

Rittal – The System.

Faster – better – everywhere.

► Catalogue 2014/2015



ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL

IT INFRASTRUCTURE

SOFTWARE & SERVICES

FRIEDHELM LOH GROUP



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Dear Sir or Madam,

Here at the Friedhelm Loh Group, one of our corporate principles is:

“We view our customers as partners who determine the success of the company”.

Our goal is to solve your challenges. Our products and services are uncompromising in terms of quality, technical execution, range and availability. Our dedicated employees around the globe are fully committed to this principle on a daily basis.

With us as market leaders on your side, you benefit from our innovative strength.

We can make you faster and better.

As well as launching a slew of new products, we have also consistently refined the unique Rittal value chain. Act now to rationalise your planning with engineering software and a data portal from Eplan, and use “Rittal – The System.” for fast, efficient generation of your power distribution systems and controllers.

Our software will help you to calculate climate control data and select the most appropriate cooling unit, and we now offer support with intelligent machine tools from Kiesling.

We are committed to making your processes more efficient in every respect, from A to Z.

Rittal is also unveiling another world first for your success – the standardised data centre RiMatrix S. True to our motto “Faster – better – everywhere.”, it eliminates the need for long planning and installation times. We can install a tested data centre in a matter of weeks rather than months.

The Rittal Catalogue is here to help you compile products and corresponding system accessories quickly and successfully.

Thank you for your invaluable feedback and suggestions, and we look forward to developing more innovations together.

Wishing you every success

Yours



Friedhelm Loh
Owner and CEO
Friedhelm Loh Group

FAMILY BUSINESS

INNOVATION LEADER



GLOBAL PLAYER

TOP EMPLOYER

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» nextlevel

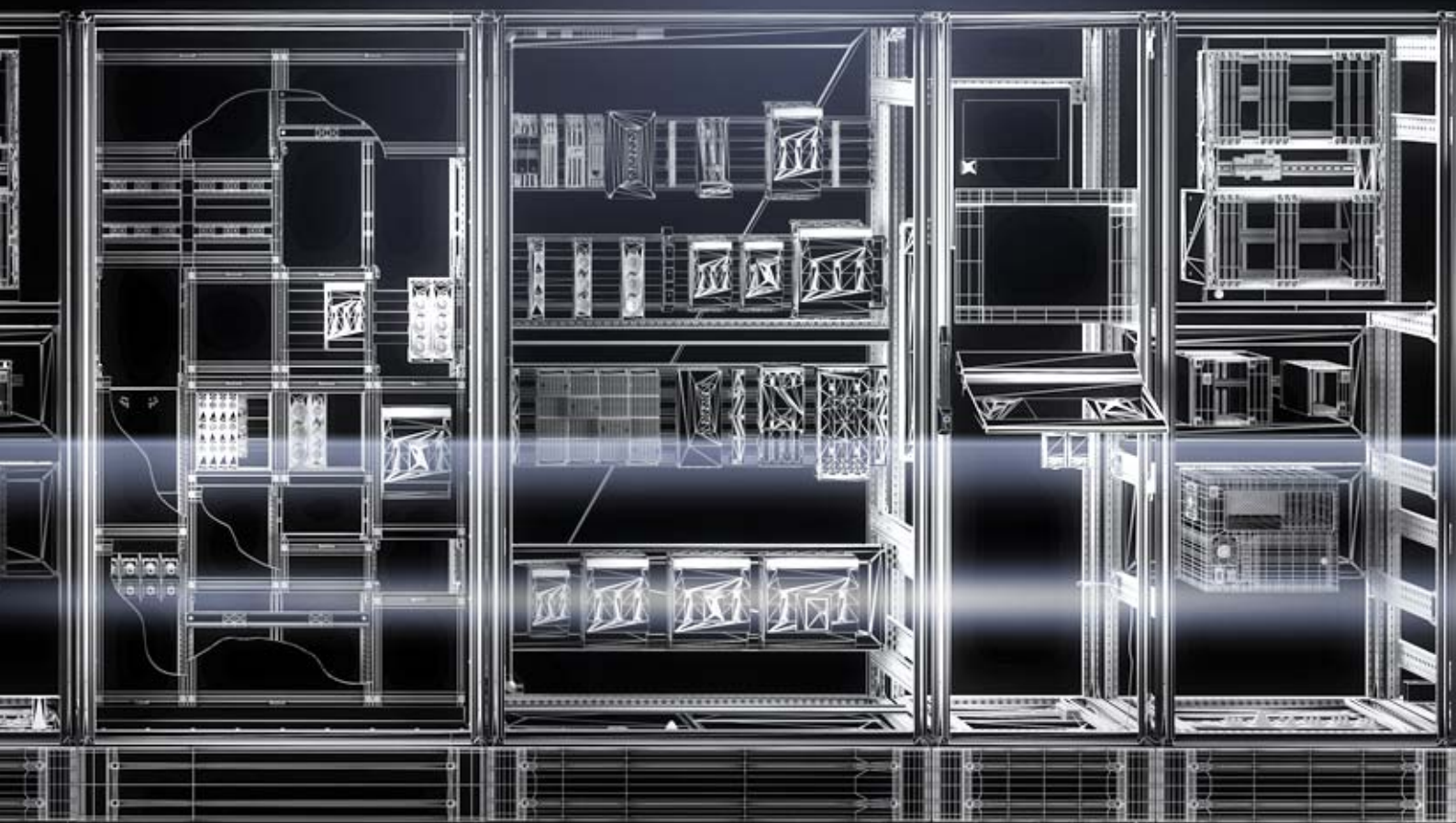
Step one in the value chain

Eplan are global providers of high-tech, software-based engineering solutions. Use Eplan to optimise your engineering and accelerate your product generation process.



Eplan – efficient engineering.

- EPLAN Engineering Center
- EPLAN electric P8
- EPLAN Data Portal
- EPLAN PPE
- EPLAN Pro Panel
- EPLAN Fluid
- EPLAN Harness proD



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Step two in the value chain

With Eplan and Rittal, you benefit from integrated engineering solutions based on top-quality system components, component data, system know-how and design expertise throughout every aspect of “Rittal – The System.”



Rittal – The System.

- Enclosure systems
- Ri4Power power distribution to IEC 61 439
- TopTherm cooling units, TÜV-tested
- RiMatrix S – The standardised data centre



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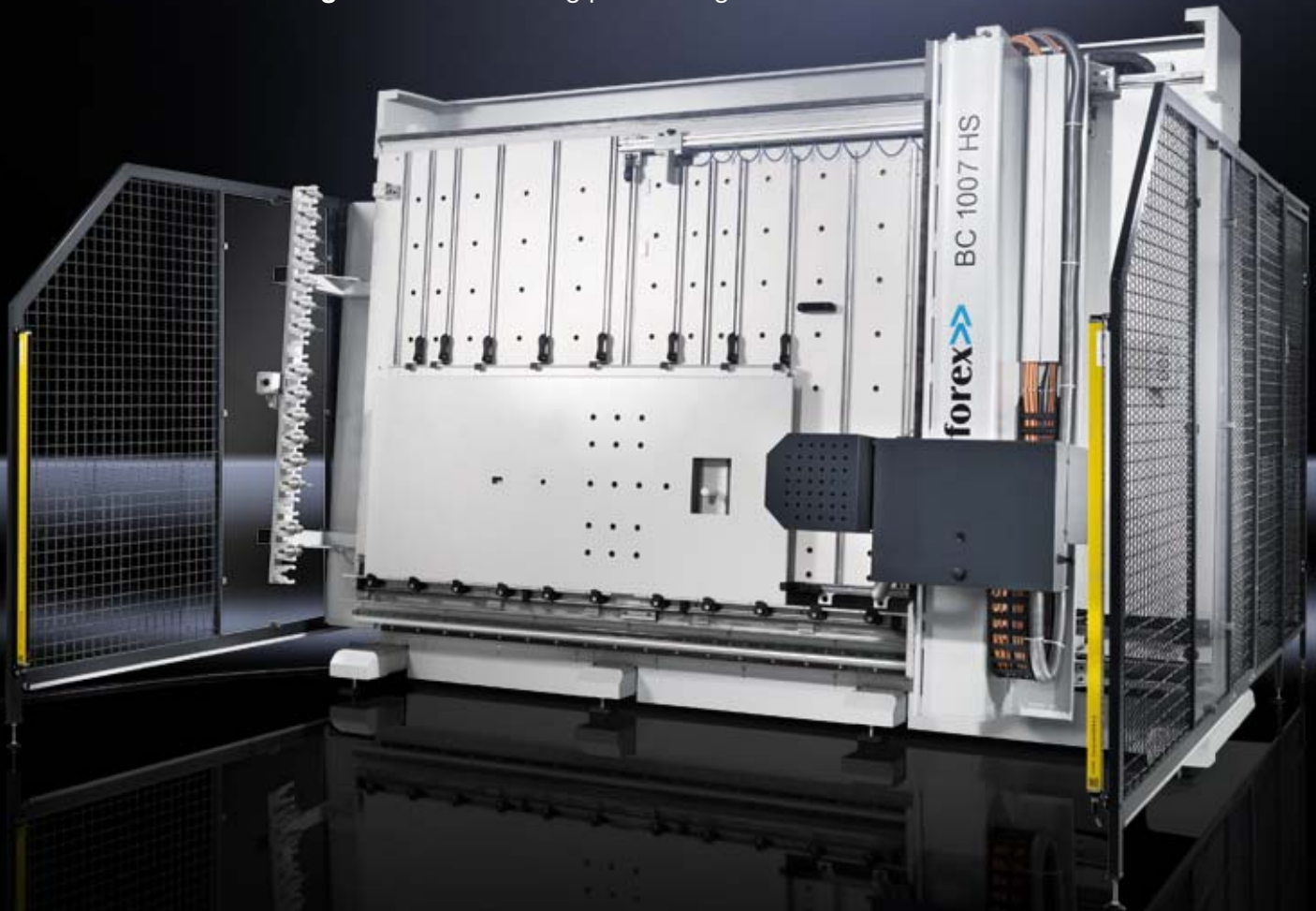
» nextlevel

Step three in the value chain

Three powerful companies have joined forces to form an integrated trio of excellence, covering all aspects of enclosures. With Kiesling as international machine tool specialists, we can automate your success in equipping your enclosure.



- **Kiesling Perforex** – Machining of enclosure solutions
- **Kiesling Secarex** – Cable ducts and support rails cut to length without delay
- **Kiesling Athex** – Automated terminal block configuration
- **Kiesling Averex** – Mounting plate wiring



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Make **IT** easy.

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for data centres

With RiMatrix S, Rittal unveils the first pre-planned, pre-configured concept with defined efficiency and power ratings for fully standardised data centre production.

The revolutionary alternative to individual data centre construction: RiMatrix S

- Standardised, mass-produced data centre modules
- Only one model number
- Short delivery times – Delivered by HGV



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Enclosures

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for industry

The Eplan engineering platform and the extensive system solutions from Rittal are perfectly interlinked. In this way, you can benefit from a unique system and effortlessly take value creation to the next level.

Rittal – The System.

- Eplan – Efficient engineering
- Rittal – Type-tested enclosure systems
- Kiesling – Machining of enclosures and mounting plate wiring



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Enclosures from the smallest to the largest

- Small and compact enclosures
- Enclosure systems
- Console and PC enclosure systems
- Support arm systems and operating housings
- Stainless steel housing and enclosure systems



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- Over 9 million already in use – the Top enclosure system TS 8
- Rittal's expertise is acquired from 15,000 enclosures and housings per day



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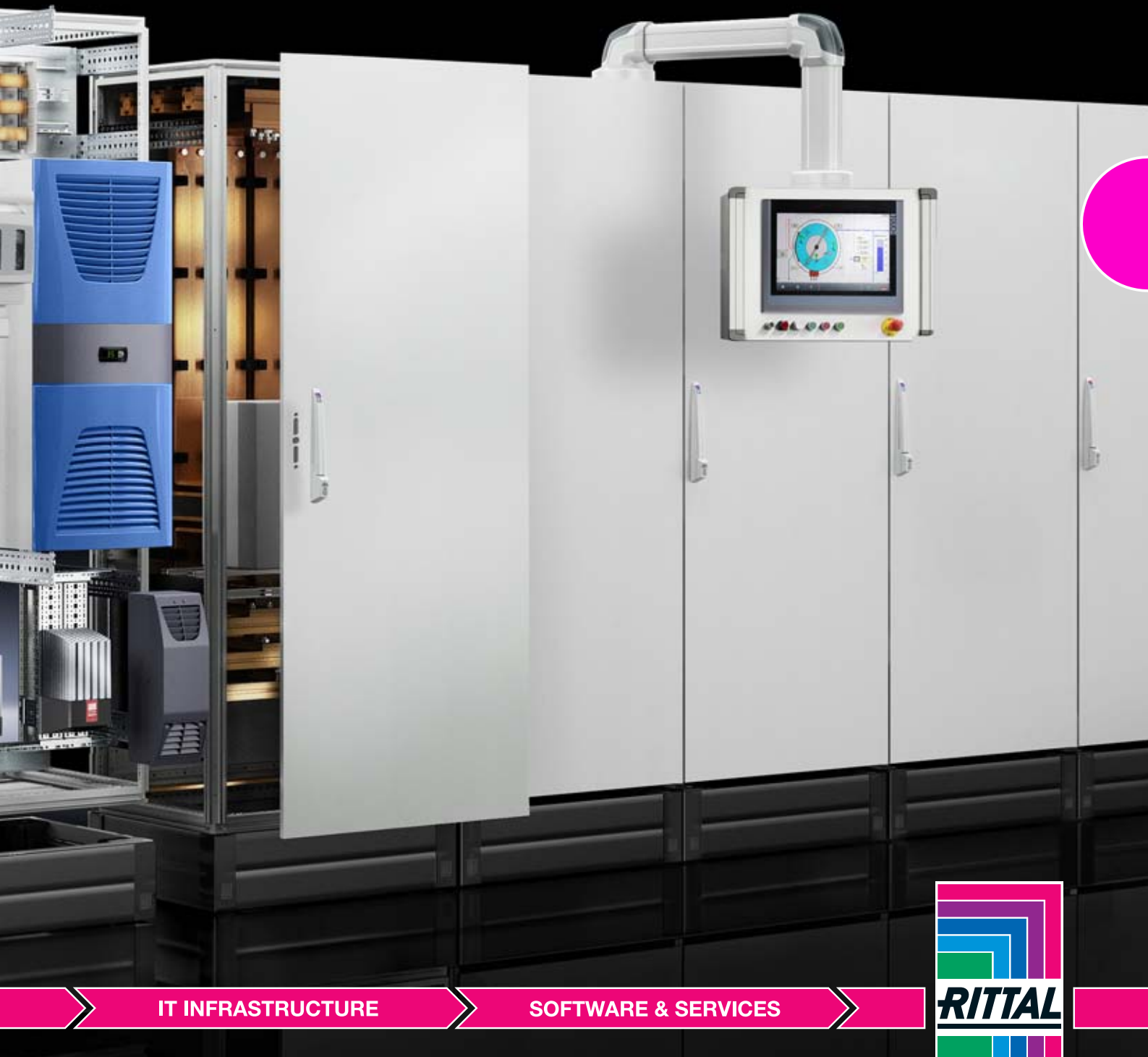
Your benefits

As a system provider, Rittal is the world's leading supplier of innovative enclosure technology. Rittal meets very high standards of security, ergonomics, energy and cost efficiency.

Faster – Software tools for efficient engineering and a huge range of products available for immediate delivery

Better – A comprehensive range of system accessories for individual installation and fast assembly

Everywhere – A contiguous global delivery and service network



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Small enclosures

Polycarbonate enclosures PK

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Polycarbonate enclosures PK



PK accessories Page 27 System accessories Page 507 Cable gland, polyamide Page 658

Material:

- Housing: Fibre-glass reinforced polycarbonate
- Cover grey: Fibreglass-reinforced polycarbonate, all-round foamed-in PU seal
- Cover transparent: Polycarbonate, all-round foamed-in PU seal
- Cover screws: Polyamide
- Insulating bungs: Polyethylene

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 66

Supply includes:

- Enclosure with cover
- Cover screws
- Insulating bungs for wall mounting screws

Approvals:

- UL
- cUL

Technical details:

Available on the Internet

without knockouts

Width mm		65	94	94	94	110	110	Page
Height mm		65	65	94	94	110	110	
Depth mm		57	57	57	81	66	90	
Model No.		9500.000	9502.000	9504.000	9505.000	9506.000	9507.000	
Cover	Grey	Packs of 12 pc(s).	8 pc(s).	6 pc(s).	6 pc(s).	6 pc(s).	6 pc(s).	

Accessories

Mounting plate		-	-	-	-	-	-	
Wall mounting brackets	1 pack(s)	9583.000	9583.000	9583.000	9583.000	9583.000	9583.000	27
Hinges		-	-	-	-	-	-	

without knockouts

Width mm		130	130	130	130	180	180	Page
Height mm		94	94	130	130	94	94	
Depth mm		57	81	75	99	57	81	
Model No.		9508.000	9509.000	9510.000	9511.000	9512.000	9513.000	
Cover	Grey	Packs of 4 pc(s).	4 pc(s).	4 pc(s).	4 pc(s).	2 pc(s).	2 pc(s).	

Accessories

Mounting plate		-	-	-	-	-	-	
Wall mounting brackets	1 pack(s)	9583.000	9583.000	9583.000	9583.000	9583.000	9583.000	27
Hinges		-	-	-	-	-	-	

Polycarbonate enclosures PK

without knockouts

Width mm	Packs of	180	180	180	180	180	180	Page
Height mm		110	110	110	110	110	110	
Depth mm		90	90	111	111	165	165	
Model No.	2 pc(s).	9514.000	9514.100	9515.000	9515.100	9516.000	9516.100	
Cover	Grey	■	-	■	-	■	-	
	Transparent	-	■	-	■	-	■	
Accessories								
Mounting plate		-	-	-	-	-	-	
Wall mounting brackets	1 pack(s)	9583.000	9583.000	9583.000	9583.000	9583.000	9583.000	27
Hinges	10 set(s)	9581.000	9581.000	9581.000	9581.000	9581.000	9581.000	27

without knockouts

Width mm	Packs of	182	182	182	182	182	182	Page
Height mm		180	180	180	180	180	180	
Depth mm		90	90	111	111	165	165	
Model No.	1 pc(s).	9517.000	9517.100	9518.000	9518.100	9519.000	9519.100	
Cover	Grey	■	-	■	-	■	-	
	Transparent	-	■	-	■	-	■	
Accessories								
Mounting plate	10 pc(s).	9548.000	9548.000	9548.000	9548.000	9548.000	9548.000	27
Wall mounting brackets	1 pack(s)	9583.000	9583.000	9583.000	9583.000	9583.000	9583.000	27
Hinges	10 set(s)	9581.000	9581.000	9581.000	9581.000	9581.000	9581.000	27

without knockouts

Width mm	Packs of	254	254	254	254	254	254	Page
Height mm		180	180	180	180	180	180	
Depth mm		90	90	111	111	165	165	
Model No.	1 pc(s).	9520.000	9520.100	9521.000	9521.100	9522.000	9522.100	
Cover	Grey	■	-	■	-	■	-	
	Transparent	-	■	-	■	-	■	
Accessories								
Mounting plate	8 pc(s).	9549.000	9549.000	9549.000	9549.000	9549.000	9549.000	27
Wall mounting brackets	1 pack(s)	9583.000	9583.000	9583.000	9583.000	9583.000	9583.000	27
Hinges	10 set(s)	9581.000	9581.000	9581.000	9581.000	9581.000	9581.000	27

without knockouts

Width mm	Packs of	360	360	360	360	360	360	Page
Height mm		254	254	254	254	254	254	
Depth mm		111	111	165	165	165	165	
Model No.	1 pc(s).	9523.000	9523.100	9524.000	9524.100	9524.100	9524.100	
Cover	Grey	■	-	■	-	■	-	
	Transparent	-	■	-	■	-	■	
Accessories								
Mounting plate	4 pc(s).	9550.000	9550.000	9550.000	9550.000	9550.000	9550.000	27
Wall mounting brackets	1 pack(s)	9583.000	9583.000	9583.000	9583.000	9583.000	9583.000	27
Hinges	10 set(s)	9581.000	9581.000	9581.000	9581.000	9581.000	9581.000	27

Polycarbonate enclosures PK



PK accessories Page 27 System accessories Page 507 Cable gland, polyamide Page 658

Material:

- Housing: Fibre-glass reinforced polycarbonate
- Cover: Fibreglass-reinforced polycarbonate, all-round foamed-in PU seal
- Cover screws: Polyamide
- Insulating bungs: Polyethylene

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 66

Supply includes:

- Enclosure with cover
- Cover screws
- Insulating bungs for wall mounting screws

Approvals:

- UL
- cUL

Technical details:

Available on the Internet

with knockouts

Width mm		130	180	254	Page
Height mm		94	110	180	
Depth mm		57	90	111	
Model No.		9508.050	9514.050	9521.050	
	Packs of	4 pc(s).	2 pc(s).	1 pc(s).	
Cover	Grey	■	■	■	
No. of metric knockouts		10 x M16/M20	16 x M20 2 x M20/M25 2 x M32/M40	24 x M20 4 x M25/M32 4 x M32/M40	
Accessories					
Mounting plate	8 pc(s).	-	-	9549.000	27
Wall mounting brackets	1 pack(s)	9583.000	9583.000	9583.000	27

Polycarbonate enclosures PK

Accessories

Mounting plate

For individual interior installation

Material:

- 2.5 mm melamine phenol-coated laminated paper

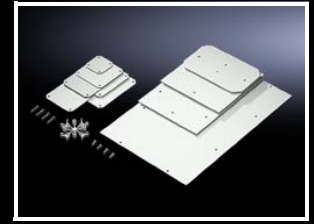
Colour:

- RAL 7035

Supply includes:

- Mounting plate
- Self-tapping assembly screws

For enclosure	Width mm	Height mm	Packs of	Model No.
9517.000/.100, 9518.000/.100, 9519.000/.100	150	150	10 pc(s).	9548.000
9520.000/.100, 9521.000/.100, 9521.050, 9522.000/.100	220	150	8 pc(s).	9549.000
9523.000/.100, 9524.000/.100	331	220	4 pc(s).	9550.000



Hinges

For hinged attachment of covers. The supplied drilling template ensures problem-free assembly.

Colour:

- Similar to RAL 7035

Supply includes:

- 1 set =
- 2 hinges
- 4 assembly screws
- 4 polyethylene sealing bungs
- 1 drilling template

For enclosure	Material	Packs of	Model No.
9514.000/.100 – 9524.000/.100	Polystyrene	10 set(s)	9581.000



Wall mounting brackets

The enclosure can be screwed to the wall using four wall mounting brackets. The wall mounting bracket is securely attached to the enclosure by simply using pins.

Material:

- Polyamide, grey

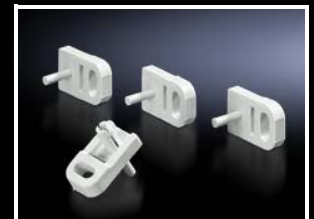
Colour:

- Similar to RAL 7035

	Packs of	Model No.
For all enclosures	1 pack(s)	9583.000

Supply includes:

- 1 pack = 40 pieces



Cast aluminium enclosures GA



GA accessories Page 29 System accessories Page 507

Material:

- Enclosure: Cast aluminium
- Cover: Cast aluminium, all-round foamed-in PU seal

Surface finish:

- Textured paint

Colour:

- RAL 7001

Protection category IP to IEC 60 529:

- IP 66

Protection category NEMA:

- NEMA 4

Supply includes:

- Enclosure with cover
- Cover screws, captive
- Screws for attaching support rails
- Screw for connection of the PE conductor

Technical details:

Available on the Internet

Width mm		58	98	75	125	175	250	122	220	Page
Height mm		64	64	80	80	80	80	120	120	
Depth mm		34	35	57	57	57	57	80	91	
Model No.		9101.210	9102.210	9104.210	9105.210	9106.210	9107.210	9108.210	9110.210	
	Packs of	5 pc(s).	3 pc(s).	1 pc(s).	1 pc(s).	1 pc(s).	1 pc(s).	1 pc(s).	1 pc(s).	
Accessories										
Mounting plate		-	-	-	9105.700	-	-	9108.700	9110.700	29
	Packs of	-	-	-	10 pc(s).	-	-	2 pc(s).	2 pc(s).	
Wall mounting bracket	2 pc(s).	-	-	-	-	-	-	9121.122	9121.122	29
Hinge, exterior	2 pc(s).	-	-	-	-	-	-	9123.000	9123.000	29
Earth straps		see page	see page	see page	see page	see page	see page	see page	see page	644
Cable glands		from page	from page	from page	from page	from page	from page	from page	from page	658

Width mm	Packs of	360	160	260	360	202	280	334	330	Page
Height mm		120	160	160	160	232	232	233	230	
Depth mm		82	91	91	91	111	111	111	181	
Model No.	1 pc(s).	9111.210	9112.210	9113.210	9114.210	9116.210	9117.210	9118.210	9119.210	
Accessories										
Mounting plate		-	9112.700	9113.700	9114.700	9116.700	9117.700	9118.700	9118.700	29
	Packs of	-	2 pc(s).	2 pc(s).	1 pc(s).	1 pc(s).	1 pc(s).	1 pc(s).	1 pc(s).	
Wall mounting bracket	2 pc(s).	9121.122	9121.160	9121.160	9121.160	9121.230	9121.230	9121.230	9121.230	29
Hinge, exterior	2 pc(s).	9123.000	9123.000	9123.000	9123.000	9123.000	9123.000	9123.000	9123.000	29
Earth straps		see page	see page	see page	see page	see page	see page	see page	see page	644
Cable glands		from page	from page	from page	from page	from page	from page	from page	from page	658

Cast aluminium enclosures GA

Accessories

Mounting plate

For individual interior installation, with mounting holes.

Material:

– Sheet steel

Surface finish:

– Zinc-plated

Exterior dimensions mm		For GA enclosures	Packs of	Model No.
Width	Height			
114	69	9105.210	10 pc(s).	9105.700
109	107	9108.210	2 pc(s).	9108.700
207	107	9110.210	2 pc(s).	9110.700
144	142	9112.210	2 pc(s).	9112.700
245	142	9113.210	2 pc(s).	9113.700
346	142	9114.210	1 pc(s).	9114.700
183	214	9116.210	1 pc(s).	9116.700
264	214	9117.210	1 pc(s).	9117.700
314	214	9118.210/9119.210	1 pc(s).	9118.700



Wall mounting bracket

For external mounting on surfaces – no need to dismantle the cover if pre-assembled.

Material:

– Sheet steel

Surface finish:

– Zinc-plated

For GA enclosures	Packs of	Model No.
9108.210/ 9110.210/ 9111.210	2 pc(s).	9121.122
9112.210/ 9113.210/ 9114.210	2 pc(s).	9121.160
9116.210/ 9117.210/ 9118.210/ 9119.210	2 pc(s).	9121.230



Hinge, exterior

For fastening the cover to the enclosure base.

Material:

– Die-cast aluminium

Colour:

– RAL 7001

For GA enclosures	Packs of	Model No.
9108.210/ 9110.210/ 9111.210/ 9112.210/ 9113.210/ 9114.210/ 9116.210/ 9117.210/ 9118.210/ 9119.210	2 pc(s). + 8 screws	9123.000



Terminal boxes KL



System accessories Page 507 KL stainless steel Page 177 KL for potentially explosive areas Page 192 KL Hygienic Design Page 170

Material:

- Enclosure: Sheet steel
- Cover: Sheet steel, all-round foamed-in PU seal

Surface finish:

- Enclosure and cover: Dipcoat-primed, powder-coated on the outside, textured paint

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 66

Protection category NEMA:

- NEMA 4

Supply includes:

- Enclosure with cover
- Quick-release fastener including plastic bushes

Approvals:

- UL
- CSA
- TÜV
- Germanischer Lloyd
- Russian Maritime Register of Shipping
- Lloyds Register of Shipping
- Bureau Veritas
- VDE

Technical details:

Available on the Internet

without gland plate

Width mm	Packs of	150	200	200	300	300	400	Page
Height mm		150	150	200	150	200	200	
Depth mm		80	80	80	80	80	80	
Material thickness - enclosure mm		1.25	1.25	1.25	1.25	1.25	1.25	
Material thickness - cover mm		1.25	1.25	1.25	1.25	1.25	1.25	
Model No.	1 pc(s).	1514.510	1528.510	1516.510	1515.510	1517.510	1518.510	
Weight kg		1.4	1.6	1.9	2.1	2.6	3.2	
Accessories								
Mounting plates	1 pc(s).	1560.700	1575.700	1562.700	1561.700	1563.700	1564.700	591
Support rails TS 35/7.5	10 pc(s).	2314.000	2315.000	2315.000	2316.000	2316.000	2317.000	614
Support rails TS 35/15		-	-	-	-	-	-	
Cover retainer	3 pair(s)	1591.000	1591.000	1591.000	1591.000	1591.000	1591.000	574
Cover hinge	6 pc(s).	1592.000	1592.000	1592.000	1592.000	1592.000	1592.000	574
Earthing kit	5 pc(s).	2570.100	2570.100	2570.100	2570.100	2570.100	2570.100	646
Wall mounting bracket	4 pc(s).	1590.000	1590.000	1590.000	1590.000	1590.000	1590.000	587
Spare quick-release fastener	12 pc(s).	1593.000	1593.000	1593.000	1593.000	1593.000	1593.000	

Terminal boxes KL

without gland plate

Width mm	Packs of	600	150	200	200	300	300	Page
Height mm		200	150	150	200	150	200	
Depth mm		80	120	120	120	120	120	
Material thickness - enclosure mm		1.25	1.25	1.25	1.25	1.25	1.25	
Material thickness - cover mm		1.25	1.25	1.25	1.25	1.25	1.25	
Model No.	1 pc(s).	1519.510	1500.510	1529.510	1502.510	1501.510	1503.510	
Weight kg		4.6	1.6	1.8	2.3	2.6	3.0	
Accessories								
Mounting plates	1 pc(s).	1566.700	1560.700	1575.700	1562.700	1561.700	1563.700	591
Support rails TS 35/7.5	10 pc(s).	–	2314.000	2315.000	2315.000	2316.000	2316.000	614
Support rails TS 35/15	10 pc(s).	2319.000	–	–	–	–	–	614
Cover retainer	3 pair(s)	1591.000	1591.000	1591.000	1591.000	1591.000	1591.000	574
Cover hinge	6 pc(s).	1592.000	1592.000	1592.000	1592.000	1592.000	1592.000	574
Earthing kit	5 pc(s).	2570.100	2570.100	2570.100	2570.100	2570.100	2570.100	646
Wall mounting bracket	4 pc(s).	1590.000	1590.000	1590.000	1590.000	1590.000	1590.000	587
Spare quick-release fastener	12 pc(s).	1593.000	1593.000	1593.000	1593.000	1593.000	1593.000	

without gland plate

Width mm	Packs of	300	400	400	400	400	500	Page
Height mm		300	150	200	300	400	200	
Depth mm		120	120	120	120	120	120	
Material thickness - enclosure mm		1.38	1.25	1.25	1.38	1.38	1.25	
Material thickness - cover mm		1.25	1.25	1.25	1.25	1.25	1.25	
Model No.	1 pc(s).	1507.510	1589.510	1504.510	1508.510	1511.510	1505.510	
Weight kg		4.0	3.2	3.6	4.8	6.2	4.4	
Accessories								
Mounting plates	1 pc(s).	1567.700	1576.700	1564.700	1568.700	1571.700	1565.700	591
Support rails TS 35/7.5	10 pc(s).	2316.000	2317.000	2317.000	2317.000	2317.000	–	614
Support rails TS 35/15	10 pc(s).	–	–	–	–	–	2318.000	614
Cover retainer	3 pair(s)	1591.000	1591.000	1591.000	1591.000	1591.000	1591.000	574
Cover hinge	6 pc(s).	1592.000	1592.000	1592.000	1592.000	1592.000	1592.000	574
Earthing kit	5 pc(s).	2570.100	2570.100	2570.100	2570.100	2570.100	2570.100	646
Wall mounting bracket	4 pc(s).	1590.000	1590.000	1590.000	1590.000	1590.000	1590.000	587
Spare quick-release fastener	12 pc(s).	1593.000	1593.000	1593.000	1593.000	1593.000	1593.000	

without gland plate

Width mm	Packs of	500	600	600	600	800	800	Page
Height mm		300	200	300	400	200	400	
Depth mm		120	120	120	120	120	120	
Material thickness - enclosure mm		1.38	1.25	1.38	1.38	1.25	1.38	
Material thickness - cover mm		1.25	1.25	1.25	1.25	1.25	1.25	
Model No.	1 pc(s).	1509.510	1506.510	1510.510	1512.510	1527.510	1513.510	
Weight kg		5.8	5.7	6.8	8.4	6.8	11.0	
Accessories								
Mounting plates	1 pc(s).	1569.700	1566.700	1570.700	1572.700	1574.700	1573.700	591
Support rails TS 35/7.5		–	–	–	–	–	–	
Support rails TS 35/15	10 pc(s).	2318.000	2319.000	2319.000	2319.000	–	–	614
Cover retainer	3 pair(s)	1591.000	1591.000	1591.000	1591.000	1591.000	1591.000	574
Cover hinge	6 pc(s).	1592.000	1592.000	1592.000	1592.000	1592.000	1592.000	574
Earthing kit	5 pc(s).	2570.100	2570.100	2570.100	2570.100	2570.100	2570.100	646
Wall mounting bracket	4 pc(s).	1590.000	1590.000	1590.000	1590.000	1590.000	1590.000	587
Spare quick-release fastener	12 pc(s).	1593.000	1593.000	1593.000	1593.000	1593.000	1593.000	

Terminal boxes KL



System accessories Page 507 KL stainless steel Page 177 KL for potentially explosive areas Page 192 KL Hygienic Design Page 170

Material:

- Enclosure: Sheet steel
- Cover: Sheet steel, all-round foamed-in PU seal

Surface finish:

- Enclosure and cover: Dipcoat-primed, powder-coated on the outside, textured paint

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 55

Protection category NEMA:

- NEMA 12

Supply includes:

- Enclosure with cover
- Quick-release fastener including plastic bushes
- Sheet steel gland plates with seals and assembly parts

Approvals:

- UL
- CSA
- TÜV
- Germanischer Lloyd
- Russian Maritime Register of Shipping
- Lloyds Register of Shipping
- Bureau Veritas
- VDE

Technical details:

Available on the Internet

with gland plate

Width mm	Packs of	300	300	300	400	400	400	500	Page
Height mm		150	200	300	200	300	400	200	
Depth mm		120	120	120	120	120	120	120	
Material thickness - enclosure mm		1.25	1.25	1.38	1.25	1.38	1.38	1.25	
Material thickness - cover mm		1.25	1.25	1.25	1.25	1.25	1.25	1.25	
Model No.	1 pc(s).	1530.510	1531.510	1535.510	1532.510	1536.510	1539.510	1533.510	
Weight kg		2.7	3.3	4.5	4.0	5.2	6.7	4.9	
Gland plate (top + bottom), size		2	2	2	2	2	2	2	
Gland plate (top + bottom), qty.		1 + 1	1 + 1	1 + 1	1 + 1	1 + 1	1 + 1	2 + 2	
Gland plate (left + right), size		-	-	2	-	2	2	-	
Gland plate (left + right), qty.		-	-	1 + 1	-	1 + 1	1 + 1	-	
Accessories									
Mounting plates	1 pc(s).	1561.700	1563.700	1567.700	1564.700	1568.700	1571.700	1565.700	591
Plastic cable gland plates		see page	see page	see page	see page	see page	see page	see page	653
Support rails TS 35/7.5	10 pc(s).	2316.000	2316.000	2316.000	2317.000	2317.000	2317.000	-	614
Support rails TS 35/15	10 pc(s).	-	-	-	-	-	-	2318.000	614
Cover retainer	3 pair(s)	1591.000	1591.000	1591.000	1591.000	1591.000	1591.000	1591.000	574
Cover hinge	6 pc(s).	1592.000	1592.000	1592.000	1592.000	1592.000	1592.000	1592.000	574
Earthing kit	5 pc(s).	2570.100	2570.100	2570.100	2570.100	2570.100	2570.100	2570.100	646
Wall mounting bracket	4 pc(s).	1590.000	1590.000	1590.000	1590.000	1590.000	1590.000	1590.000	587
Spare quick-release fastener	12 pc(s).	1593.000	1593.000	1593.000	1593.000	1593.000	1593.000	1593.000	


Terminal boxes KL

with gland plate

Width mm	Packs of	500	600	600	600	800	800	Page
Height mm		300	200	300	400	200	400	
Depth mm		120	120	120	120	120	120	
Material thickness - enclosure mm		1.38	1.25	1.38	1.38	1.25	1.38	
Material thickness - cover mm		1.25	1.25	1.25	1.25	1.25	1.25	
Model No.	1 pc(s).	1537.510	1534.510	1538.510	1540.510	1542.510	1541.510	
Weight kg		5.2	5.9	7.7	9.0	7.2	12.0	
Gland plate (top + bottom), size		2	2	2	2	2	2	
Gland plate (top + bottom), qty.		2 + 2	2 + 2	2 + 2	2 + 2	3 + 3	3 + 3	
Gland plate (left + right), size		2	-	2	2	-	2	
Gland plate (left + right), qty.		1 + 1	-	1 + 1	1 + 1	-	1 + 1	

Accessories								
Mounting plates	1 pc(s).	1569.700	1566.700	1570.700	1572.700	1574.700	1573.700	591
Plastic cable gland plates		see page	see page	see page	see page	see page	see page	653
Support rails TS 35/7.5		-	-	-	-	-	-	
Support rails TS 35/15	10 pc(s).	2318.000	2319.000	2319.000	2319.000	-	-	614
Cover retainer	3 pair(s)	1591.000	1591.000	1591.000	1591.000	1591.000	1591.000	574
Cover hinge	6 pc(s).	1592.000	1592.000	1592.000	1592.000	1592.000	1592.000	574
Earthing kit	5 pc(s).	2570.100	2570.100	2570.100	2570.100	2570.100	2570.100	646
Wall mounting bracket	4 pc(s).	1590.000	1590.000	1590.000	1590.000	1590.000	1590.000	587
Spare quick-release fastener	12 pc(s).	1593.000	1593.000	1593.000	1593.000	1593.000	1593.000	

Accessories



Earthing set

see from page 644

E-Box EB



System accessories Page 507

Material:

- Enclosure and door: Sheet steel, all-round foamed-in PU seal

Surface finish:

- Enclosure and door: Dipcoat-primed, powder-coated on the outside, textured paint
- Mounting plate: Zinc-plated

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 66

Protection category NEMA:

- NEMA 4

Supply includes:

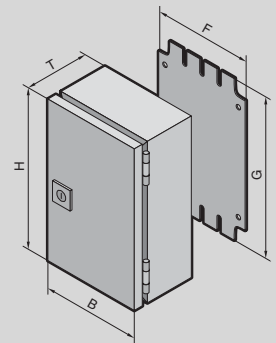
- Enclosure with hinged door
- 180° hinge
- Cam lock with 3 mm double-bit insert
- Mounting plate

Approvals:

- UL
- CSA
- TÜV
- Germanischer Lloyd
- Russian Maritime Register of Shipping
- Lloyds Register of Shipping
- Bureau Veritas
- VDE

Technical details:

Available on the Internet



Depth 80 mm

Width (B) mm	Packs of	150	150	200	200	200	Page
Height (H) mm		150	300	200	300	400	
Depth (T) mm		80	80	80	80	80	
Mounting plate width (F) mm		125	125	175	175	175	
Mounting plate height (G) mm		135	285	185	285	385	
Material thickness - enclosure mm		1.25	1.25	1.25	1.25	1.25	
Material thickness - door mm		1.25	1.25	1.25	1.25	1.25	
Model No.	1 pc(s).	1551.500	1545.500	1546.500	1552.500	1547.500	
Weight kg		1.7	2.6	2.4	3.2	4.4	
Accessories							
Wall mounting bracket	4 pc(s).	1590.000	1590.000	1590.000	1590.000	1590.000	587
Pole clamp	1 set(s)	2584.000	2584.000	2584.000	2584.000	2584.000	589
Mounting clip	30 pc(s).	2309.000	2309.000	2309.000	2309.000	2309.000	614
Support rails		see page	see page	see page	see page	see page	613
Cable glands		from page	from page	from page	from page	from page	658
Earth straps		see page	see page	see page	see page	see page	644
Lock cover	2 pc(s).	2476.000	2476.000	2476.000	2476.000	2476.000	571
Lock systems		from page	from page	from page	from page	from page	560

Depth 120 mm

Width (B) mm	Packs of	150	150	200	200	200	200	300	300	Page
Height (H) mm		150	300	200	300	400	500	300	400	
Depth (T) mm		120	120	120	120	120	120	120	120	
Mounting plate width (F) mm		125	125	175	175	175	175	275	275	
Mounting plate height (G) mm		135	285	185	285	385	485	285	385	
Material thickness - enclosure mm		1.25	1.25	1.25	1.25	1.25	1.25	1.38	1.38	
Material thickness - door mm		1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	
Model No.	1 pc(s).	1553.500	1548.500	1549.500	1554.500	1550.500	1557.500	1555.500	1556.500	
Weight kg		2.0	3.0	2.8	3.6	5.0	6.2	5.0	6.4	
Accessories										
Wall mounting bracket	4 pc(s).	1590.000	1590.000	1590.000	1590.000	1590.000	1590.000	1590.000	1590.000	587
Pole clamp	1 set(s)	2584.000	2584.000	2584.000	2584.000	2584.000	2584.000	2584.000	2584.000	589
Mounting clip	30 pc(s).	2309.000	2309.000	2309.000	2309.000	2309.000	2309.000	2309.000	2309.000	614
Support rails		see page	see page	see page	see page	see page	see page	see page	see page	613
Cable glands		from page	from page	from page	from page	from page	from page	from page	from page	658
Earth straps		see page	see page	see page	see page	see page	see page	see page	see page	644
Lock cover	2 pc(s).	2476.000	2476.000	2476.000	2476.000	2476.000	2476.000	2476.000	2476.000	571
Lock systems		from page	from page	from page	from page	from page	from page	from page	from page	560

Depth 155 mm

Width (B) mm	Packs of	300		300		300		Page
Height (H) mm		400		600		800		
Depth (T) mm		155		155		155		
Mounting plate width (F) mm		275		275		275		
Mounting plate height (G) mm		385		585		785		
Material thickness - enclosure mm		1.38		1.38		1.38		
Material thickness - door mm		1.25		1.25		1.25		
Model No.	1 pc(s).	1577.500		1578.500		1579.500		
Weight kg		7.1		11.0		13.2		
Accessories								
Wall mounting bracket	4 pc(s).	1590.000		1590.000		1590.000		587
Pole clamp	1 set(s)	2584.000		2584.000		2584.000		589
Mounting clip	30 pc(s).	2309.000		2309.000		2309.000		614
Support rails		see page		see page		see page		613
Cable glands		from page		from page		from page		658
Earth straps		see page		see page		see page		644
Lock cover	2 pc(s).	2476.000		2476.000		2476.000		571
Lock systems		from page		from page		from page		560



Wall mounting bracket

see from page 587

Bus enclosures BG



System accessories Page 507 **BG stainless steel** Page 178

Material:

- Enclosure: Sheet steel
- Door: Sheet steel with polycarbonate viewing window, 4 mm

Surface finish:

- Enclosure and door: Dipcoat-primed, powder-coated, textured paint

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 65

Protection category NEMA:

- NEMA 12

Supply includes:

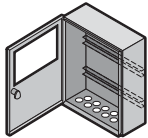
- Enclosure with door
 - Viewing window in the door
- Please note the product-specific scope of supply.

Approvals:

- TÜV
- Lloyds Register of Shipping
- VDE
- UL
- cUL

Technical details:

Available on the Internet



Width mm	Packs of	200	300	400	500	Page
Height mm		300	300	300	300	
Depth mm		80	80	80	80	
Model No.	1 pc(s).	1583.520	1584.520	1585.520	1586.520	
Material thickness mm	Enclosure	1.25	1.25	1.25	1.25	
	Door	1.25	1.25	1.25	1.25	

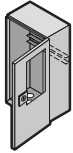
Product-specific scope of supply

Door hinge		Left	Left	Left	Left	
Cam lock with double-bit insert		1	1	1	1	
Support rail TS 35/7.5		2	2	2	2	
Number of metric holes	M12	2	2	2	3	
	M20	5	9	13	24	
	M25	2	2	3	-	

Accessories

Lock cover	1 pc(s).	2476.000	2476.000	2476.000	2476.000	572
Wall mounting bracket	4 pc(s).	1590.000	1590.000	1590.000	1590.000	587
Pole clamp	1 pc(s).	2584.000	2584.000	2584.000	2584.000	589
Lock inserts, type A	see page 570					
Lock cylinder inserts, type B	see page 571					
Plastic handles, type B	see page 569					

Bus enclosures BG



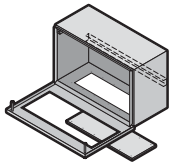
Width mm	Packs of	200	400	Page
Height mm		300	300	
Depth mm		120	120	
Model No.	1 pc(s).	1605.520	1606.520	
Material thickness mm	Enclosure	1.25	1.38	
	Door	1.25	1.25	

Product-specific scope of supply

Door hinge		Right	Right	
Cam lock with double-bit insert		1	1	
Support rail TS 35/7.5		1	1	
Number of metric holes	M12	2	-	
	M20	-	2	
	M32	5	9	
	M50	-	1	

Accessories

Lock cover	1 pc(s).	2476.000	2476.000	572
Wall mounting bracket	4 pc(s).	1590.000	1590.000	587
Pole clamp	1 pc(s).	2584.000	2584.000	589
Lock inserts, type A			see page 570	
Lock cylinder inserts, type B			see page 571	
Plastic handles, type B			see page 569	



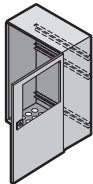
Width mm	Packs of	400	600	Page
Height mm		200	200	
Depth mm		125	125	
Model No.	1 pc(s).	1558.510	1559.510	
Material thickness mm	Enclosure	1.25	1.25	
	Door	1.25	1.25	

Product-specific scope of supply

Door hinge		Bottom	Bottom	
Quick-release fastener		2	3	
Support rail TS 35/7.5		1	1	
Gland plate in the base		1	1	

Accessories

Wall mounting bracket	4 pc(s).	1590.000	1590.000	587
Pole clamp	1 pc(s).	2584.000	2584.000	589



Width mm	Packs of	400	500	Page
Height mm		500	300	
Depth mm		160	120	
Model No.	1 pc(s).	1611.510	1609.510	
Material thickness mm	Enclosure	1.38	1.38	
	Door	1.5	1.25	

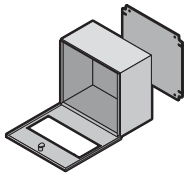
Product-specific scope of supply

Door hinge		Right	Bottom	
Cam lock with double-bit insert		1	-	
Quick-release fastener		-	2	
Support rail TS 35/7.5		3	1	
Number of drilled holes for PG 13.5 or M20		33	48	

Accessories

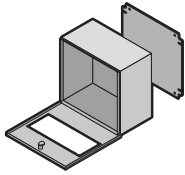
Lock cover	1 pc(s).	2476.000	-	572
Wall mounting bracket	4 pc(s).	1590.000	1590.000	587
Pole clamp	1 pc(s).	2584.000	2584.000	589
Lock inserts, type A			see page 570	
Lock cylinder inserts, type B			see page 571	
Plastic handles, type B			see page 569	

Bus enclosures BG



Width mm	Packs of	400	400	400	Page
Height mm		300	300	300	
Depth mm		155	155	155	
Mounting plate width		385	385	385	
Mounting plate height		275	275	275	
Model No.	1 pc(s).	1577.500	1577.530	1577.450	
Material thickness mm	Enclosure	1.38	1.38	1.38	
	Door	1.25	1.25	1.25	
Product-specific scope of supply					
Door hinge		Bottom	Bottom	Bottom	
Cam lock with double-bit insert		1	1	1	
Viewing window	Size mm	–	340 x 190	340 x 155	
	Position ¹⁾ mm	–	42	92	
Mounting plate		1	1	1	
Gland plate in the base		–	–	–	
Accessories					
Lock cover	1 pc(s).	2476.000	2476.000	2476.000	572
Wall mounting bracket	4 pc(s).	1590.000	1590.000	1590.000	587
Pole clamp	1 pc(s).	2584.000	2584.000	2584.000	589
Lock inserts, type A					see page 570
Lock cylinder inserts, type B					see page 571
Plastic handles, type B					see page 569

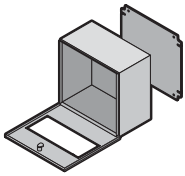
¹⁾ Bottom edge of window to bottom edge of door



Width mm	Packs of	600	600	600	Page
Height mm		300	300	300	
Depth mm		155	155	155	
Mounting plate width		585	585	585	
Mounting plate height		275	275	275	
Model No.	1 pc(s).	1578.500	1578.530	1578.450	
Material thickness mm	Enclosure	1.38	1.38	1.38	
	Door	1.25	1.25	1.25	
Product-specific scope of supply					
Door hinge		Bottom	Bottom	Bottom	
Cam lock with double-bit insert		2	2	2	
Viewing window	Size mm	–	540 x 190	540 x 155	
	Position ¹⁾ mm	–	42	92	
Mounting plate		1	1	1	
Gland plate in the base		–	–	–	
Accessories					
Lock cover	1 pc(s).	2476.000	2476.000	2476.000	572
Wall mounting bracket	4 pc(s).	1590.000	1590.000	1590.000	587
Pole clamp	1 pc(s).	2584.000	2584.000	2584.000	589
Lock inserts, type A					see page 570
Lock cylinder inserts, type B					see page 571
Plastic handles, type B					see page 569

¹⁾ Bottom edge of window to bottom edge of door

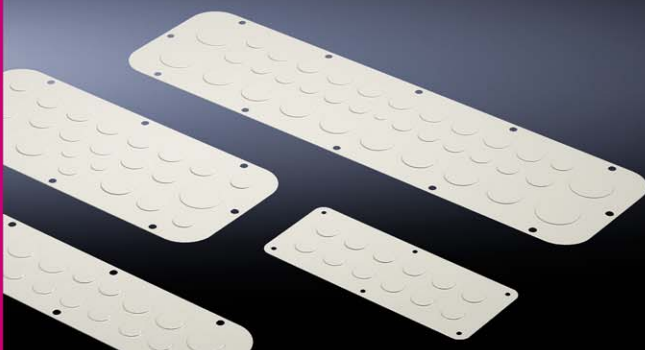
Bus enclosures BG



Width mm	Packs of	800	800	800	Page
Height mm		300	300	300	
Depth mm		155	155	155	
Mounting plate width		785	785	785	
Mounting plate height		275	275	275	
Model No.	1 pc(s).	1579.500	1579.530	1579.450	
Material thickness mm	Enclosure	1.38	1.38	1.38	
	Door	1.25	1.25	1.25	
Product-specific scope of supply					
Door hinge		Bottom	Bottom	Bottom	
Cam lock with double-bit insert		2	2	2	
Viewing window	Size mm	–	740 x 190	740 x 155	
	Position ¹⁾ mm	–	42	92	
Mounting plate		1	1	1	
Gland plate in the base		–	–	–	
Accessories					
Lock cover	1 pc(s).	2476.000	2476.000	2476.000	572
Wall mounting bracket	4 pc(s).	1590.000	1590.000	1590.000	587
Pole clamp	1 pc(s).	2584.000	2584.000	2584.000	589
Lock inserts, type A				see page 570	
Lock cylinder inserts, type B				see page 571	
Plastic handles, type B				see page 569	

¹⁾Bottom edge of window to bottom edge of door

Accessories



Metal gland plates

see page 655

Rittal – The System.

Faster – better – everywhere.



Compact enclosures

Compact enclosures AE

Compact enclosures AE46

Compact system enclosures CM

Width 600 – 800 mm50

Width 1000 – 1200 mm51

Plastic enclosures KS

Plastic enclosures KS52

Compact enclosures AE



New interior installation rail

- Retrospective interior installation without machining
- Allows time-saving mounting on the sides, base and roof areas
- Variable with two rows of TS 8 system punchings, creates additional mounting space
- TS 8 system punchings allow TS 8 accessories to be used
- Automatic potential equalisation
- May still be fitted after installation of the mounting plates
- Mounting option for door-operated switch and door stay

Conductive mounting plate

- Simple one-person assembly even with free-standing enclosures, via a slot in the mounting plate
- Zinc-plated surface finish for direct contact between assemblies and optimum EMC properties

Interchangeable gland plate

- Sheet steel for simple machining, supplied loose
- Integrated, automatic potential equalisation by mounting screws
- Other gland plates with metal or plastic knock-outs for simple, fast cable entry are available as accessories



Compact enclosures AE

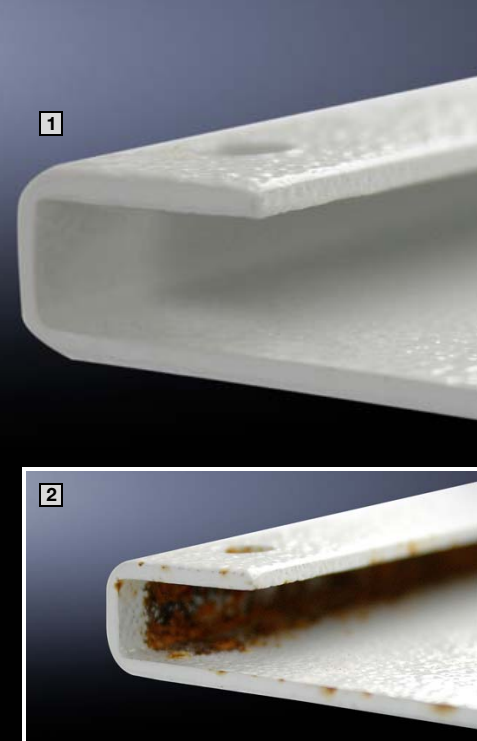


Optimum surface protection

Triple surface treatment provides optimum protection against corrosion. Maximum quality is achieved in three stages:

- 1st phase: Nanoceramic primer
- 2nd phase: Electrophoretic dipcoat-priming
- 3rd phase: Textured powder-coating

- 1 Metal with triple surface treatment (Rittal standard) following a 180-hour salt spray mist test
- 2 Metal powder-coated only following a 180-hour salt spray mist test



Integral perforated door strips

- For universal door installations
- For secure cable routing from the door to the enclosure



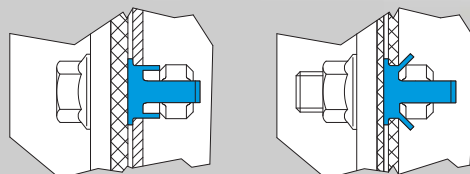
Interchangeable door hinge

- The door hinge is easily swapped over in single-door enclosures
- No machining required, since the holes are pre-integrated and sealed with stoppers



Practical wall mounting bracket

- For fast, time-saving attachment to the enclosure from the outside
- Simply insert the expandable dowel into the enclosure hole from the outside, and screw-fasten the wall bracket from the outside. In this way, the pre-configured enclosure may be transported to the installation site and the wall bracket secured without opening the enclosure.



Compact enclosures AE



System accessories Page 507 AE stainless steel Page 179 Hygienic Design Page 171

Material:

- Enclosure: Sheet steel
- Door: Sheet steel, all-round foamed-in PU seal

Surface finish:

- Enclosure and door: Dipcoat-primed, powder-coated on the outside, textured paint
- Mounting plate: Zinc-plated

Colour:

- RAL 7035

Supply includes:

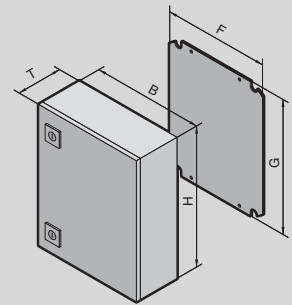
- Enclosure with hinged door(s), of all-round solid construction
 - Gland plate(s) in enclosure base
 - Mounting plate
- Please note the product-specific scope of supply.

Approvals:

- UL
- CSA
- TÜV
- Germanischer Lloyd
- Russian Maritime Register of Shipping
- Lloyds Register of Shipping
- Bureau Veritas
- VDE

Technical details:

Available on the Internet



Width (B) mm	Packs of	200	200	300	300	300	380	Page
Height (H) mm		300	300	300	300	400	300	
Depth (T) mm		120	155	155	210	210	155	
Mounting plate width (F) mm		162	162	254	254	254	334	
Mounting plate height (G) mm		275	275	275	275	375	275	
Material thickness - enclosure mm		1.25	1.25	1.38	1.38	1.38	1.38	
Material thickness - door mm		1.5	1.5	1.5	1.5	1.5	1.5	
Mounting plate thickness mm		2.0	2.0	2.5	2.0	2.0	2.0	
Model No.	1 pc(s).	1032.500	1035.500	1036.500	1033.500	1034.500	1030.500	
Weight kg		4.0	4.5	6.1	7.0	8.8	7.4	
Protection category IP to IEC 60 529		IP 55	IP 55	IP 66	IP 66	IP 66	IP 66	
Protection category NEMA		NEMA 12	NEMA 12	NEMA 4	NEMA 4	NEMA 4	NEMA 4	

Product-specific scope of supply

Door(s)		1	1	1	1	1	1	
Door hinged on the right, may be swapped to the left		-	-	■	■	■	■	
Gland plate, size		1	1	-	-	-	3	
Gland plates, qty.		1	1	1	1	1	1	
Cam lock		1	1	1	1	1	1	

Accessories

Gland plates		from page	from page	from page	from page	from page	from page	653
Rails for interior installation	4 pc(s).	-	-	-	2383.210	2383.210	-	605
Wall mounting bracket	4 pc(s).	2508.100	2508.100	2508.100	2508.100	2508.100	2508.100	587
Baying kit	1 set(s)	1199.100	1199.100	1199.100	1199.100	1199.100	1199.100	548
Door stay	5 pc(s).	-	-	2519.000	2519.000	2519.000	2519.000	578
180° hinges	2 pc(s).	2449.000	2449.000	2449.000	2449.000	2449.000	2449.000	574
Earth straps		see page	see page	see page	see page	see page	see page	644
LED system light	1 pc(s).	4140.810	4140.810	4140.810	4140.810	see page	see page	637
Plastic wiring plan pocket		from page	from page	from page	from page	from page	from page	577
Dust guard trim	1 pc(s).	2426.500	2426.500	2426.500	2426.500	2426.500	2426.500	581
Lock systems		from page	from page	from page	from page	from page	from page	560

Compact enclosures AE

Width (B) mm	Packs of	380	380	380	380	400	400	Page
Height (H) mm		300	380	600	600	500	800	
Depth (T) mm		210	210	210	350	210	300	
Mounting plate width (F) mm		334	334	334	334	354	349	
Mounting plate height (G) mm		275	355	570	570	475	770	
Material thickness - enclosure mm		1.38	1.38	1.38	1.5	1.38	1.5	
Material thickness - door mm		1.5	1.5	1.5	1.5	1.5	2.0	
Mounting plate thickness mm		2.0	2.0	2.5	2.5	2.0	3.0	
Model No.	1 pc(s).	1031.500	1380.500	1038.500	1338.500	1045.500	1037.500	
Weight kg		7.5	9.8	15.6	19.4	13.0	26.2	
Protection category IP to IEC 60 529		IP 66	IP 66	IP 66	IP 66	IP 66	IP 66	
Protection category NEMA		NEMA 4	NEMA 4	NEMA 4	NEMA 4	NEMA 4	NEMA 4	
Product-specific scope of supply								
Door(s)		1	1	1	1	1	1	
Door hinged on the right, may be swapped to the left		■	■	■	■	■	■	
Gland plate, size		3	3	3	4	4	4	
Gland plates, qty.		1	1	1	1	1	1	
Cam lock		1	1	2	2	2	2	
Accessories								
Gland plates		from page	from page	from page	from page	from page	from page	653
Rails for interior installation	4 pc(s).	2383.210	2383.210	2383.210	2383.350	2383.210	2383.300	605
Wall mounting bracket	4 pc(s).	2508.100	2508.100	2508.100	2508.100	2508.100	2508.100	587
Baying kit	1 set(s)	1199.100	1199.100	1199.100	1199.100	1199.100	1199.100	548
Door stay	5 pc(s).	2519.000	2519.000	2519.000	2519.000	2519.000	2519.000	578
180° hinges	2 pc(s).	2449.000	2449.000	2449.000	2449.000	2449.000	2449.000	574
Earth straps		see page	see page	see page	see page	see page	see page	644
LED system light		see page	see page	see page	see page	see page	see page	637
Plastic wiring plan pocket		from page	from page	from page	from page	from page	from page	577
Dust guard trim	1 pc(s).	2426.500	2426.500	2426.500	2426.500	2426.500	2426.500	581
Lock systems		from page	from page	from page	from page	from page	from page	560

Width (B) mm	Packs of	500	500	500	600	600	600	Page
Height (H) mm		500	500	700	380	380	600	
Depth (T) mm		210	300	250	210	350	210	
Mounting plate width (F) mm		449	449	449	549	549	549	
Mounting plate height (G) mm		470	470	670	355	355	570	
Material thickness - enclosure mm		1.38	1.5	1.5	1.38	1.5	1.38	
Material thickness - door mm		1.75	1.75	2.0	1.5	1.5	1.75	
Mounting plate thickness mm		2.5	2.5	2.5	2.5	2.5	2.5	
Model No.	1 pc(s).	1050.500	1350.500	1057.500	1039.500	1339.500	1060.500	
Weight kg		16.8	19.6	31.2	15.4	20.0	22.8	
Protection category IP to IEC 60 529		IP 66	IP 66	IP 66	IP 66	IP 66	IP 66	
Protection category NEMA		NEMA 4	NEMA 4	NEMA 4	NEMA 4	NEMA 4	NEMA 4	
Product-specific scope of supply								
Door(s)		1	1	1	1	1	1	
Door hinged on the right, may be swapped to the left		■	■	■	■	■	■	
Gland plate, size		4	4	4	5	5	5	
Gland plates, qty.		1	1	1	1	1	1	
Cam lock		2	2	2	1	1	2	
Accessories								
Gland plates		from page	from page	from page	from page	from page	from page	653
Rails for interior installation	4 pc(s).	2383.210	2383.300	2383.250	2383.210	2383.350	2383.210	605
Wall mounting bracket	4 pc(s).	2508.100	2508.100	2508.100	2508.100	2508.100	2508.100	587
Baying kit	1 set(s)	1199.100	1199.100	1199.100	1199.100	1199.100	1199.100	548
Door stay	5 pc(s).	2519.000	2519.000	2519.000	2519.000	2519.000	2519.000	578
180° hinges	2 pc(s).	2449.000	2449.000	2449.000	2449.000	2449.000	2449.000	574
Support strips	20 pc(s).	2325.000	2325.000	2325.000	2326.000	2326.000	2326.000	575
Earth straps		see page	see page	see page	see page	see page	see page	644
LED system light		see page	see page	see page	see page	see page	see page	637
Plastic wiring plan pocket		from page	from page	from page	from page	from page	from page	577
Dust guard trim	1 pc(s).	2426.500	2426.500	2426.500	2426.500	2426.500	2426.500	581
Lock systems		from page	from page	from page	from page	from page	from page	560

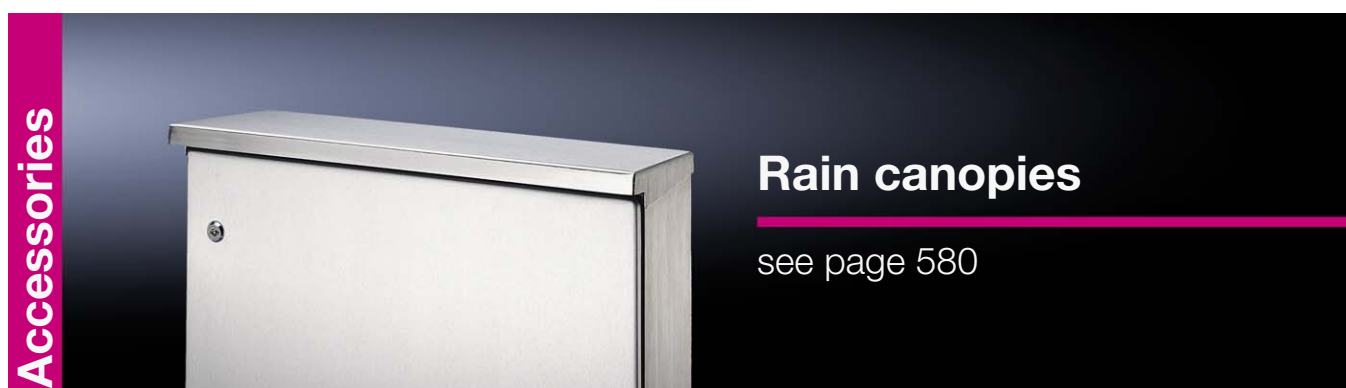
Compact enclosures AE

Width (B) mm	Packs of	600	600	600	600	600	600	Page
Height (H) mm		600	600	760	760	800	1000	
Depth (T) mm		250	350	210	350	250	250	
Mounting plate width (F) mm		549	549	549	549	549	539	
Mounting plate height (G) mm		570	570	730	730	770	955	
Material thickness - enclosure mm		1.5	1.5	1.38	1.5	1.5	1.5	
Material thickness - door mm		1.75	1.75	2.0	2.0	2.0	2.0	
Mounting plate thickness mm		2.5	2.5	3.0	3.0	3.0	3.0	
Model No.	1 pc(s).	1054.500	1360.500	1076.500	1376.500	1058.500	1090.500	
Weight kg		24.8	28.4	32.1	36.0	33.6	50.5	
Protection category IP to IEC 60 529		IP 66	IP 66	IP 66	IP 66	IP 66	IP 66	
Protection category NEMA		NEMA 4	NEMA 4	NEMA 4	NEMA 4	NEMA 4	NEMA 4	
Product-specific scope of supply								
Door(s)		1	1	1	1	1	1	
Door hinged on the right, may be swapped to the left		■	■	■	■	■	■	
Gland plate, size		5	5	5	5	5	5	
Gland plates, qty.		1	1	1	1	1	1	
Cam lock		2	2	2	2	2	2	
Accessories								
Gland plates		from page	from page	from page	from page	from page	from page	653
Rails for interior installation	4 pc(s).	2383.250	2383.350	2383.210	2383.350	2383.250	2383.250	605
Wall mounting bracket	4 pc(s).	2508.100	2508.100	2508.100	2508.100	2508.100	2508.100	587
Baying kit	1 set(s)	1199.100	1199.100	1199.100	1199.100	1199.100	–	548
Door stay	5 pc(s).	2519.000	2519.000	2519.000	2519.000	2519.000	2519.000	578
180° hinges	2 pc(s).	2449.000	2449.000	2449.000	2449.000	2449.000	2449.000	574
Support strips	20 pc(s).	2326.000	2326.000	2326.000	2326.000	2326.000	2326.000	575
Earth straps		see page	see page	see page	see page	see page	see page	644
LED system light		see page	see page	see page	see page	see page	see page	637
Plastic wiring plan pocket		from page	from page	from page	from page	from page	from page	577
Dust guard trim	1 pc(s).	2426.500	2426.500	2426.500	2426.500	2426.500	2426.500	581
Lock systems		from page	from page	from page	from page	from page	from page	560

Width (B) mm	Packs of	600	760	760	800	800	800	Page
Height (H) mm		1200	760	760	600	1000	1200	
Depth (T) mm		300	210	300	300	300	300	
Mounting plate width (F) mm		540	704	704	749	739	740	
Mounting plate height (G) mm		1155	730	730	570	955	1155	
Material thickness - enclosure mm		1.5	1.5	1.5	1.5	1.5	1.5	
Material thickness - door mm		2.0	2.0	2.0	2.0	2.0	2.0	
Mounting plate thickness mm		3.0	3.0	3.0	2.5	3.0	3.0	
Model No.	1 pc(s).	1260.500	1077.500	1073.500	1055.500	1180.500	1280.500	
Weight kg		55.0	40.0	44.5	33.9	57.0	70.0	
Protection category IP to IEC 60 529		IP 66	IP 66	IP 66	IP 66	IP 66	IP 66	
Protection category NEMA		NEMA 4	NEMA 4	NEMA 4	NEMA 4	NEMA 4	NEMA 4	
Product-specific scope of supply								
Door(s)		1	1	1	1	1	1	
Door hinged on the right, may be swapped to the left		■	■	■	■	■	■	
Gland plate, size		5	5	5	5	5	5	
Gland plates, qty.		1	1	1	1	1	1	
Cam lock		–	2	2	2	2	–	
3-point lock system		■	–	–	–	–	■	
Accessories								
Gland plates		from page	from page	from page	from page	from page	from page	653
Rails for interior installation	4 pc(s).	2383.300	2383.210	2383.300	2383.300	2383.300	2383.300	605
Wall mounting bracket	4 pc(s).	2508.100	2508.100	2508.100	2508.100	2508.100	2508.100	587
Baying kit	1 set(s)	–	1199.100	1199.100	1199.100	–	–	548
Door stay	5 pc(s).	2519.000	2519.000	2519.000	2519.000	2519.000	2519.000	578
180° hinges	2 pc(s).	2449.000	2449.000	2449.000	2449.000	2449.000	2449.000	574
Support strips	20 pc(s).	2326.000	2327.000	2327.000	2328.000	2328.000	2328.000	575
Eyebolts	4 pc(s).	2509.000	–	–	–	–	2509.000	586
Earth straps		see page	see page	see page	see page	see page	see page	644
LED system light		see page	see page	see page	see page	see page	see page	637
Plastic wiring plan pocket		from page	from page	from page	from page	from page	from page	577
Dust guard trim	1 pc(s).	2426.500	2426.500	2426.500	2426.500	2426.500	2426.500	581
Lock systems		from page	from page	from page	from page	from page	from page	560

Compact enclosures AE

Width (B) mm	Packs of	1000	1000	1000	1000	1000	Page
Height (H) mm		760	760	1000	1200	1400	
Depth (T) mm		210	300	300	300	300	
Mounting plate width (F) mm		944	944	939	940	940	
Mounting plate height (G) mm		730	730	955	1155	1355	
Material thickness - enclosure mm		1.5	1.5	1.5	1.5	1.5	
Material thickness - door mm		2.0	2.0	2.0	2.0	2.0	
Mounting plate thickness mm		3.0	3.0	3.0	3.0	3.0	
Model No.	1 pc(s).	1100.500	1130.500	1110.500	1213.500	1114.500	
Weight kg		52.0	56.0	71.0	85.0	97.0	
Protection category IP to IEC 60 529		IP 55	IP 55	IP 55	IP 55	IP 55	
Protection category NEMA		NEMA 12	NEMA 12	NEMA 12	NEMA 12	NEMA 12	
Product-specific scope of supply							
Door(s)		2	2	2	2	2	
Door hinged on the right, may be swapped to the left		-	-	-	-	-	
Gland plate, size		4	4	4	4	4	
Gland plates, qty.		2	2	2	2	2	
Cam lock		2	2	2	-	-	
3-point lock system		-	-	-	■	■	
Accessories							
Gland plates		from page	from page	from page	from page	from page	653
Rails for interior installation	4 pc(s).	2383.210	2383.300	2383.300	2383.300	2383.300	605
Wall mounting bracket	4 pc(s).	2508.100	2508.100	2508.100	2508.100	2508.100	587
Baying kit	1 set(s)	1199.100	1199.100	-	-	-	548
Door stay	5 pc(s).	2519.000	2519.000	2519.000	2519.000	2519.000	578
180° hinges	2 pc(s).	2449.000	2449.000	2449.000	2449.000	2449.000	574
Support strips	20 pc(s).	2325.000	2325.000	2325.000	2325.000	2325.000	575
Eyebolts	4 pc(s).	-	-	-	2509.000	2509.000	586
Earth straps		see page	see page	see page	see page	see page	644
LED system light		see page	see page	see page	see page	see page	637
Plastic wiring plan pocket		from page	from page	from page	from page	from page	577
Dust guard trim	1 pc(s).	2426.500	2426.500	2426.500	2426.500	2426.500	581
Lock systems		from page	from page	from page	from page	from page	560



Accessories

Rain canopies

see page 580

Compact system enclosures CM



System accessories Page 507 System lights Page 634 Cable duct Page 673 Climate control Page 307

Material:

- Enclosure: Sheet steel 1.5 mm
- Door: Sheet steel, 2.0 mm, all-round foamed-in PU seal
- Mounting plate: Sheet steel 3.0 mm

Surface finish:

- Enclosure and door: Dipcoat-primed, powder-coated on the outside, textured paint
- Mounting plate: Zinc-plated

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 55 with selection of the appropriate gland plates or trim panel

Protection category NEMA:

- NEMA 12 with selection of the appropriate gland plates or trim panel

Supply includes:

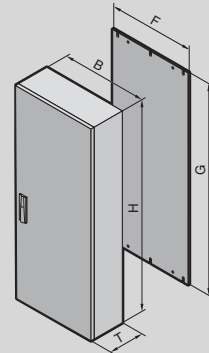
- Enclosure with hinged door(s)
- 3-point locking system with double-bit insert
- Mounting plate
- Open base for individual cable entry

Approvals:

- UL
- CSA
- TÜV
- Lloyds Register of Shipping

Technical details:

Available on the Internet



Width 600 – 800 mm

Width (B) mm	Packs of	600	600	600	600	800	800	800	800	Page
Height (H) mm		800	1000	1200	1200	1000	1000	1200	1200	
Depth (T) mm		400	400	300	400	300	400	300	400	
Mounting plate width (F) mm		540	540	540	540	740	740	740	740	
Mounting plate height (G) mm		755	955	1155	1155	955	955	1155	1155	
Model No.	1 pc(s).	5110.500	5111.500	5112.500	5113.500	5114.500	5115.500	5116.500	5117.500	
Weight kg		39.0	49.0	52.0	56.0	57.0	61.0	65.0	71.0	
Door(s)		1	1	1	1	1	1	1	1	
Door hinged on the right, may be swapped to the left		■	■	■	■	■	■	■	■	

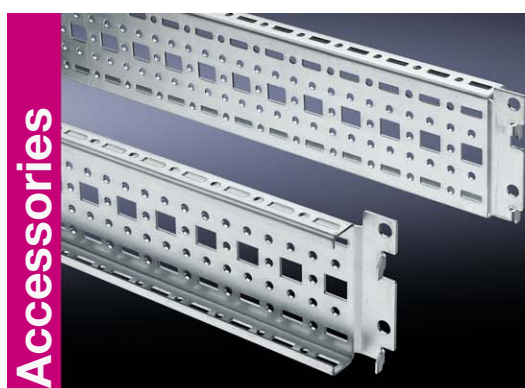
Accessories

Accessories		from page	from page	from page	from page	from page	from page	from page	from page	Page
Base/plinth		from page	from page	from page	from page	from page	from page	from page	from page	510
Trim panel	1 pc(s).	5001.130	5001.130	–	5001.130	–	5001.140	–	5001.140	117
Gland plates		see page	see page	see page	see page	see page	see page	see page	see page	525
Rails for interior installation, for height	4 pc(s).	–	5001.052	5001.053	5001.053	5001.052	5001.052	5001.053	5001.053	605
Rails for interior installation, for width	4 pc(s).	5001.050	5001.050	5001.050	5001.050	5001.051	5001.051	5001.051	5001.051	605
TS punched section with mounting flange, 17 x 73 mm, for depth	4 pc(s).	8612.140	8612.140	8612.130	8612.140	8612.130	8612.140	8612.130	8612.140	606
TS punched section with mounting flange, 17 x 73 mm, for width	4 pc(s).	8612.060	8612.060	8612.060	8612.060	8612.080	8612.080	8612.080	8612.080	606
Base configuration rail	2 pc(s).	5001.370	5001.370	5001.371	5001.370	5001.371	5001.370	5001.371	5001.370	608
TS support strips	20 pc(s).	4596.000	4596.000	4596.000	4596.000	4598.000	4598.000	4598.000	4598.000	575
Cable clamp rails	1 pc(s).	5001.080	5001.080	5001.080	5001.080	5001.081	5001.081	5001.081	5001.081	665
Sheet steel wiring plan pockets	1 pc(s).	4116.500	4116.500	4116.500	4116.500	4118.500	4118.500	4118.500	4118.500	578
Rain canopies, sheet steel	1 pc(s).	5001.310	5001.310	–	5001.310	–	5001.330	–	5001.330	580
Rail systems		from page	from page	from page	from page	from page	from page	from page	from page	605
Lock systems		from page	from page	from page	from page	from page	from page	from page	from page	560

Compact system enclosures CM

Width 1000 – 1200 mm

Width (B) mm	Packs of	1000	1000	1000	1000	1000	1200	Page
Height (H) mm		1000	1200	1200	1400	1400	1200	
Depth (T) mm		300	300	400	300	400	400	
Mounting plate width (F) mm		940	940	940	940	940	1140	
Mounting plate height (G) mm		955	1155	1155	1355	1355	1155	
Model No.	1 pc(s).	5118.500	5119.500	5120.500	5121.500	5122.500	5123.500	
Weight kg		70.0	82.0	86.0	95.0	100.0	102.0	
Door(s)		2	2	2	2	2	2	
Door hinged on the right, may be swapped to the left		–	–	–	–	–	–	
Accessories								
Base/plinth		from page	from page	from page	from page	from page	from page	510
Trim panel	1 pc(s).	–	–	5001.150	–	5001.150	5001.160	117
Gland plates		see page	see page	see page	see page	see page	see page	525
Rails for interior installation, for height	4 pc(s).	5001.052	5001.053	5001.053	5001.054	5001.054	5001.053	605
Rails for interior installation, for width		–	–	–	–	–	5001.053	605
TS punched section with mounting flange, 17 x 73 mm, for depth	4 pc(s).	8612.130	8612.130	8612.140	8612.130	8612.140	8612.140	606
TS punched section with mounting flange, 17 x 73 mm, for width	4 pc(s).	8612.000	8612.000	8612.000	8612.000	8612.000	8612.020	606
Base configuration rail	2 pc(s).	5001.371	5001.371	5001.370	5001.371	5001.370	5001.370	608
TS support strips	20 pc(s).	4309.000	4309.000	4309.000	4309.000	4309.000	4596.000	575
Cable clamp rails	1 pc(s).	5001.082	5001.082	5001.082	5001.082	5001.082	5001.083	665
Sheet steel wiring plan pockets	1 pc(s).	4115.500	4115.500	4115.500	4115.500	4115.500	4116.500	578
Rain canopies, sheet steel	1 pc(s).	–	–	5001.350	–	5001.350	5001.360	580
Rail systems		from page	from page	from page	from page	from page	from page	605
Lock systems		from page	from page	from page	from page	from page	from page	560



Accessories

TS punched section with mounting flange

see page 606

Plastic enclosures KS



System accessories Page 507 **KS for potentially explosive areas** Page 194

Material:

- Enclosure and door: Fibreglass-reinforced unsaturated polyester
- Door: All-round foamed-in PU seal
- Mounting plate: Sheet steel
- Viewing window: Glazed acrylic, 3.0 mm with all-round rubber cable clamp strip

Surface finish:

- Enclosure and door: Dyed plastic with no after-treatment
- Mounting plate: Zinc-plated

Colour:

- Similar to RAL 7035

Supply includes:

- Enclosure with hinged door, of all-round solid construction, 3 mm double-bit lock
- Mounting plate

- Twin seal on the top and bottom edges of the door as integral rain protection strip
- Press-fitted C sections at the sides for infinitely variable mounting plate depth adjustment

Please note the product-specific scope of supply.

Note:

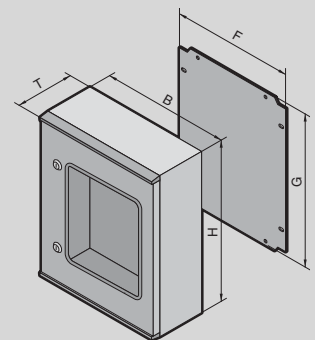
- Under the influence of long-term UV radiation (sunlight) in conjunction with wind and rain, the surface finish may become visually impaired. This does not affect the protection of the installed electrical components in any way. If the enclosures cannot be protected from UV radiation, we recommend that they should be painted with a PUR paint. Ambient temperature -30°C...+75°C.

Approvals:

- TÜV
- Germanischer Lloyd
- Russian Maritime Register of Shipping
- Lloyds Register of Shipping
- Bureau Veritas

Technical details:

Available on the Internet




Width (B) mm	Packs of	200	250	300	400	400	400	400	500	Page
Height (H) mm		300	350	400	400	400	600	600	500	
Depth (T) mm		150	150	200	200	200	200	200	300	
Mounting plate width (F) mm		145	195	245	345	345	345	345	417	
Mounting plate height (G) mm		250	300	350	350	350	550	550	450	
Mounting plate thickness mm		2.0	2.0	2.0	2.5	2.5	2.5	2.5	2.5	
Model No.	1 pc(s).	1423.500	1432.500	1434.500	1444.500	1448.500	1446.500	1449.500	1453.500	
Weight kg		3.4	4.3	5.9	7.9	8.0	11.5	11.2	13.5	
Protection category IP to IEC 60 529		IP 66	IP 66	IP 66	IP 66	IP 56	IP 66	IP 56	IP 66	
Protection category NEMA		NEMA 4X	NEMA 4X	NEMA 4X	NEMA 4X	NEMA 12	NEMA 4X	NEMA 12	NEMA 4X	
Product-specific scope of supply										
Door(s)		1	1	1	1	1	1	1	1	
Door hinged on the right, may be swapped to the left		■	■	■	■	■	■	■	■	
Removable centre bar, lockable door on right		–	–	–	–	–	–	–	–	
Viewing window		–	–	–	–	■	–	■	–	
Cam lock		1	1	2	2	2	2	2	2	
3-point lock system		–	–	–	–	–	–	–	–	
Accessories										
Mounting plate adjustment bracket	4 pc(s).	1481.000	1481.000	1481.000	1481.000	1481.000	1481.000	1481.000	1491.000	594
Threaded inserts M6	20 pc(s).	1482.000	1482.000	1482.000	1482.000	1482.000	1482.000	1482.000	1482.000	625
Pole clamp	1 set(s)	2584.000	2584.000	2584.000	2584.000	2584.000	2584.000	2584.000	2584.000	589
Wall mounting bracket	4 pc(s).	1483.010	1483.010	1483.010	1483.010	1483.010	1483.010	1483.010	1483.010	588
Lock systems		from page	from page	from page	from page	from page	from page	from page	from page	560

Plastic enclosures KS

Width (B) mm	Packs of	500	600	600	600	600	800	800	1000	Page
Height (H) mm		500	600	600	800	800	1000	1000	1000	
Depth (T) mm		300	200	200	300	300	300	300	300	
Mounting plate width (F) mm		417	545	545	517	517	717	717	917	
Mounting plate height (G) mm		450	550	550	750	750	950	950	950	
Mounting plate thickness mm		2.5	2.5	2.5	3.0	3.0	3.0	3.0	3.0	
Model No.	1 pc(s).	1454.500	1466.500	1467.500	1468.500	1469.500	1479.500	1480.500	1400.500	
Weight kg		13.4	15.9	15.6	26.5	26.0	39.9	41.7	51.6	
Protection category IP to IEC 60 529		IP 56	IP 66	IP 56	IP 66	IP 56	IP 56	IP 66	IP 56	
Protection category NEMA		NEMA 12	NEMA 4X	NEMA 12	NEMA 4X	NEMA 12	NEMA 12	NEMA 4X	NEMA 12	
Product-specific scope of supply										
Door(s)		1	1	1	1	1	1	1	2	
Door hinged on the right, may be swapped to the left		■	■	■	■	■	■	■	–	
Removable centre bar, lockable door on right		–	–	–	–	–	–	–	■	
Viewing window		■	–	■	–	■	■	–	–	
Cam lock		2	2	2	–	–	–	–	–	
3-point lock system		–	–	–	■	■	■	■	■	
Accessories										
Mounting plate adjustment bracket	4 pc(s).	1491.000	1481.000	1481.000	1491.000	1491.000	1491.000	1491.000	1491.000	594
Threaded inserts M6	20 pc(s).	1482.000	1482.000	1482.000	1482.000	1482.000	1482.000	1482.000	1482.000	625
Pole clamp	1 set(s)	2584.000	2584.000	2584.000	2584.000	2584.000	2584.000	2584.000	2584.000	589
Wall mounting bracket	4 pc(s).	1483.010	1483.010	1483.010	1483.010	1483.010	1483.010	1483.010	1483.010	588
Lock systems		from page	from page	from page	from page	from page	from page	from page	from page	560

Accessories



Spare filter mats

see page 371

Rittal – The System.

Faster – better – everywhere.



Enclosure systems

Baying systems TS 8

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System enclosures SE 8

Width 600 – 800 mm.....	81
Width 1000 – 1800 mm.....	82
IP 66/NEMA 4	83



Baying systems TS 8

System enclosures SE 8





Improved mounting plate

- Simple, one-person assembly
- The mounting plate slides easily on slide rails with plastic skids, slide rails may also be used for interior installation
- Easy positioning of the mounting plate on a 25 mm pitch pattern



New Flex-Block base/plinth system

- Fast assembly by simply clipping together the base/plinth components
- The enclosure is easily transported, both when empty and fully configured, by removing the base/plinth trim panel
- Space-saving cable management in the base/plinth means more space for enclosure configuration



Comprehensive potential equalisation

- All panels and gland plates in standard enclosures may be conductively connected via assembly components



Baying systems TS 8



Versatile baying options

- Around corners, forwards, backwards, to the left or right or even upwards; the baying options are unlimited
- Baying connection technology for fast assembly and stable, permanent baying
- Bayed TS 8 enclosures may be transported



Symmetrical frame

- Symmetrical layout supports access from all sides
- Identical system accessories in the width and depth for interior installation
- Accessible from all sides, due to hinged side panels



Universal interior installation

- Two symmetrical levels with identical pitch patterns in the width and depth
- Interior installation with two mounting levels
- Up to 15% better space utilisation due to consistent use of the outer mounting level
- Extensive system accessories tailored to the frame section for individual interior installation



System enclosures SE 8



Smart design

- High stability thanks to a self-supporting, integral construction technique, roof and sides from a single piece with extruded "frame"
- High protection category
- Sheet steel and stainless steel versions for almost every application area



Time-saving interior installation

- Identical mounting plate and compatibility with the TS 8 baying system for uniform engineering
- Minimal assembly work due to the extruded side panels



Unlimited installation options

- Automatic potential equalisation
- Optimum cable entry
- Wide range of accessories with TS 8 system platform
- Different base/plinth variants: Flex-Block, cable chamber or standard base/plinth in sheet steel or stainless steel



Baying systems TS 8



System accessories Page 507 TS 8 stainless steel Page 182 TS 8 EMC-shielded Page 80 TS 8 IP 66/NEMA 4X Page 183

Material and surface finish:

- Enclosure frame: Sheet steel, 1.5 mm, dipcoat-primed
- Roof: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Door: Sheet steel, 2 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Rear panel: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Gland plates: Sheet steel, 1.5 mm, zinc-plated
- Mounting plate: Sheet steel, 3 mm, zinc-plated

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 55

Protection category NEMA:

- NEMA 12

Supply includes:

- Enclosure frame with door(s)
- Roof plate
- Gland plates
- Rear panel
- Mounting plate
- 4 eyebolts
- Lock: 3 mm double-bit

Note:

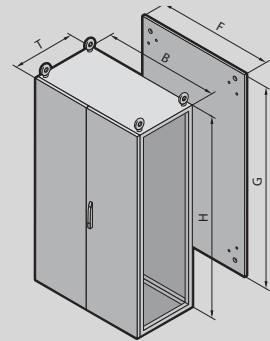
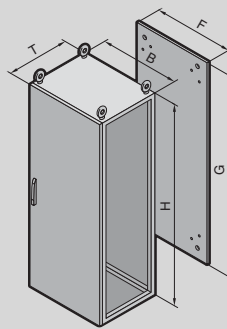
- Design enclosure width 400 mm: Without tubular door frame, mounting plate and gland plates. Protection category IP 55 and NEMA 12 are not met

Approvals:

- UL
- CSA
- TÜV
- Norske Veritas
- Germanischer Lloyd
- Russian Maritime Register of Shipping
- Lloyds Register of Shipping
- Bureau Veritas
- VDE

Technical details:

Available on the Internet



Baying systems TS 8

Height 1200/1400 mm, depth 500 mm

Width (B) mm	Packs of	600	800	1200	600	800	1200	Page
Height (H) mm		1200	1200	1200	1400	1400	1400	
Depth (T) mm		500	500	500	500	500	500	
Mounting plate width (F) mm		499	699	1099	499	699	1099	
Mounting plate height (G) mm		1096	1096	1096	1296	1296	1296	
Model No.	1 pc(s).	8615.500	8815.500	8215.500	8645.500	8845.500	8245.500	
Door(s)		1	1	2	1	1	2	
Weight kg		74.5	92.1	140.0	86.0	107.5	163.5	
2 support strips fitted in the enclosure depth		-	-	-	-	-	-	
Accessories								
Side panels, screw-fastened, sheet steel	2 pc(s).	8115.235	8115.235	8115.235	8145.235	8145.235	8145.235	534
Divider panel		-	-	-	-	-	-	
Divider panel for module plates		-	-	-	-	-	-	
Glazed door		-	-	-	-	-	-	
Flex-Block corner pieces, 100 mm	1 set(s)	8100.000	8100.000	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, sealed, for width	1 set(s)	8100.600	8100.800	8100.120	8100.600	8100.800	8100.120	511
Flex-Block trim panels, 100 mm, sealed, for depth	1 set(s)	8100.500	8100.500	8100.500	8100.500	8100.500	8100.500	511
Flex-Block corner pieces, 200 mm	1 set(s)	8200.000	8200.000	8200.000	8200.000	8200.000	8200.000	511
Flex-Block trim panels, 200 mm, sealed, for width	1 set(s)	8200.600	8200.800	8200.120	8200.600	8200.800	8200.120	511
Flex-Block trim panels, 200 mm, sealed, for depth	1 set(s)	8200.500	8200.500	8200.500	8200.500	8200.500	8200.500	511
Base/plinth components, front and rear, 100 mm	1 set(s)	8601.600	8601.800	8601.200	8601.600	8601.800	8601.200	513
Base/plinth trim panels, side, 100 mm	1 set(s)	8601.050	8601.050	8601.050	8601.050	8601.050	8601.050	514
Base/plinth components, front and rear, 200 mm	1 set(s)	8602.600	8602.800	8602.200	8602.600	8602.800	8602.200	513
Base/plinth trim panels, side, 200 mm	1 set(s)	8602.050	8602.050	8602.050	8602.050	8602.050	8602.050	514
Levelling feet	4 pc(s).	4612.000	4612.000	4612.000	4612.000	4612.000	4612.000	520
Cable clamp rails	2 pc(s).	4191.000	4192.000	4196.000	4191.000	4192.000	4196.000	665
C rails 30/15	6 pc(s).	4944.000	4945.000	4947.000	4944.000	4945.000	4947.000	612
Section for cable entry, rear		8802.065	8802.085	8802.125	8802.065	8802.085	8802.125	652
	Packs of	1 set(s)	1 set(s)	2 set(s)	1 set(s)	1 set(s)	2 set(s)	
Cable entry plates		8800.060	8800.080	8800.120	8800.060	8800.080	8800.120	650
	Packs of	2 pc(s).	2 pc(s).	4 pc(s).	2 pc(s).	2 pc(s).	4 pc(s).	
Snap-on nut TS		see page	see page	see page	see page	see page	see page	618
TS support strips		see page	see page	see page	see page	see page	see page	609
Rail systems		from page	from page	from page	from page	from page	from page	602
Baying system		from page	from page	from page	from page	from page	from page	542
Sheet steel wiring plan pockets		see page	see page	see page	see page	see page	see page	578
180° hinges		see page	see page	see page	see page	see page	see page	574
Door stay for escape routes	1 pc(s).	4583.500	4583.500	4583.500	4583.500	4583.500	4583.500	578
Ride-up roller	10 pc(s).	4538.000	4538.000	4538.000	4538.000	4538.000	4538.000	579
Cable duct for vertical TS section		see page	see page	see page	see page	see page	see page	663
Cable duct		see page	see page	see page	see page	see page	see page	664
Mounting plate		-	-	-	-	-	-	
System lights		from page	from page	from page	from page	from page	from page	634
Earth straps		see page	see page	see page	see page	see page	see page	644
Lock systems		from page	from page	from page	from page	from page	from page	561

Baying systems TS 8

Height 1600 mm, depth 500 mm

Width (B) mm	Packs of	600	800	1200	Page
Height (H) mm		1600	1600	1600	
Depth (T) mm		500	500	500	
Mounting plate width (F) mm		499	699	1099	
Mounting plate height (G) mm		1496	1496	1496	
Model No.	1 pc(s).	8665.500	8865.500	8265.500	
Door(s)		1	1	2	
Weight kg		100.0	103.0	159.3	
2 support strips fitted in the enclosure depth		-	-	-	

Accessories					
Side panels, screw-fastened, sheet steel	2 pc(s).	8165.235	8165.235	8165.235	534
Divider panel		-	-	-	
Divider panel for module plates		-	-	-	
Glazed door		-	-	-	
Flex-Block corner pieces, 100 mm	1 set(s)	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, sealed, for width	1 set(s)	8100.600	8100.800	8100.120	511
Flex-Block trim panels, 100 mm, sealed, for depth	1 set(s)	8100.500	8100.500	8100.500	511
Flex-Block corner pieces, 200 mm	1 set(s)	8200.000	8200.000	8200.000	511
Flex-Block trim panels, 200 mm, sealed, for width	1 set(s)	8200.600	8200.800	8200.120	511
Flex-Block trim panels, 200 mm, sealed, for depth	1 set(s)	8200.500	8200.500	8200.500	511
Base/plinth components, front and rear, 100 mm	1 set(s)	8601.600	8601.800	8601.200	513
Base/plinth trim panels, side, 100 mm	1 set(s)	8601.050	8601.050	8601.050	514
Base/plinth components, front and rear, 200 mm	1 set(s)	8602.600	8602.800	8602.200	513
Base/plinth trim panels, side, 200 mm	1 set(s)	8602.050	8602.050	8602.050	514
Levelling feet	4 pc(s).	4612.000	4612.000	4612.000	520
Cable clamp rails	2 pc(s).	4191.000	4192.000	4196.000	665
C rails 30/15	6 pc(s).	4944.000	4945.000	4947.000	612
Section for cable entry, rear		8802.065	8802.085	8802.125	652
	Packs of	1 set(s)	1 set(s)	2 set(s)	
Cable entry plates		8800.060	8800.080	8800.120	650
	Packs of	2 pc(s).	2 pc(s).	4 pc(s).	
Snap-on nut TS		see page	see page	see page	618
TS support strips		see page	see page	see page	609
Rail systems		from page	from page	from page	602
Baying system		from page	from page	from page	542
Sheet steel wiring plan pockets		see page	see page	see page	578
180° hinges		see page	see page	see page	574
Door stay for escape routes	1 pc(s).	4583.500	4583.500	4583.500	578
Ride-up roller	10 pc(s).	4538.000	4538.000	4538.000	579
Cable duct for vertical TS section		see page	see page	see page	663
Cable duct		see page	see page	see page	664
Mounting plate		-	-	-	
System lights		from page	from page	from page	634
Earth straps		see page	see page	see page	644
Lock systems		from page	from page	from page	561

Baying systems TS 8

Height 1800 mm, depth 400 mm

Width (B) mm	Packs of	600	800	1000	1000	1200	Page
Height (H) mm		1800	1800	1800	1800	1800	
Depth (T) mm		400	400	400	400	400	
Mounting plate width (F) mm		499	699	899	899	1099	
Mounting plate height (G) mm		1696	1696	1696	1696	1696	
Model No.	1 pc(s).	8684.500	8884.500	8080.500	8084.500	8284.500	
Door(s)		1	1	2	1	2	
Weight kg		91.3	113.5	140.0	136.4	170.6	
2 support strips fitted in the enclosure depth		–	–	–	–	–	
Accessories							
Side panels, screw-fastened, sheet steel	2 pc(s).	8184.235	8184.235	8184.235	8184.235	8184.235	534
Divider panel	1 pc(s).	8609.840	8609.840	8609.840	8609.840	8609.840	537
Divider panel for module plates		–	–	–	–	–	
Glazed door	1 pc(s).	8610.685	8610.885	–	–	–	549
Flex-Block corner pieces, 100 mm	1 set(s)	8100.000	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, sealed, for width	1 set(s)	8100.600	8100.800	8100.010	8100.010	8100.120	511
Flex-Block trim panels, 100 mm, sealed, for depth	1 set(s)	8100.400	8100.400	8100.400	8100.400	8100.400	511
Flex-Block corner pieces, 200 mm	1 set(s)	8200.000	8200.000	8200.000	8200.000	8200.000	511
Flex-Block trim panels, 200 mm, sealed, for width	1 set(s)	8200.600	8200.800	8200.010	8200.010	8200.120	511
Flex-Block trim panels, 200 mm, sealed, for depth	1 set(s)	8200.400	8200.400	8200.400	8200.400	8200.400	511
Base/plinth components, front and rear, 100 mm	1 set(s)	8601.600	8601.800	8601.000	8601.000	8601.200	513
Base/plinth trim panels, side, 100 mm	1 set(s)	8601.040	8601.040	8601.040	8601.040	8601.040	514
Base/plinth components, front and rear, 200 mm	1 set(s)	8602.600	8602.800	8602.000	8602.000	8602.200	513
Base/plinth trim panels, side, 200 mm	1 set(s)	8602.040	8602.040	8602.040	8602.040	8602.040	514
Levelling feet	4 pc(s).	4612.000	4612.000	4612.000	4612.000	4612.000	520
Cable clamp rails	2 pc(s).	4191.000	4192.000	4336.000	4336.000	4196.000	665
C rails 30/15	6 pc(s).	4944.000	4945.000	4946.000	4946.000	4947.000	612
Section for cable entry, rear		8802.065	8802.085	8802.105	8802.105	8802.125	652
	Packs of	1 set(s)	1 set(s)	2 set(s)	2 set(s)	2 set(s)	
Cable entry plates		8800.060	8800.080	8800.100	8800.100	8800.120	650
	Packs of	2 pc(s).	2 pc(s).	4 pc(s).	4 pc(s).	4 pc(s).	
Snap-on nut TS		see page	see page	see page	see page	see page	618
TS support strips	20 pc(s).	4596.000	see page	see page	see page	see page	609
Rail systems		from page	from page	from page	from page	from page	602
Baying system		from page	from page	from page	from page	from page	542
Sheet steel wiring plan pockets	1 pc(s).	see page	see page	see page	4124.000	see page	578
180° hinges		see page	see page	see page	see page	see page	574
Door stay for escape routes	1 pc(s).	4583.500	4583.500	4583.500	4583.500	4583.500	578
Ride-up roller	10 pc(s).	4538.000	4538.000	4538.000	4538.000	4538.000	579
Cable duct for vertical TS section		see page	see page	see page	see page	see page	663
Cable duct		see page	see page	see page	see page	see page	664
Mounting plate		–	–	–	–	–	
System lights		from page	from page	from page	from page	from page	634
Earth straps		see page	see page	see page	see page	see page	644
Lock systems		from page	from page	from page	from page	from page	561

Baying systems TS 8

Height 1800 mm, depth 500 mm

Width (B) mm	Packs of	400	600	800	800	1200	Page
Height (H) mm		1800	1800	1800	1800	1800	
Depth (T) mm		500	500	500	500	500	
Mounting plate width (F) mm		–	499	699	699	1099	
Mounting plate height (G) mm		–	1696	1696	1696	1696	
Model No.	1 pc(s).	8485.510	8685.500	8880.500	8885.500	8285.500	
Door(s)		1	1	2	1	2	
Weight kg		49.2	93.8	122.5	115.8	173.3	
2 support strips fitted in the enclosure depth		–	–	–	–	–	
Accessories							
Side panels, screw-fastened, sheet steel	2 pc(s).	8185.235	8185.235	8185.235	8185.235	8185.235	534
Divider panel	1 pc(s).	8609.850	8609.850	8609.850	8609.850	8609.850	537
Divider panel for module plates	1 pc(s).	8609.100	8609.100	8609.100	8609.100	8609.100	538
Glazed door	1 pc(s).	–	8610.685	–	8610.885	–	549
Flex-Block corner pieces, 100 mm	1 set(s)	8100.000	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, sealed, for width	1 set(s)	8100.400	8100.600	8100.800	8100.800	8100.120	511
Flex-Block trim panels, 100 mm, sealed, for depth	1 set(s)	8100.500	8100.500	8100.500	8100.500	8100.500	511
Flex-Block corner pieces, 200 mm	1 set(s)	8200.000	8200.000	8200.000	8200.000	8200.000	511
Flex-Block trim panels, 200 mm, sealed, for width	1 set(s)	8200.400	8200.600	8200.800	8200.800	8200.120	511
Flex-Block trim panels, 200 mm, sealed, for depth	1 set(s)	8200.500	8200.500	8200.500	8200.500	8200.500	511
Base/plinth components, front and rear, 100 mm	1 set(s)	8601.400	8601.600	8601.800	8601.800	8601.200	513
Base/plinth trim panels, side, 100 mm	1 set(s)	8601.050	8601.050	8601.050	8601.050	8601.050	514
Base/plinth components, front and rear, 200 mm	1 set(s)	8602.400	8602.600	8602.800	8602.800	8602.200	513
Base/plinth trim panels, side, 200 mm	1 set(s)	8602.050	8602.050	8602.050	8602.050	8602.050	514
Levelling feet	4 pc(s).	4612.000	4612.000	4612.000	4612.000	4612.000	520
Cable clamp rails	2 pc(s).	4193.000	4191.000	4192.000	4192.000	4196.000	665
C rails 30/15	6 pc(s).	–	4944.000	4945.000	4945.000	4947.000	612
Section for cable entry, rear		–	8802.065	8802.085	8802.085	8802.125	652
	Packs of	–	1 set(s)	1 set(s)	1 set(s)	2 set(s)	
Cable entry plates		–	8800.060	8800.080	8800.080	8800.120	650
	Packs of	–	2 pc(s).	2 pc(s).	2 pc(s).	4 pc(s).	
Snap-on nut TS		see page	see page	see page	see page	see page	618
TS support strips		–	see page	see page	see page	see page	609
Rail systems		from page	from page	from page	from page	from page	602
Baying system		from page	from page	from page	from page	from page	542
Sheet steel wiring plan pockets		–	see page	see page	see page	see page	578
180° hinges		see page	see page	see page	see page	see page	574
Door stay for escape routes	1 pc(s).	–	4583.500	4583.500	4583.500	4583.500	578
Ride-up roller	10 pc(s).	4538.000	4538.000	4538.000	4538.000	4538.000	579
Cable duct for vertical TS section		see page	see page	see page	see page	see page	663
Cable duct		see page	see page	see page	see page	see page	664
Mounting plate	1 pc(s).	8614.180	–	–	–	–	591
System lights		from page	from page	from page	from page	from page	634
Earth straps		see page	see page	see page	see page	see page	644
Lock systems		from page	from page	from page	from page	from page	561

Baying systems TS 8

Height 1800 mm, depth 600 mm

Width (B) mm	Packs of	400	600	800	800	1200	Page
Height (H) mm		1800	1800	1800	1800	1800	
Depth (T) mm		600	600	600	600	600	
Mounting plate width (F) mm		–	499	699	699	1099	
Mounting plate height (G) mm		–	1696	1696	1696	1696	
Model No.	1 pc(s).	8486.510	8686.500	8881.500	8886.500	8286.500	
Door(s)		1	1	2	1	2	
Weight kg		51.7	96.8	125.8	120.3	179.9	
2 support strips fitted in the enclosure depth		■	■	■	■	■	
Accessories							
Side panels, screw-fastened, sheet steel	2 pc(s).	8186.235	8186.235	8186.235	8186.235	8186.235	534
Divider panel	1 pc(s).	8609.860	8609.860	8609.860	8609.860	8609.860	537
Divider panel for module plates	1 pc(s).	8609.110	8609.110	8609.110	8609.110	8609.110	538
Glazed door	1 pc(s).	–	8610.685	–	8610.885	–	549
Flex-Block corner pieces, 100 mm	1 set(s)	8100.000	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, sealed, for width	1 set(s)	8100.400	8100.600	8100.800	8100.800	8100.120	511
Flex-Block trim panels, 100 mm, sealed, for depth	1 set(s)	8100.600	8100.600	8100.600	8100.600	8100.600	511
Flex-Block corner pieces, 200 mm	1 set(s)	8200.000	8200.000	8200.000	8200.000	8200.000	511
Flex-Block trim panels, 200 mm, sealed, for width	1 set(s)	8200.400	8200.600	8200.800	8200.800	8200.120	511
Flex-Block trim panels, 200 mm, sealed, for depth	1 set(s)	8200.600	8200.600	8200.600	8200.600	8200.600	511
Base/plinth components, front and rear, 100 mm	1 set(s)	8601.400	8601.600	8601.800	8601.800	8601.200	513
Base/plinth trim panels, side, 100 mm	1 set(s)	8601.060	8601.060	8601.060	8601.060	8601.060	514
Base/plinth components, front and rear, 200 mm	1 set(s)	8602.400	8602.600	8602.800	8602.800	8602.200	513
Base/plinth trim panels, side, 200 mm	1 set(s)	8602.060	8602.060	8602.060	8602.060	8602.060	514
Levelling feet	4 pc(s).	4612.000	4612.000	4612.000	4612.000	4612.000	520
Cable clamp rails	2 pc(s).	4193.000	4191.000	4192.000	4192.000	4196.000	665
C rails 30/15	6 pc(s).	–	4944.000	4945.000	4945.000	4947.000	612
Section for cable entry, rear		–	8802.065	8802.085	8802.085	8802.125	652
	Packs of	–	1 set(s)	1 set(s)	1 set(s)	2 set(s)	
Cable entry plates		–	8800.060	8800.080	8800.080	8800.120	650
	Packs of	–	2 pc(s).	2 pc(s).	2 pc(s).	4 pc(s).	
Snap-on nut TS		see page	see page	see page	see page	see page	618
TS support strips		–	see page	see page	see page	see page	609
Rail systems		from page	from page	from page	from page	from page	602
Baying system		from page	from page	from page	from page	from page	542
Sheet steel wiring plan pockets		–	see page	see page	see page	see page	578
180° hinges		see page	see page	see page	see page	see page	574
Door stay for escape routes	1 pc(s).	–	4583.500	4583.500	4583.500	4583.500	578
Ride-up roller	10 pc(s).	4538.000	4538.000	4538.000	4538.000	4538.000	579
Cable duct for vertical TS section		see page	see page	see page	see page	see page	663
Cable duct		see page	see page	see page	see page	see page	664
Mounting plate	1 pc(s).	8614.180	–	–	–	–	591
System lights		from page	from page	from page	from page	from page	634
Earth straps		see page	see page	see page	see page	see page	644
Lock systems		from page	from page	from page	from page	from page	561

Baying systems TS 8

Height 2000 mm, depth 400 mm

Width (B) mm	Packs of	600	800	1000	1200	Page
Height (H) mm		2000	2000	2000	2000	
Depth (T) mm		400	400	400	400	
Mounting plate width (F) mm		499	699	899	1099	
Mounting plate height (G) mm		1896	1896	1896	1896	
Model No.	1 pc(s).	8604.500	8804.500	8004.500	8204.500	
Door(s)		1	1	2	2	
Weight kg		99.0	124.0	152.8	184.5	
2 support strips fitted in the enclosure depth		–	–	–	–	

Accessories

Side panels, screw-fastened, sheet steel	2 pc(s).	8104.235	8104.235	8104.235	8104.235	534
Divider panel	1 pc(s).	8609.040	8609.040	8609.040	8609.040	537
Divider panel for module plates		–	–	–	–	
Glazed door	1 pc(s).	8610.605	8610.805	–	–	549
Flex-Block corner pieces, 100 mm	1 set(s)	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, sealed, for width	1 set(s)	8100.600	8100.800	8100.010	8100.120	511
Flex-Block trim panels, 100 mm, sealed, for depth	1 set(s)	8100.400	8100.400	8100.400	8100.400	511
Flex-Block corner pieces, 200 mm	1 set(s)	8200.000	8200.000	8200.000	8200.000	511
Flex-Block trim panels, 200 mm, sealed, for width	1 set(s)	8200.600	8200.800	8200.010	8200.120	511
Flex-Block trim panels, 200 mm, sealed, for depth	1 set(s)	8200.400	8200.400	8200.400	8200.400	511
Base/plinth components, front and rear, 100 mm	1 set(s)	8601.600	8601.800	8601.000	8601.200	513
Base/plinth trim panels, side, 100 mm	1 set(s)	8601.040	8601.040	8601.040	8601.040	514
Base/plinth components, front and rear, 200 mm	1 set(s)	8602.600	8602.800	8602.000	8602.200	513
Base/plinth trim panels, side, 200 mm	1 set(s)	8602.040	8602.040	8602.040	8602.040	514
Levelling feet	4 pc(s).	4612.000	4612.000	4612.000	4612.000	520
Cable clamp rails	2 pc(s).	4191.000	4192.000	4336.000	4196.000	665
C rails 30/15	6 pc(s).	4944.000	4945.000	4946.000	4947.000	612
Section for cable entry, rear		8802.065	8802.085	8802.105	8802.125	652
	Packs of	1 set(s)	1 set(s)	2 set(s)	2 set(s)	
Cable entry plates		8800.060	8800.080	8800.100	8800.120	650
	Packs of	2 pc(s).	2 pc(s).	4 pc(s).	4 pc(s).	
Snap-on nut TS		see page	see page	see page	see page	618
TS support strips		see page	see page	see page	see page	609
Rail systems		from page	from page	from page	from page	602
Baying system		from page	from page	from page	from page	542
Sheet steel wiring plan pockets		see page	see page	see page	see page	578
180° hinges		see page	see page	see page	see page	574
Door stay for escape routes	1 pc(s).	4583.500	4583.500	4583.500	4583.500	578
Ride-up roller	10 pc(s).	4538.000	4538.000	4538.000	4538.000	579
Cable duct for vertical TS section		see page	see page	see page	see page	663
Cable duct		see page	see page	see page	see page	664
Mounting plate		–	–	–	–	
System lights		from page	from page	from page	from page	634
Earth straps		see page	see page	see page	see page	644
Lock systems		from page	from page	from page	from page	561

Baying systems TS 8

Height 2000 mm, depth 500 mm

Width (B) mm	Packs of	400	600	800	1000	1200	Page
Height (H) mm		2000	2000	2000	2000	2000	
Depth (T) mm		500	500	500	500	500	
Mounting plate width (F) mm		–	499	699	899	1099	
Mounting plate height (G) mm		–	1896	1896	1896	1896	
Model No.	1 pc(s).	8405.510	8605.500	8805.500	8005.500	8205.500	
Door(s)		1	1	1	2	2	
Weight kg		60.7	101.3	126.3	157.1	190.6	
2 support strips fitted in the enclosure depth		–	–	–	–	–	
Accessories							
Side panels, screw-fastened, sheet steel	2 pc(s).	8105.235	8105.235	8105.235	8105.235	8105.235	534
Divider panel	1 pc(s).	8609.050	8609.050	8609.050	8609.050	8609.050	537
Divider panel for module plates	1 pc(s).	8609.120	8609.120	8609.120	8609.120	8609.120	538
Glazed door	1 pc(s).	–	8610.605	8610.805	–	–	549
Flex-Block corner pieces, 100 mm	1 set(s)	8100.000	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, sealed, for width	1 set(s)	8100.400	8100.600	8100.800	8100.010	8100.120	511
Flex-Block trim panels, 100 mm, sealed, for depth	1 set(s)	8100.500	8100.500	8100.500	8100.500	8100.500	511
Flex-Block corner pieces, 200 mm	1 set(s)	8200.000	8200.000	8200.000	8200.000	8200.000	511
Flex-Block trim panels, 200 mm, sealed, for width	1 set(s)	8200.400	8200.600	8200.800	8200.010	8200.120	511
Flex-Block trim panels, 200 mm, sealed, for depth	1 set(s)	8200.500	8200.500	8200.500	8200.500	8200.500	511
Base/plinth components, front and rear, 100 mm	1 set(s)	8601.400	8601.600	8601.800	8601.000	8601.200	513
Base/plinth trim panels, side, 100 mm	1 set(s)	8601.050	8601.050	8601.050	8601.050	8601.050	514
Base/plinth components, front and rear, 200 mm	1 set(s)	8602.400	8602.600	8602.800	8602.000	8602.200	513
Base/plinth trim panels, side, 200 mm	1 set(s)	8602.050	8602.050	8602.050	8602.050	8602.050	514
Levelling feet	4 pc(s).	4612.000	4612.000	4612.000	4612.000	4612.000	520
Cable clamp rails	2 pc(s).	4193.000	4191.000	4192.000	4336.000	4196.000	665
C rails 30/15	6 pc(s).	–	4944.000	4945.000	4946.000	4947.000	612
Section for cable entry, rear		–	8802.065	8802.085	8802.105	8802.125	652
	Packs of	–	1 set(s)	1 set(s)	2 set(s)	2 set(s)	
Cable entry plates		–	8800.060	8800.080	8800.100	8800.120	650
	Packs of	–	2 pc(s).	2 pc(s).	4 pc(s).	4 pc(s).	
Snap-on nut TS		see page	see page	see page	see page	see page	618
TS support strips		–	see page	see page	see page	see page	609
Rail systems		from page	from page	from page	from page	from page	602
Baying system		from page	from page	from page	from page	from page	542
Sheet steel wiring plan pockets		–	see page	see page	see page	see page	578
180° hinges		see page	see page	see page	see page	see page	574
Door stay for escape routes	1 pc(s).	–	4583.500	4583.500	4583.500	4583.500	578
Ride-up roller	10 pc(s).	4538.000	4538.000	4538.000	4538.000	4538.000	579
Cable duct for vertical TS section		see page	see page	see page	see page	see page	663
Cable duct		see page	see page	see page	see page	see page	664
Mounting plate	1 pc(s).	8614.200	–	–	–	–	591
System lights		from page	from page	from page	from page	from page	634
Earth straps		see page	see page	see page	see page	see page	644
Lock systems		from page	from page	from page	from page	from page	561

Baying systems TS 8

Height 2000 mm, depth 600 mm

Width (B) mm	Packs of	400	600	800	1000	1200	Page
Height (H) mm		2000	2000	2000	2000	2000	
Depth (T) mm		600	600	600	600	600	
Mounting plate width (F) mm		–	499	699	899	1099	
Mounting plate height (G) mm		–	1896	1896	1896	1896	
Model No.	1 pc(s).	8406.510	8606.500	8806.500	8006.500	8206.500	
Door(s)		1	1	1	2	2	
Weight kg		55.7	104.0	130.5	161.2	194.6	
2 support strips fitted in the enclosure depth		■	■	■	■	■	
Accessories							
Side panels, screw-fastened, sheet steel	2 pc(s).	8106.235	8106.235	8106.235	8106.235	8106.235	534
Divider panel	1 pc(s).	8609.060	8609.060	8609.060	8609.060	8609.060	537
Divider panel for module plates	1 pc(s).	8609.130	8609.130	8609.130	8609.130	8609.130	538
Glazed door	1 pc(s).	–	8610.605	8610.805	–	–	549
Flex-Block corner pieces, 100 mm	1 set(s)	8100.000	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, sealed, for width	1 set(s)	8100.400	8100.600	8100.800	8100.010	8100.120	511
Flex-Block trim panels, 100 mm, sealed, for depth	1 set(s)	8100.600	8100.600	8100.600	8100.600	8100.600	511
Flex-Block corner pieces, 200 mm	1 set(s)	8200.000	8200.000	8200.000	8200.000	8200.000	511
Flex-Block trim panels, 200 mm, sealed, for width	1 set(s)	8200.400	8200.600	8200.800	8200.010	8200.120	511
Flex-Block trim panels, 200 mm, sealed, for depth	1 set(s)	8200.600	8200.600	8200.600	8200.600	8200.600	511
Base/plinth components, front and rear, 100 mm	1 set(s)	8601.400	8601.600	8601.800	8601.000	8601.200	513
Base/plinth trim panels, side, 100 mm	1 set(s)	8601.060	8601.060	8601.060	8601.060	8601.060	514
Base/plinth components, front and rear, 200 mm	1 set(s)	8602.400	8602.600	8602.800	8602.000	8602.200	513
Base/plinth trim panels, side, 200 mm	1 set(s)	8602.060	8602.060	see page	8602.060	8602.060	514
Levelling feet	4 pc(s).	4612.000	4612.000	4612.000	4612.000	4612.000	520
Cable clamp rails	2 pc(s).	4193.000	4191.000	4192.000	4336.000	4196.000	665
C rails 30/15	6 pc(s).	–	4944.000	4945.000	4946.000	4947.000	612
Section for cable entry, rear		–	8802.065	8802.085	8802.105	8802.125	652
	Packs of	–	1 set(s)	1 set(s)	2 set(s)	2 set(s)	
Cable entry plates		–	8800.060	8800.080	8800.100	8800.120	650
	Packs of	–	2 pc(s).	2 pc(s).	4 pc(s).	4 pc(s).	
Snap-on nut TS		see page	see page	see page	see page	see page	618
TS support strips		–	see page	see page	see page	see page	609
Rail systems		from page	from page	from page	from page	from page	602
Baying system		from page	from page	from page	from page	from page	542
Sheet steel wiring plan pockets		–	see page	see page	see page	see page	578
180° hinges		see page	see page	see page	see page	see page	574
Door stay for escape routes	1 pc(s).	–	4583.500	4583.500	4583.500	4583.500	578
Ride-up roller	10 pc(s).	4538.000	4538.000	4538.000	4538.000	4538.000	579
Cable duct for vertical TS section		see page	see page	see page	see page	see page	663
Cable duct		see page	see page	see page	see page	see page	664
Mounting plate	1 pc(s).	8614.200	–	–	–	–	591
System lights		from page	from page	from page	from page	from page	634
Earth straps		see page	see page	see page	see page	see page	644
Lock systems		from page	from page	from page	from page	from page	561

Height 2000 mm, depth 800 mm

Width (B) mm	Packs of	600	800	1200	Page
Height (H) mm		2000	2000	2000	
Depth (T) mm		800	800	800	
Mounting plate width (F) mm		499	699	1099	
Mounting plate height (G) mm		1896	1896	1896	
Model No.	1 pc(s).	8608.500	8808.500	8208.500	
Door(s)		1	1	2	
Weight kg		111.3	137.0	203.0	
2 support strips fitted in the enclosure depth		■	■	■	
Accessories					
Side panels, screw-fastened, sheet steel	2 pc(s).	8108.235	8108.235	8108.235	534
Divider panel	1 pc(s).	8609.080	8609.080	8609.080	537
Divider panel for module plates		–	–	–	
Glazed door	1 pc(s).	8610.605	8610.805	–	549
Flex-Block corner pieces, 100 mm	1 set(s)	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, sealed, for width	1 set(s)	8100.600	8100.800	8100.120	511
Flex-Block trim panels, 100 mm, sealed, for depth	1 set(s)	8100.800	8100.800	8100.800	511
Flex-Block corner pieces, 200 mm	1 set(s)	8200.000	8200.000	8200.000	511
Flex-Block trim panels, 200 mm, sealed, for width	1 set(s)	8200.600	8200.800	8200.120	511
Flex-Block trim panels, 200 mm, sealed, for depth	1 set(s)	8200.800	8200.800	8200.800	511
Base/plinth components, front and rear, 100 mm	1 set(s)	8601.600	8601.800	8601.200	513
Base/plinth trim panels, side, 100 mm	1 set(s)	8601.080	8601.080	8601.080	514
Base/plinth components, front and rear, 200 mm	1 set(s)	8602.600	8602.800	8602.200	513
Base/plinth trim panels, side, 200 mm	1 set(s)	8602.080	8602.080	8602.080	514
Levelling feet	4 pc(s).	4612.000	4612.000	4612.000	520
Cable clamp rails	2 pc(s).	4191.000	4192.000	4196.000	665
C rails 30/15	6 pc(s).	4944.000	4945.000	4947.000	612
Section for cable entry, rear		8802.065	8802.085	8802.125	652
	Packs of	1 set(s)	1 set(s)	2 set(s)	
Cable entry plates		8800.060	8800.080	8800.120	650
	Packs of	2 pc(s).	2 pc(s).	4 pc(s).	
Snap-on nut TS		see page	see page	see page	618
TS support strips		see page	see page	see page	609
Rail systems		from page	from page	from page	602
Baying system		from page	from page	from page	542
Sheet steel wiring plan pockets		see page	see page	see page	578
180° hinges		see page	see page	see page	574
Door stay for escape routes	1 pc(s).	4583.500	4583.500	4583.500	578
Ride-up roller	10 pc(s).	4538.000	4538.000	4538.000	579
Cable duct for vertical TS section		see page	see page	see page	663
Cable duct		see page	see page	see page	664
Mounting plate		–	–	–	
System lights		from page	from page	from page	634
Earth straps		see page	see page	see page	644
Lock systems		from page	from page	from page	561

Baying systems TS 8

Height 2200 mm, depth 600 mm

Width (B) mm	Packs of	600	800	1200	Page
Height (H) mm		2200	2200	2200	
Depth (T) mm		600	600	600	
Mounting plate width (F) mm		499	699	1099	
Mounting plate height (G) mm		2096	2096	2096	
Model No.	1 pc(s).	8626.500	8826.500	8226.500	
Door(s)		1	1	2	
Weight kg		113.1	139.3	208.0	
2 support strips fitted in the enclosure depth		■	■	■	

Accessories					
Side panels, screw-fastened, sheet steel	2 pc(s).	8126.235	8126.235	8126.235	534
Divider panel	1 pc(s).	8609.260	8609.260	8609.260	537
Divider panel for module plates		–	–	–	538
Glazed door	1 pc(s).	8610.625	8610.825	–	549
Flex-Block corner pieces, 100 mm	1 set(s)	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, sealed, for width	1 set(s)	8100.600	8100.800	8100.120	511
Flex-Block trim panels, 100 mm, sealed, for depth	1 set(s)	8100.600	8100.600	8100.600	511
Flex-Block corner pieces, 200 mm	1 set(s)	8200.000	8200.000	8200.000	511
Flex-Block trim panels, 200 mm, sealed, for width	1 set(s)	8200.600	8200.800	8200.120	511
Flex-Block trim panels, 200 mm, sealed, for depth	1 set(s)	8200.600	8200.600	8200.600	511
Base/plinth components, front and rear, 100 mm	1 set(s)	8601.600	8601.800	8601.200	513
Base/plinth trim panels, side, 100 mm	1 set(s)	8601.060	8601.060	8601.060	514
Base/plinth components, front and rear, 200 mm	1 set(s)	8602.600	8602.800	8602.200	513
Base/plinth trim panels, side, 200 mm	1 set(s)	8602.060	8602.060	8602.060	514
Levelling feet	4 pc(s).	4612.000	4612.000	4612.000	520
Cable clamp rails	2 pc(s).	4191.000	4192.000	4196.000	665
C rails 30/15	6 pc(s).	4944.000	4945.000	4947.000	612
Section for cable entry, rear		8802.065	8802.085	8802.125	652
	Packs of	1 set(s)	1 set(s)	2 set(s)	
Cable entry plates		8800.060	8800.080	8800.120	650
	Packs of	2 pc(s).	2 pc(s).	4 pc(s).	
Snap-on nut TS		see page	see page	see page	618
TS support strips		see page	see page	see page	609
Rail systems		from page	from page	from page	602
Baying system		from page	from page	from page	542
Sheet steel wiring plan pockets		see page	see page	see page	578
180° hinges		see page	see page	see page	574
Door stay for escape routes	1 pc(s).	4583.500	4583.500	4583.500	578
Ride-up roller	10 pc(s).	4538.000	4538.000	4538.000	579
Cable duct for vertical TS section		see page	see page	see page	663
Cable duct		see page	see page	see page	664
Mounting plate		–	–	–	
System lights		from page	from page	from page	634
Earth straps		see page	see page	see page	644
Lock systems		from page	from page	from page	561



System accessories Page 507 482.6 mm (19") installation accessories Page 678 482.6 mm (19") climate control Page 307

Material and surface finish:

- Enclosure frame: Sheet steel, 1.5 mm, dipcoat-primed
- Roof: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Front frame: Extruded aluminium section with die-cast corner pieces, powder-coated

- Rear door: Sheet steel, 2 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Gland plates: Sheet steel, 1.5 mm, zinc-plated
- Adaptor sections: Aluminium

Colour:

- RAL 7035

Supply includes:

- Enclosure frame
- Front frame (r/h hinge, opening angle 130°, held on the left via mechanical snap fasteners)
- Rear door (r/h hinge, may be swapped to opposite side)
- Roof
- Adaptor sections, 482.6 mm (19") attachment level
- Gland plates

Approvals:

- UL
- cUL

Technical details:

Available on the Internet

Electronic enclosures

Units U	Packs of	33	33	42	42	Page
Width mm		600	600	600	600	
Height mm		1600	1600	2000	2000	
Depth mm		600	800	600	800	
Model No.	1 pc(s).	8410.510	8418.510	8430.510	8438.510	
Door(s)		1	1	1	1	
Accessories						
Side panels, screw-fastened, sheet steel	2 pc(s).	8166.235	8168.235	8106.235	8108.235	534
Flex-Block corner pieces, 100 mm	1 set(s)	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, sealed, for width	1 set(s)	8100.600	8100.600	8100.600	8100.600	511
Flex-Block trim panels, 100 mm, sealed, for depth	1 set(s)	8100.600	8100.800	8100.600	8100.800	511
Flex-Block corner pieces, 200 mm	1 set(s)	8200.000	8200.000	8200.000	8200.000	511
Flex-Block trim panels, 200 mm, sealed, for width	1 set(s)	8200.600	8200.600	8200.600	8200.600	511
Flex-Block trim panels, 200 mm, sealed, for depth	1 set(s)	8200.600	8200.800	8200.600	8200.800	511
Base/plinth components, front and rear, 100 mm	1 set(s)	8601.600	8601.600	8601.600	8601.600	513
Base/plinth trim panels, side, 100 mm	1 set(s)	8601.060	8601.080	8601.060	8601.080	514
Base/plinth components, front and rear, 200 mm	1 set(s)	8602.600	8602.600	8602.600	8602.600	513
Base/plinth trim panels, side, 200 mm	1 set(s)	8602.060	8602.080	8602.060	8602.080	514
Levelling feet	4 pc(s).	4612.000	4612.000	4612.000	4612.000	520
Cable clamp rails	2 pc(s).	4191.000	4191.000	4191.000	4191.000	665
C rails 30/15	6 pc(s).	4944.000	4944.000	4944.000	4944.000	612
Baying system		from page	from page	from page	from page	542
Section for cable entry, rear	1 set(s)	8802.065	8802.065	8802.065	8802.065	652
Adaptor sections, 482.6 mm (19")	2 pc(s).	8613.360	8613.360	8613.300	8613.300	684
LED system light	1 pc(s).	4140.830	4140.830	4140.830	4140.830	637
Compact light	1 pc(s).	4140.010	4140.010	4140.010	4140.010	636
Lock systems		from page	from page	from page	from page	561

Baying systems TS 8



System accessories Page 507 Cable entry Page 650

Material and surface finish:

- Enclosure frame: Sheet steel, 1.5 mm, dipcoat-primed and powder-coated, textured paint
- Roof: Sheet steel, 1.5 mm, dipcoat-primed and powder-coated, textured paint
- Door: Sheet steel, 2 mm, dipcoat-primed and powder-coated, textured paint
- Rear panel: Sheet steel, 1.5 mm, dipcoat-primed and powder-coated, textured paint

- Base: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Mounting plate: Sheet steel, 3 mm, zinc-plated

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 66

Protection category NEMA:

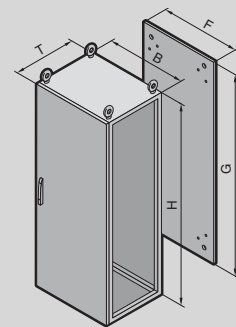
- NEMA 4

Supply includes:

- Enclosure frame with door
- Roof plate
- Base, solid
- Rear panel
- Mounting plate
- 4 eyebolts
- Lock: 3 mm double-bit

Approvals:

- UL
- cUL



IP 66/NEMA 4

Width (B) mm	Packs of	800	Page
Height (H) mm		2000	
Depth (T) mm		600	
Mounting plate width (F) mm		699	
Mounting plate height (G) mm		1896	
Model No.	1 pc(s).	8806.580	
Accessories			
Side panels, screw-fastened, sheet steel	2 pc(s).	8106.235	534
Quick-fit baying clamp, one-piece	6 pc(s).	8800.500	543
Baying clamp, horizontal	4 pc(s).	8800.400	543
Baying frame IP 66/NEMA 4, NEMA 4X	1 pc(s).	8700.010	535
Angular baying bracket	4 pc(s).	8800.430	545
Base/plinth components, front and rear, 100 mm	1 set(s)	8601.800	513
Base/plinth trim panels, side, 100 mm	1 set(s)	8601.060	514
Base/plinth components, front and rear, 200 mm	1 set(s)	8602.800	513
Base/plinth trim panels, side, 200 mm	1 set(s)	8602.060	514
Cable clamp rails	2 pc(s).	4192.000	665
Rail systems		from page	602
Sheet steel wiring plan pockets	1 pc(s).	4118.000	578
Cable duct		see page	664
System lights		from page	634
Lock systems		from page	561



System accessories Page 507 ISV assembly modules Page 299 TS enclosure (WxD 600 x 400/600 mm) Page 62

Material and surface finish:

- Enclosure frame: Sheet steel, 1.5 mm, dipcoat-primed
- Roof: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Door: Sheet steel, 2 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Rear panel: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Gland plates: Sheet steel, 1.5 mm, zinc-plated

Colour:

- RAL 7035

Basis of test:

- IEC 61 439-1/-2

Protection category IP to IEC 60 529:

- IP 55

Protection category NEMA:

- NEMA 12

Supply includes:

- Enclosure frame with door(s)
- Three-piece gland plates
- Rear panel
- Roof plate
- 4 eyebolts
- Lock: 3 mm double-bit

Distribution enclosures

Width mm	Packs of	850	850	1100	1100	Page
Height mm		2000	2000	2000	2000	
Depth mm		400	600	400	600	
Model No.	1 pc(s).	9666.955	9666.915	9666.965	9666.925	
Door(s)		1	1	2	2	
Weight kg		111.0	117.0	146.0	156.0	
Also required						
Mounting angle	2 pc(s).	9666.712	9666.712	9666.712	9666.712	
Installation kit	1 pc(s).	9666.910	9666.910	9666.920	9666.920	
Depth stay	2 pc(s).	-	-	9666.730	9666.730	
Accessories						
Side panels, screw-fastened, sheet steel	2 pc(s).	8104.235	8106.235	8104.235	8106.235	534
Base/plinth components, front and rear, 100 mm	1 set(s)	8601.850	8601.850	8601.300	8601.300	513
Base/plinth trim panels, side, 100 mm	1 set(s)	8601.040	8601.060	8601.040	8601.060	514
Base/plinth components, front and rear, 200 mm	1 set(s)	8602.850	8602.850	8602.100	8602.100	513
Base/plinth trim panels, side, 200 mm	1 set(s)	8602.040	8602.060	8602.040	8602.060	514
Levelling feet	4 pc(s).	4612.000	4612.000	4612.000	4612.000	520
Roof plates	1 pc(s).	9665.953	9665.913	9665.963	9665.923	583
Cable entry glands		see page	see page	see page	see page	584
Lock systems		from page	from page	from page	from page	561
Angular baying bracket	4 pc(s).	8800.430	8800.430	8800.430	8800.430	545
Baying connector, external	6 pc(s).	8800.490	8800.490	8800.490	8800.490	544

Baying systems TS 8



System accessories Page 507 **Installation accessories for TS modular front design** Page 552 **Compartment configuration** Page 283

Material and surface finish:

- Enclosure frame: Sheet steel, 1.5 mm, dipcoat-primed
- Rear panel: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Gland plates: Sheet steel, 1.5 mm, zinc-plated

Colour:

- RAL 7035

Basis of test:

- IEC 61 439-1/-2
- IEC 61 641

Protection category IP to

IEC 60 529:

- Up to IP 54, depending on the panels

Supply includes:

- Enclosure frame
- Rear panel
- Three-piece gland plates

Technical details:

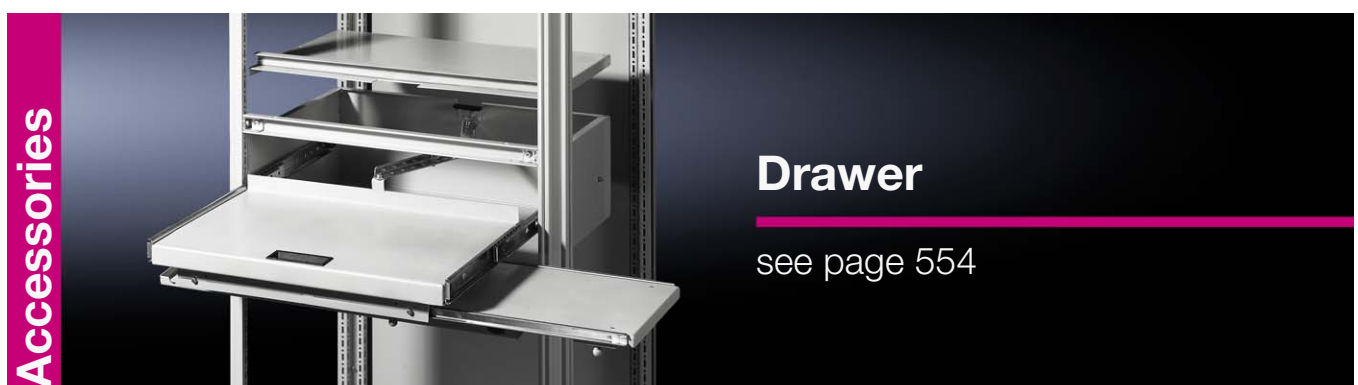
Available on the Internet

Modular enclosures, height 2000 mm

Width mm	Packs of	400	600	800	400	600	800	Page
Height mm		2000	2000	2000	2000	2000	2000	
Depth mm		600	600	600	800	800	800	
Model No.	1 pc(s).	9670.406	9670.606	9670.806	9670.408	9670.608	9670.808	
Weight kg		43.8	51.0	61.0	46.0	53.7	64.2	
Accessories								
Side panels, screw-fastened, sheet steel	2 pc(s).	8106.235	8106.235	8106.235	8108.235	8108.235	8108.235	534
Flex-Block corner pieces, 100 mm	1 set(s)	8100.000	8100.000	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, sealed, for width	1 set(s)	8100.400	8100.600	8100.800	8100.400	8100.600	8100.800	511
Flex-Block trim panels, 100 mm, sealed, for depth	1 set(s)	8100.600	8100.600	8100.600	8100.800	8100.800	8100.800	511
Flex-Block corner pieces, 200 mm	1 set(s)	8200.000	8200.000	8200.000	8200.000	8200.000	8200.000	511
Flex-Block trim panels, 200 mm, sealed, for width	1 set(s)	8200.400	8200.600	8200.800	8200.400	8200.600	8200.800	511
Flex-Block trim panels, 200 mm, sealed, for depth	1 set(s)	8200.600	8200.600	8200.600	8200.800	8200.800	8200.800	511
Base/plinth components, front and rear, 100 mm	1 set(s)	8601.400	8601.600	8601.800	8601.400	8601.600	8601.800	513
Base/plinth trim panels, side, 100 mm	1 set(s)	8601.060	8601.060	8601.060	8601.080	8601.080	8601.080	514
Base/plinth components, front and rear, 200 mm	1 set(s)	8602.400	8602.600	8602.800	8602.400	8602.600	8602.800	513
Base/plinth trim panels, side, 200 mm	1 set(s)	8602.060	8602.060	8602.060	8602.080	8602.080	8602.080	514
Levelling feet	4 pc(s).	4612.000	4612.000	4612.000	4612.000	4612.000	4612.000	520
Angular baying bracket	4 pc(s).	8800.430	8800.430	8800.430	8800.430	8800.430	8800.430	545
Baying connector, external	6 pc(s).	8800.490	8800.490	8800.490	8800.490	8800.490	8800.490	544
Roof plates		see page	see page	see page	see page	see page	see page	583
Partial doors		see page	see page	see page	see page	see page	see page	552
Front trim panels, top		see page	see page	see page	see page	see page	see page	553
Front trim panels, bottom		see page	see page	see page	see page	see page	see page	553

Modular enclosures, height 2200 mm

Width mm	Packs of	400	600	800	400	600	800	Page
Height mm		2200	2200	2200	2200	2200	2200	
Depth mm		600	600	600	800	800	800	
Model No.	1 pc(s).	9670.426	9670.626	9670.826	9670.428	9670.628	9670.828	
Weight kg		43.2	54.0	59.4	46.1	55.8	66.0	
Accessories								
Side panels, screw-fastened, sheet steel	2 pc(s).	8126.235	8126.235	8126.235	8128.235	8128.235	8128.235	534
Flex-Block corner pieces, 100 mm	1 set(s)	8100.000	8100.000	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, sealed, for width	1 set(s)	8100.400	8100.600	8100.800	8100.400	8100.600	8100.800	511
Flex-Block trim panels, 100 mm, sealed, for depth	1 set(s)	8100.600	8100.600	8100.600	8100.800	8100.800	8100.800	511
Flex-Block corner pieces, 200 mm	1 set(s)	8200.000	8200.000	8200.000	8200.000	8200.000	8200.000	511
Flex-Block trim panels, 200 mm, sealed, for width	1 set(s)	8200.400	8200.600	8200.800	8200.400	8200.600	8200.800	511
Flex-Block trim panels, 200 mm, sealed, for depth	1 set(s)	8200.600	8200.600	8200.600	8200.800	8200.800	8200.800	511
Base/plinth components, front and rear, 100 mm	1 set(s)	8601.400	8601.600	8601.800	8601.400	8601.600	8601.800	513
Base/plinth trim panels, side, 100 mm	1 set(s)	8601.060	8601.060	8601.060	8601.080	8601.080	8601.080	514
Base/plinth components, front and rear, 200 mm	1 set(s)	8602.400	8602.600	8602.800	8602.400	8602.600	8602.800	513
Base/plinth trim panels, side, 200 mm	1 set(s)	8602.060	8602.060	8602.060	8602.080	8602.080	8602.080	514
Levelling feet	4 pc(s).	4612.000	4612.000	4612.000	4612.000	4612.000	4612.000	520
Angular baying bracket	4 pc(s).	8800.430	8800.430	8800.430	8800.430	8800.430	8800.430	545
Baying connector, external	6 pc(s).	8800.490	8800.490	8800.490	8800.490	8800.490	8800.490	544
Roof plates		see page	see page	see page	see page	see page	see page	583
Partial doors		see page	see page	see page	see page	see page	see page	552
Front trim panels, top		see page	see page	see page	see page	see page	see page	553
Front trim panels, bottom		see page	see page	see page	see page	see page	see page	553



Accessories

Drawer

see page 554

Baying systems TS 8



System accessories Page 507 Compartment configuration Page 283

Material and surface finish:

- Enclosure frame: Sheet steel, 1.5 mm, dipcoat-primed
- Roof: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Door: Sheet steel, 2 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Rear panel: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Gland plates: Sheet steel, 1.5 mm, zinc-plated
- Punched section without mounting flange: Sheet steel, zinc-plated

Colour:

- RAL 7035

Basis of test:

- IEC 61 439-1/-2
- IEC 61 641

Protection category IP to IEC 60 529:

- Up to IP 3X, depending on the panels

Supply includes:

- Enclosure frame with r/h door hinge, left side open
- Roof
- Rear panel
- Three-piece gland plates
- Punched sections without mounting flanges 23 x 73 mm for enclosure height
- Lock: 3 mm double-bit

Technical details:

Available on the Internet

Fuse-switch disconnecter enclosures

Width mm	Packs of	1000	1200	1200	Page
Height mm		2000	2000	2000	
Depth mm		600	600	800	
Model No.	1 pc(s).	9670.006	9670.106	9670.108	
Weight kg		97.0	116.0	123.0	
Accessories					
Side panels, screw-fastened, sheet steel	2 pc(s).	8106.235	8106.235	8108.235	534
Flex-Block corner pieces, 100 mm	1 set(s)	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, sealed, for width	1 set(s)	8100.010	8100.120	8100.120	511
Flex-Block trim panels, 100 mm, sealed, for depth	1 set(s)	8100.600	8100.600	8100.800	511
Flex-Block corner pieces, 200 mm	1 set(s)	8200.000	8200.000	8200.000	511
Flex-Block trim panels, 200 mm, sealed, for width	1 set(s)	8200.010	8200.120	8200.120	511
Flex-Block trim panels, 200 mm, sealed, for depth	1 set(s)	8200.600	8200.600	8200.800	511
Base/plinth components, front and rear, 100 mm	1 set(s)	8601.000	8601.200	8601.200	513
Base/plinth trim panels, side, 100 mm	1 set(s)	8601.060	8601.060	8601.080	514
Base/plinth components, front and rear, 200 mm	1 set(s)	8602.000	8602.200	8602.200	513
Base/plinth trim panels, side, 200 mm	1 set(s)	8602.060	8602.060	8602.080	514
Levelling feet	4 pc(s).	4612.000	4612.000	4612.000	520
Angular baying bracket	4 pc(s).	8800.430	8800.430	8800.430	545
Baying connector, external	6 pc(s).	8800.490	8800.490	8800.490	544
Front trim panels	1 set(s)	9674.340	9674.340	9674.340	290
Contact hazard protection cover plate	1 set(s)	9674.362	9674.366	-	291
Divider panel	1 pc(s).	9674.306	9674.306	9674.308	291
Roof plates	1 pc(s).	9660.255	9660.265	9659.555	583



System accessories Page 507 **Base/plinth** Page 512 **Compartment configuration** Page 283

Material and surface finish:

- Enclosure frame: Sheet steel, 1.5 mm, dipcoat-primed
- Roof: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Front trim panel: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Rear panel: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Gland plate: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint

Colour:

- RAL 7035

Basis of test:

- IEC 61 439-1/-2
- IEC 61 641

Protection category IP to IEC 60 529:

- IP 55

Supply includes:

- Enclosure frame
- Front trim panel
- Roof
- Rear panel
- Gland plate

Technical details:

Available on the Internet

Note:

- The busbar enclosure is on one base/plinth together with the main enclosure, i.e. please select a base/plinth for the main enclosure which is 200 mm wider.

Busbar enclosures

Width mm	Packs of	200	200	200	Page
Height mm		2000	2200	2000	
Depth mm		600	600	800	
Model No.	1 pc(s).	9670.206	9670.226	9670.208	
Weight kg		34.0	36.6	37.5	
Accessories					
Side panels, screw-fastened, sheet steel	2 pc(s).	8106.235	8126.235	8108.235	534
Angular baying bracket	4 pc(s).	8800.430	8800.430	8800.430	545
Baying connector, external	6 pc(s).	8800.490	8800.490	8800.490	544
Coupling set mounting kit	1 set(s)	9674.196	9674.196	9674.198	288

Baying systems TS 8



System accessories Page 507 Baying systems TS 8 Page 62 Baying system TS 8, stainless steel Page 182

The large enclosures in the TS 8 series offer a good level of shielding across a broad frequency range, even in the standard version. For increased EMC requirements, Rittal offers the TS 8 enclosure in a version certified by the VDE with high RF attenuation.

Material:

- Enclosure frame: Sheet steel with aluminium zinc coating, 1.5 mm
- Roof: Sheet steel with aluminium zinc coating, 1.5 mm
- Door: Sheet steel with aluminium zinc coating, 2.0 mm
- Rear panel: Sheet steel with aluminium zinc coating, 1.5 mm
- Gland plates: Sheet steel, 1.5 mm
- Mounting plate: Sheet steel 3.0 mm

Surface finish:

- Enclosure frame: Uncoated
- Door, rear panel and roof: Spray-finished on the outside and paint-free on the inside
- Gland plates: Zinc-plated
- Mounting plate: Zinc-plated

Colour:

- RAL 7035

Supply includes:

- Enclosure frame with door
- Rear panel and roof plate detachable
- Gland plates, divided
- Door hinged on the right, may be swapped to the left
- Mounting plate
- 4 eyebolts

Note:

- For bayed enclosures, the EMC baying seal is required

Approvals:

- VDE



EMC enclosures

Width mm	Packs of	800	800	Page
Height mm		2000	2000	
Depth mm		600	800	
Model No.	1 pc(s).	8806.750	8808.750	
Accessories				
EMC side panels	2 pc(s).	8106.750	8108.750	640
EMC baying seal	1 pc(s).	8800.690	8800.690	640
EMC divider panel seal	1 pc(s).	4348.000	4348.000	640
Base/plinth		from page	from page	510
Rail for EMC shielding bracket and strain relief	1 pc(s).	2388.800	2388.800	641
EMC shielding bracket		see page	see page	641
EMC shield bus		see page	see page	642
EMC gland plates	1 set(s)	8800.680	8800.680	641
EMC earth clamps		see page	see page	642
EMC cable glands		see page	see page	642
Baying system		from page	from page	542
Cable duct for vertical TS section		see page	see page	663
Cable duct		see page	see page	664
Snap-on nut TS		see page	see page	618
Rail systems		from page	from page	602
System lights		from page	from page	634
Earth straps		see page	see page	644
Earthing strap		see page	see page	644
Lock systems		from page	from page	561



System accessories Page 184 **SE 8 stainless steel** Page 185

Free-standing enclosure system based on the TS 8 platform. System accessories for TS 8 interior installation can be used without restriction.

Material and surface finish:

- Enclosure: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Door: Sheet steel, 2 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Rear panel: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint

- Mounting plate: Sheet steel, 3 mm, zinc-plated
- Gland plates: Sheet steel, 1.5 mm, zinc-plated

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 55

Protection category NEMA:

- NEMA 12

Supply includes:

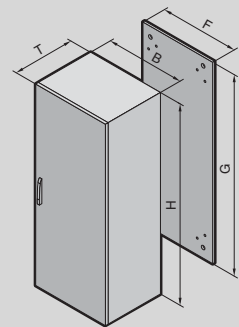
- Enclosure, solid top and sides
- Door(s)
- R/h door hinge with single-door enclosures, may be swapped to opposite side
- Mounting plate
- Gland plates
- Rear panel, detachable
- Lock: 3 mm double-bit

Approvals:

- UL
- cUL

Technical details:

Available on the Internet



Width 600 – 800 mm

Width (B) mm	Packs of	600	800	800	800	800	Page
Height (H) mm		1800	1800	2000	2000	2000	
Depth (T) mm		400	400	400	500	600	
Mounting plate width (F) mm		499	699	699	699	699	
Mounting plate height (G) mm		1696	1696	1896	1896	1896	
Model No.	1 pc(s).	5830.500	5831.500	5832.500	5833.500	5834.500	
Door(s)		1	1	1	1	1	
	Rear panel, one-piece	■	■	■	■	■	
Weight kg		99.0	118.0	131.0	134.0	142.0	

Accessories

Accessories		from page	from page	from page	from page	from page	Page
Base/plinth		from page	from page	from page	from page	from page	510
Levelling feet	4 pc(s).	4612.000	4612.000	4612.000	4612.000	4612.000	520
Eyebolts	4 pc(s).	4568.000	4568.000	4568.000	4568.000	4568.000	586
Rail systems		from page	from page	from page	from page	from page	602
TS punched section with mounting flange, 23 x 73 mm	4 pc(s).	8612.560	8612.580	8612.580	8612.550	8612.560	607
Cable entry plates	2 pc(s).	8800.060	8800.080	8800.080	8800.080	8800.080	650
Section for cable entry, rear	1 set(s)	8802.065	8802.085	8802.085	8802.085	8802.085	652
Cable clamp rails	2 pc(s).	4191.000	4192.000	4192.000	4192.000	4192.000	665
C rails 30/15	6 pc(s).	4944.000	4945.000	4945.000	4945.000	4945.000	612
Sheet steel wiring plan pockets		see page	see page	see page	see page	see page	578
180° hinges		see page	see page	see page	see page	see page	574
System lights		from page	from page	from page	from page	from page	634
Earth straps		see page	see page	see page	see page	see page	644
TS punched section without mounting flange, 45 x 88 mm	2 pc(s).	8612.660	8612.680	8612.680	see page	see page	608
TS punched rail 25 x 38 mm	2 pc(s).	8612.760	8612.780	8612.780	see page	see page	608
TS punched rail 18 x 38 mm		see page	see page	see page	see page	see page	609
Door stay for escape routes	1 pc(s).	4583.500	4583.500	4583.500	4583.500	4583.500	578
Lock systems		from page	from page	from page	from page	from page	561

System enclosures SE 8

Width 1000 – 1800 mm

Width (B) mm	Packs of	1000	1200	1200	1200	1200	1600	1800	Page
Height (H) mm		1800	1800	2000	2000	2000	1800	2000	
Depth (T) mm		400	400	400	500	600	400	500	
Mounting plate width (F) mm		899	1099	1099	1099	1099	1499	1699	
Mounting plate height (G) mm		1696	1696	1896	1896	1896	1696	1896	
Model No.	1 pc(s).	5840.500	5841.500	5843.500	5844.500	5845.500	5842.500	5846.500	
Door(s)		2	2	2	2	2	2	2	
	Rear panel, one-piece	■	■	■	■	■	–	–	
	Rear panel, two-piece	–	–	–	–	–	■	■	
Weight kg		145.0	175.0	193.0	195.0	210.0	222.0	273.0	

Accessories									
Base/plinth		from page	from page	from page	from page	from page	from page	from page	510
Levelling feet	4 pc(s).	4612.000	4612.000	4612.000	4612.000	4612.000	4612.000	4612.000	520
Eyebolts	4 pc(s).	4568.000	4568.000	4568.000	4568.000	4568.000	4568.000	4568.000	586
Rail systems		from page	from page	from page	from page	from page	from page	from page	602
TS punched section with mounting flange, 23 x 73 mm	4 pc(s).	8612.500	8612.520	8612.520	see page	see page	–	8612.550	607
Cable entry plates	4 pc(s).	8800.100	8800.120	8800.120	8800.120	8800.120	–	–	650
Section for cable entry, rear	2 set(s)	8802.105	8802.125	8802.125	8802.125	8802.125	8802.165	–	652
Cable clamp rails	2 pc(s).	4336.000	4196.000	4196.000	4196.000	4196.000	4338.000	4339.000	665
C rails 30/15	6 pc(s).	4946.000	4947.000	4947.000	4947.000	4947.000	–	–	612
Sheet steel wiring plan pockets	1 pc(s).	see page	see page	see page	see page	see page	see page	4123.000	578
180° hinges		see page	see page	see page	see page	see page	see page	see page	574
System lights		from page	from page	from page	from page	from page	from page	from page	634
Earth straps		see page	see page	see page	see page	see page	see page	see page	644
TS punched section without mounting flange, 45 x 88 mm	2 pc(s).	–	–	–	8612.650	8612.660	–	8612.650	608
TS punched rail 25 x 38 mm	2 pc(s).	–	–	–	8612.750	8612.760	–	8612.750	608
TS punched rail 18 x 38 mm	4 pc(s).	8612.240	8612.240	8612.240	8612.250	8612.260	8612.240	8612.250	609
Door stay for escape routes	1 pc(s).	4583.500	4583.500	4583.500	4583.500	4583.500	4583.500	4583.500	578
Lock systems		from page	from page	from page	from page	from page	from page	from page	561

New





Perforex

see page 488



System accessories Page 507 SE 8 stainless steel Page 185

The system enclosure is based on the TS 8 platform. System accessories for interior installation in the TS 8 design can be used without restrictions.

Material and surface finish:

- Enclosure: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Door: Sheet steel, 2 mm, dipcoat-primed, powder-coated on the outside, textured paint
- Rear panel: Sheet steel, 1.5 mm, dipcoat-primed, powder-coated on the outside, textured paint

- Mounting plate: Sheet steel, 3 mm, zinc-plated
- Base: Sheet steel, 1.5 mm, dipcoat-primed and powder-coated, textured paint

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 66

Protection category NEMA:

- NEMA 4

Supply includes:

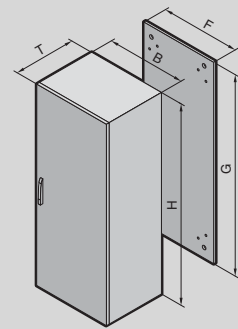
- Enclosure, solid top and sides
- Door(s)
- Door hinged on the right, may be swapped to the left
- Mounting plate
- Base, solid
- Rear panel
- Lock: 3 mm double-bit

Approvals:

- UL
- cUL

Technical details:

Available on the Internet



IP 66/NEMA 4

Width (B) mm	Packs of	600	800	800	Page
Height (H) mm		1800	1800	2000	
Depth (T) mm		400	400	600	
Mounting plate width (F) mm		499	699	699	
Mounting plate height (G) mm		1696	1696	1896	
Model No.	1 pc(s).	5830.580	5831.580	5834.580	
Door(s)		1	1	1	

Accessories

Accessories		600	800	800	Page
Base/plinth components, front and rear, 100 mm	1 set(s)	8601.600	8601.800	8601.800	513
Base/plinth trim panels, side, 100 mm	1 set(s)	8601.040	8601.040	8601.060	514
Base/plinth components, front and rear, 200 mm	1 set(s)	8602.600	8602.800	8602.800	513
Base/plinth trim panels, side, 200 mm	1 set(s)	8602.040	8602.040	8602.060	514
Eyebolts	4 pc(s).	4568.000	4568.000	4568.000	586
Rail systems		from page	from page	from page	602
TS punched section with mounting flange, 23 x 73 mm	4 pc(s).	8612.560	8612.580	see page	607
Cable clamp rails	2 pc(s).	4191.000	4192.000	4192.000	665
C rails 30/15	6 pc(s).	4944.000	4945.000	see page	612
Sheet steel wiring plan pockets		see page	see page	see page	578
180° hinges		see page	see page	see page	574
System lights		from page	from page	from page	634
Earth straps		see page	see page	see page	644
TS punched section without mounting flange, 45 x 88 mm	2 pc(s).	8612.660	8612.680	see page	608
TS punched rail 25 x 38 mm	2 pc(s).	8612.760	8612.780	see page	608
TS punched rail 18 x 38 mm		see page	see page	see page	609
Door stay for escape routes	1 pc(s).	4583.500	4583.500	4583.500	578
Lock systems		from page	from page	from page	561

Rittal – The System.

Faster – better – everywhere.



IT enclosure systems/housings

Network/server enclosures TS IT

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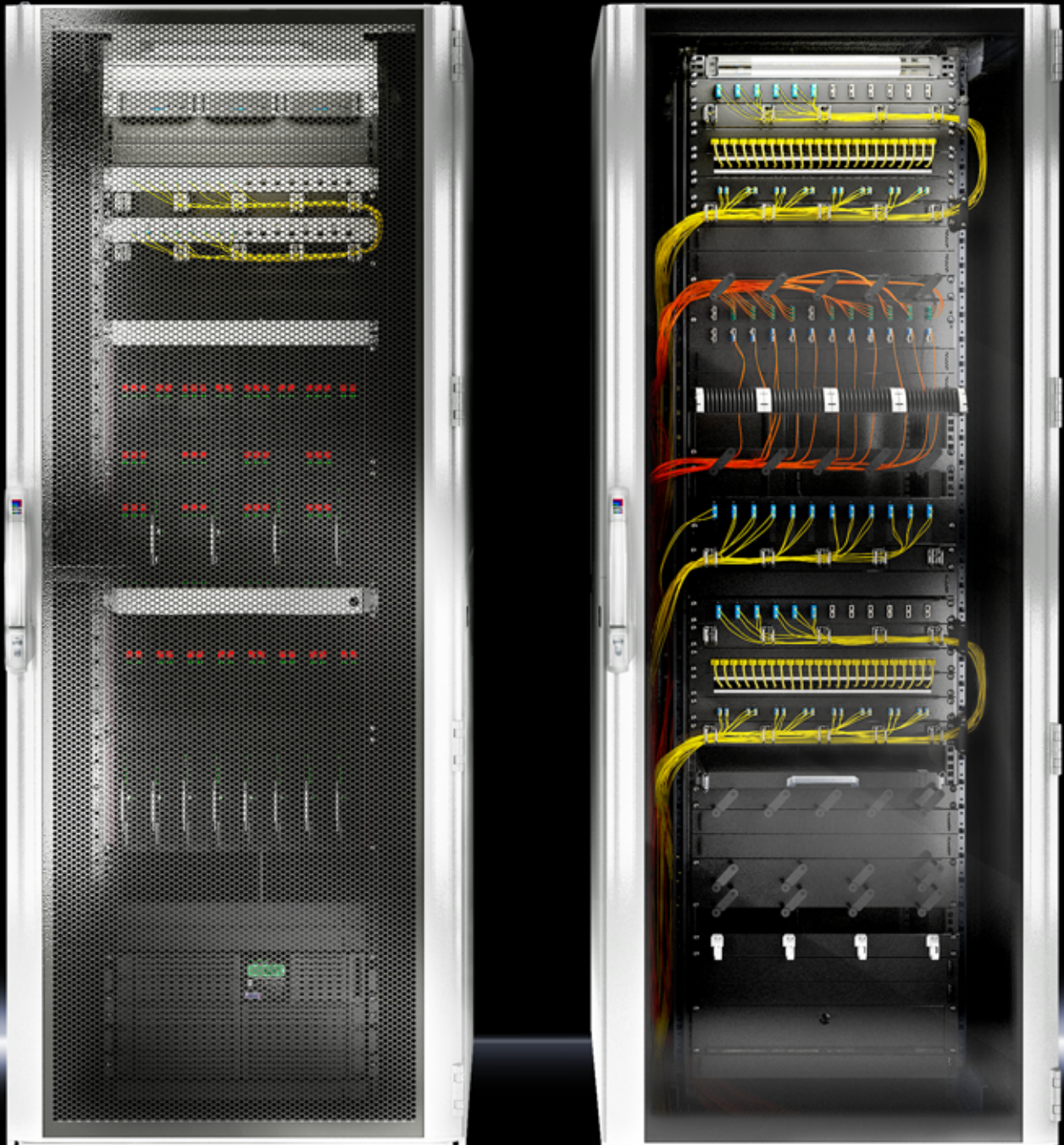
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IT enclosures

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Small fibre-optic distributor with mounting plate and splicing cassette accommodation	105

Network/server enclosures TS IT



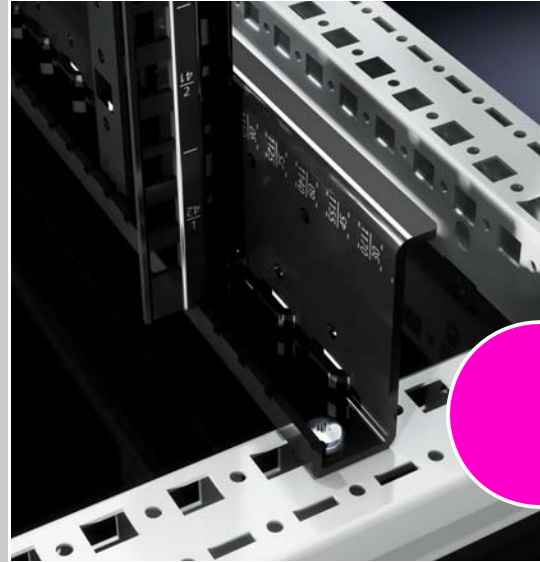
Fast and secure

- Fast: Loosen the 482.6 mm (19") quick-release fastener, slide into the correct position with infinite adjustment, and latch
- Secure: Maximum load capacity up to 15,000 N



Convenience in perfection

- Interior installation – side offset and alternative mounting dimensions are easily achieved
- Distance between levels – directly identified, thanks to integral pitch pattern
- U labelling – front and rear, legible on both sides from the front



Convincing door concept

- Glazed or vented door
- Doors with 180° hinges and comfort handle prepared for individual locks
- Divided rear door for space-optimised positioning
- Optimised air throughput ~ 85% perforated open surface area



Multi-functional roof

- Brush strips for cable entry across the entire enclosure depth
- Cable clamping directly behind the brush strip
- Fan mounting plate or spacer for active and passive climate control



Network/server enclosures TS IT



Tool-free installation

- Tool-free installation of all slide rails, component shelves, telescopic slides and much more
- Simply locate into the rear mounting angle, extend to the required size, and secure at the front



Quick-assembly side panel

- Divided side panel for simple one-person assembly
- Locate side panel at the top, slot in at the bottom, snap shut – and it's done, no screw-fastening required
- Quick-release fasteners with integral lock, additionally with internal latch for enhanced security



Built-in added value

- Prepared for Dynamic Rack Control or cable management
- Ready to use for space-saving, clip-on mounting of the Rittal PDU busbar; on both sides in the zero-U space between the mounting angle and side panel



Ingenious climate control concept

- Fully suitable for rack/suite and room cooling
- Variable termination at the sides with all-round brush strip
- 6 U mounting space additionally integrated into the compartmentalisation



Network/server enclosures TS IT



IT power Page 407 System accessories Page 507 Monitoring Page 445 IT cooling Page 427

Material:

- Sheet steel

Surface finish:

- Enclosure frame: Dipcoat-primed
- Interior installation: Dipcoat-primed
- Doors and roof: Dipcoat-primed, powder-coated

Colour:

- Enclosure frame and panels: RAL 7035
- Interior installation: RAL 9005

Load capacity of the 482.6 mm (19") mounting angles:

- 15000 N

Supply includes:

- TS 8 enclosure frame with doors and roof plate
- Please note the product-specific scope of supply.

Note:

- Depending on the siting type and location, the door opening may vary for selected applications

Approvals:

- UL
- cUL

Technical details:

Available on the Internet

with vented door for room climate control

Units U	Packs of	24	42	42	42	42	Page
Width mm		800	600	600	800	800	
Height mm		1200	2000	2000	2000	2000	
Depth mm		1000	1000	1200	1000	1200	
Distance between mounting levels, pre-configured mm		745	745	745	745	745	
Model No.	1 pc(s).	5504.110	5508.110	5510.110	5509.110	5511.110	
Product-specific scope of supply							
Sheet steel door at the front, vented (vented surface area approx. 85% perforated), 180° hinges	1 pc(s).	■	■	■	■	■	
Sheet steel door at the rear, vented (vented surface area approx. 85% perforated), 180° hinges	1 pc(s).	■	-	-	-	-	
Lock front and rear: Comfort handle for semi-cylinders and security lock 3524 E	1 pc(s).	■	■	■	■	■	
Two 482.6 mm (19") mounting angles front and rear, variably mounted on support strips with quick-release fasteners		■	■	■	■	■	
Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate	1 pc(s).	■	■	■	■	■	
Spacers to raise the fan cover plate, for passive cooling (supplied loose)	4 pc(s).	■	■	■	■	■	
Potential equalisation with earthing point (supplied loose)	1 set(s)	■	■	■	■	■	
Multi-tooth screws M5, cage nuts M5, conductive (supplied loose)	50 pc(s).	■	■	■	■	■	
Sheet steel door at the rear, vertically divided, vented (vented surface area approx. 85% perforated), 180° hinges	1 pc(s).	-	■	■	■	■	
Accessories							
Side panels, divided	1 pc(s).	-	5501.030	5501.040	5501.030	5501.040	536
Side panel, lockable	2 pc(s).	7824.120	7824.200	-	7824.200	-	536
Base mount	2 pc(s).	5501.320	5501.320	5501.350	5501.320	5501.350	524
Gland plates	1 set(s)	5502.550	5502.540	5502.560	5502.550	5502.570	528
Base/plinth		from page	from page	from page	from page	from page	510
Fan mounting plates	1 pc(s).	5502.020	5502.010	5502.010	5502.020	5502.020	437
Air baffle plates	1 set(s)	-	5501.805	5501.805	5501.815	5501.815	692
Cable route	1 pc(s).	-	5502.120	5502.120	5502.120	5502.120	672
Cable duct	1 pc(s).	-	5502.105	5502.105	5502.105	5502.105	673
Component shelves		from page	from page	from page	from page	from page	627
Slide rails		from page	from page	from page	from page	from page	687

Network/server enclosures TS IT

with vented door for room climate control

Units U	Packs of	47	47	47	47	Page
Width mm		600	600	800	800	
Height mm		2200	2200	2200	2200	
Depth mm		1000	1200	1000	1200	
Distance between mounting levels, pre-configured mm		745	745	745	745	
Model No.	1 pc(s).	5513.110	5515.110	5514.110	5516.110	
Product-specific scope of supply						
Sheet steel door at the front, vented (vented surface area approx. 85% perforated), 180° hinges	1 pc(s).	■	■	■	■	
Sheet steel door at the rear, vertically divided, vented (vented surface area approx. 85% perforated), 180° hinges	1 pc(s).	■	■	■	■	
Lock front and rear: Comfort handle for semi-cylinders and security lock 3524 E	1 pc(s).	■	■	■	■	
Two 482.6 mm (19") mounting angles front and rear, variably mounted on support strips with quick-release fasteners		■	■	■	■	
Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate	1 pc(s).	■	■	■	■	
Spacers to raise the fan cover plate, for passive cooling (supplied loose)	4 pc(s).	■	■	■	■	
Potential equalisation with earthing point (supplied loose)	1 set(s)	■	■	■	■	
Multi-tooth screws M5, cage nuts M5, conductive (supplied loose)	50 pc(s).	■	■	■	■	
Accessories						
Side panels, divided	1 pc(s).	5501.060	5501.070	5501.060	5501.070	536
Side panel, lockable	2 pc(s).	7824.220	–	7824.220	–	536
Base mount	2 pc(s).	5501.320	5501.350	5501.320	5501.350	524
Gland plates	1 set(s)	5502.540	5502.560	5502.550	5502.570	528
Base/plinth		from page	from page	from page	from page	510
Fan mounting plates	1 pc(s).	5502.010	5502.010	5502.020	5502.020	437
Air baffle plates	1 set(s)	5501.825	5501.825	5501.835	5501.835	692
Cable route	1 pc(s).	5502.120	5502.120	5502.120	5502.120	672
Cable duct	1 pc(s).	5502.145	5502.145	5502.145	5502.145	673
Component shelves		from page	from page	from page	from page	627
Slide rails		from page	from page	from page	from page	687

New



PDU – Power Distribution Unit

see page 416

Network/server enclosures TS IT



IT power Page 407 System accessories Page 507 Monitoring Page 445 IT cooling Page 427

Material:

- Sheet steel
- Glazed door: Single-pane safety glass, 3 mm

Surface finish:

- Enclosure frame: Dipcoat-primed
- Interior installation: Dipcoat-primed
- Doors and roof: Dipcoat-primed, powder-coated

Colour:

- Enclosure frame and panels: RAL 7035
- Interior installation: RAL 9005

Load capacity of the 482.6 mm (19") mounting angles:

- 15000 N

Supply includes:

- TS 8 enclosure frame with doors and roof plate
- Please note the product-specific scope of supply.

Note:

- Depending on the siting type and location, the door opening may vary for selected applications

Approvals:

- UL
- cUL

Technical details:

Available on the Internet

with glazed door for rack climate control

Units U	Packs of	24	24	38	42	42	Page
Width mm		800	800	800	600	600	
Height mm		1200	1200	1800	2000	2000	
Depth mm		800	1000	800	1000	1200	
Distance between mounting levels, pre-configured mm		545	745	545	745	745	
Model No.	1 pc(s).	5503.120	5504.120	5505.120	5508.120	5510.120	
Product-specific scope of supply							
Glazed aluminium door at the front, 180° hinges	1 pc(s).	■	■	■	■	■	
Sheet steel door at the rear, 180° hinges	1 pc(s).	■	■	-	-	-	
Lock front and rear: Comfort handle for semi-cylinders and security lock 3524 E	1 pc(s).	■	■	■	■	■	
Two 482.6 mm (19") mounting angles front and rear, variably mounted on support strips with quick-release fasteners		■	■	■	■	■	
Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate	1 pc(s).	■	■	■	■	■	
Spacers to raise the fan cover plate, for passive cooling (supplied loose)	4 pc(s).	■	■	■	■	■	
Potential equalisation with earthing point (supplied loose)	1 set(s)	■	■	■	■	■	
Multi-tooth screws M5, cage nuts M5, conductive (supplied loose)	50 pc(s).	■	■	■	■	■	
Sheet steel door at the rear, vertically divided, 180° hinges	1 pc(s).	-	-	■	■	■	
Accessories							
Side panels, divided	1 pc(s).	-	-	5501.000	5501.030	5501.040	536
Side panel, lockable	2 pc(s).	7824.128	7824.120	7824.188	7824.200	-	536
Base mount	2 pc(s).	5501.310	5501.320	5501.310	5501.320	5501.350	524
Gland plates	1 set(s)	5502.530	5502.550	5502.530	5502.540	5502.560	528
Base/plinth		from page	from page	from page	from page	from page	510
Fan mounting plates	1 pc(s).	5502.020	5502.020	5502.020	5502.010	5502.010	437
Air baffle plates	1 set(s)	-	-	-	5501.805	5501.805	692
Cable route	1 pc(s).	-	-	-	5502.120	5502.120	672
Cable duct	1 pc(s).	-	-	-	5502.105	5502.105	673
Component shelves		from page	from page	from page	from page	from page	627
Slide rails		from page	from page	from page	from page	from page	687

Network/server enclosures TS IT

with glazed door for rack climate control

Units U	Packs of	42	42	42	42	47	Page
Width mm		800	800	800	800	800	
Height mm		2000	2000	2000	2000	2200	
Depth mm		600	800	1000	1200	800	
Distance between mounting levels, pre-configured mm		545	545	745	745	745	
Model No.	1 pc(s).	5506.120	5507.120	5509.120	5511.120	5512.120	
Product-specific scope of supply							
Glazed aluminium door at the front, 180° hinges	1 pc(s).	■	■	■	■	■	
Sheet steel door at the rear, vertically divided, 180° hinges	1 pc(s).	■	■	■	■	■	
Lock front and rear: Comfort handle for semi-cylinders and security lock 3524 E	1 pc(s).	■	■	■	■	■	
Two 482.6 mm (19") mounting angles front and rear, variably mounted on support strips with quick-release fasteners		■	■	■	■	■	
Roof plate, multi-piece, removable, for horizontal cable entry at the rear and covered cut-out for fan mounting plate	1 pc(s).	■	-	-	-	-	
Spacers to raise the fan cover plate, for passive cooling (supplied loose)	4 pc(s).	■	■	■	■	■	
Potential equalisation with earthing point (supplied loose)	1 set(s)	■	■	■	■	■	
Multi-tooth screws M5, cage nuts M5, conductive (supplied loose)	50 pc(s).	■	■	■	■	■	
Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate	1 pc(s).	-	■	■	■	■	
Accessories							
Side panels, divided	1 pc(s).	5501.010	5501.020	5501.030	5501.040	5501.050	536
Side panel, lockable	2 pc(s).	7824.206	7824.208	7824.200	-	7824.228	536
Base mount	2 pc(s).	5501.300	5501.310	5501.320	5501.350	5501.310	524
Gland plates	1 set(s)	5502.510	5502.530	5502.550	5502.570	5502.530	528
Base/plinth		from page	from page	from page	from page	from page	510
Fan mounting plates	1 pc(s).	5502.010	5502.020	5502.020	5502.020	5502.020	437
Air baffle plates	1 set(s)	5501.815	5501.815	5501.815	5501.815	5501.835	692
Cable route	1 pc(s).	5502.120	5502.120	5502.120	5502.120	5502.120	672
Cable duct	1 pc(s).	5502.105	5502.105	5502.105	5502.105	5502.145	673
Component shelves		from page	from page	from page	from page	from page	627
Slide rails		from page	from page	from page	from page	from page	687

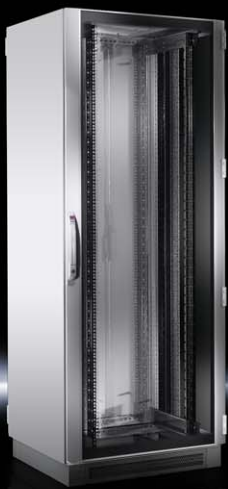
New



LCP – Liquid Cooling Package

see page 429

Network/server enclosures TS IT



IT power Page 407 System accessories Page 507 Monitoring Page 445 IT cooling Page 427

Material:

- Sheet steel
- Glazed door: Single-pane safety glass, 3 mm

Surface finish:

- Enclosure frame: Dipcoat-primed
- Interior installation: Dipcoat-primed
- Doors and roof: Dipcoat-primed, powder-coated

Colour:

- Enclosure frame and panels: RAL 7035
- Interior installation: RAL 9005

Load capacity of the 482.6 mm (19") mounting angles:

- 15000 N

Supply includes:

- TS 8 enclosure frame with doors and roof plate
- Please note the product-specific scope of supply.

Note:

- Depending on the siting type and location, the door opening may vary for selected applications

Technical details:

Available on the Internet

with glazed door for rack climate control, pre-configured

Units U	Packs of		42	Page
Width mm			800	
Height mm			2100	
Depth mm			800	
Distance between mounting levels, pre-configured mm			545	
Model No.	1 pc(s).		5507.150	
Product-specific scope of supply				
Glazed aluminium door at the front, 180° hinges	1 pc(s).		■	
Sheet steel door at the rear, vertically divided, 180° hinges	1 pc(s).		■	
Lock front and rear: Comfort handle for semi-cylinders and security lock 3524 E	1 pc(s).		■	
Two 482.6 mm (19") mounting angles front and rear, variably mounted on support strips with quick-release fasteners			■	
Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate	1 pc(s).		■	
Spacers to raise the fan cover plate, for passive cooling (supplied loose)	4 pc(s).		■	
Potential equalisation incl. central earthing point, pre-configured	1 set(s)		■	
Multi-tooth screws M5, cage nuts M5, conductive (supplied loose)	50 pc(s).		■	
Base mount	1 pc(s).		■	
Base module mounted at front as infill panel	1 pc(s).		■	
Flex-Block base/plinth 100 mm, vented	1 set(s)		■	
Side panels, one-piece, lockable	2 pc(s).		■	
Levelling feet incl. base/plinth adaptor sleeve (supplied loose)	1 set(s)		■	
Accessories				
Gland plates	1 set(s)		5502.530	529
Fan mounting plates	1 pc(s).		5502.020	437
Air baffle plates	1 set(s)		5501.815	692
Cable route	1 pc(s).		5502.120	672
Cable duct	1 pc(s).		5502.105	673
Component shelves			from page	627
Slide rails			from page	687

Network/server enclosures TS IT



IT power Page 407 **System accessories** Page 507 **Monitoring** Page 445 **IT cooling** Page 427

Material:

- Sheet steel
- Glazed aluminium door with 3 mm single-pane safety glass

Surface finish:

- Enclosure frame: Dipcoat-primed
- Interior installation: Dipcoat-primed
- Doors and roof: Dipcoat-primed, powder-coated

Colour:

- Enclosure frame and panels: RAL 7035
- Interior installation: RAL 9005

Protection category IP to IEC 60 529:

- IP 55

Load capacity of the 482.6 mm (19") mounting angles:

- 15000 N

Supply includes:

- TS 8 enclosure frame with doors and roof plate
- Please note the product-specific scope of supply.

Note:

- Depending on the siting type and location, the door opening may vary for selected applications

Approvals:

- UL
- cUL

Technical details:

Available on the Internet

with glazed door for rack climate control, IP 55

Units U	Packs of	42	42	47	Page
Width mm		800	800	800	
Height mm		2000	2000	2200	
Depth mm		800	1000	1000	
Distance between mounting levels, pre-configured mm		545	745	745	
Model No.	1 pc(s).	5507.130	5509.130	5514.130	
Product-specific scope of supply					
Glazed aluminium door at the front, 180° hinges	1 pc(s).	■	■	■	
Sheet steel door at the rear, 180° hinges	1 pc(s).	■	■	■	
Lock front and rear: Comfort handle for semi-cylinders and security lock 3524 E	1 pc(s).	■	■	■	
Base tray and gland plate, multi-piece, solid	1 pc(s).	■	■	■	
Roof plate, one-piece, solid	1 pc(s).	■	■	■	
Two 482.6 mm (19") mounting angles front and rear, variably mounted on support strips with quick-release fasteners		■	■	■	
Potential equalisation with earthing point (supplied loose)	1 pc(s).	■	■	■	
Multi-tooth screws M5, cage nuts M5, conductive (supplied loose)	50 pc(s).	■	■	■	
Baying seal and sealing kit for gland plates (supplied loose)	1 pc(s).	■	■	■	
Accessories					
Side panels, screw-fastened, sheet steel	2 pc(s).	8108.235	8100.235	-	534
Base/plinth		from page	from page	from page	510
Air baffle plates	1 set(s)	5501.815	5501.815	5501.835	692
Cable route	1 pc(s).	5502.120	5502.120	5502.120	672
Component shelves, depth-variable		see page	see page	see page	630
Component shelves, pull-out		see page	see page	see page	630
Cable duct	1 pc(s).	5502.105	5502.105	5502.145	673
Slide rails, static installation	2 pc(s).	5501.400	5501.400	5501.400	687
Slide rails, depth-variable	2 pc(s).	5501.460	5501.480	5501.480	687
Rail systems		from page	from page	from page	602
Cable management		from page	from page	from page	663
PDU international		from page	from page	from page	416

Distributor racks



482.6 mm (19") installation system Page 678 Monitoring Page 445 Power System Module Page 409 Accessories for Data Rack Page 682

Material:

- Profile frame, base/plinth: Sheet steel
- Feet: Die-cast zinc

Colour:

- Profile frame, base/plinth: RAL 7035
- Trim panel, feet: RAL 5018

Load capacity:

- Max. 150 kg, static/level

Supply includes:

- Torsionally stiff profile frame with 482.6 mm (19") punchings
- Stable base/plinth with integral feet, with the option of floor anchoring without base trim panels
- Levelling feet
- Assembly parts

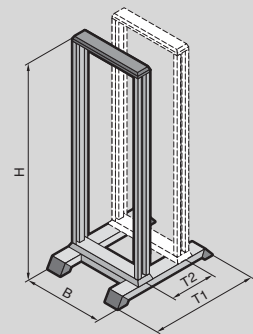
Note:

- Order second mounting level separately

Technical details:

Available on the Internet

Photo shows a configuration example with equipment not included in the scope of supply



Data Rack

Units U	Packs of	31	36	40	45	Page
Width (B) mm		550	550	550	550	
Height (H) mm		1499.5	1721.8	1899.5	2121.8	
Depth (T1) mm		750	750	750	750	
Distance from the second mounting level, 50 mm pitch pattern (T2) mm		150 - 350	150 - 350	150 - 350	150 - 350	
Model No.	1 pc(s).	7391.000	7396.000	7400.000	7445.000	
Accessories						
Second pair of mounting angles	1 pc(s).	7296.000	7297.000	7298.000	7299.000	682
Twin castors	1 set(s)	7495.000	7495.000	7495.000	7495.000	522
Component shelf 2 U, static installation		see page	see page	see page	see page	631
Cable duct	1 pc(s).	5502.105	5502.105	5502.105	5502.145	673
Cable routing across the 482.6 mm (19") mounting level	6 pc(s).	7016.100	7016.100	7016.100	7016.100	677
	6 pc(s).	7016.110	7016.110	7016.110	7016.110	677
Slide rails		see page	see page	see page	see page	687
Baying connector	3 pc(s).	7494.000	7494.000	7494.000	7494.000	682
Depth stays	2 pc(s).	7401.000	7401.000	7401.000	7401.000	682
Continuous slide rail	2 pc(s).	7402.000	7402.000	7402.000	7402.000	682
Keyboard drawer 2 U	1 pc(s).	7281.035	7281.035	7281.035	7281.035	712



System accessories Page 507

Compact 482.6 mm (19") enclosure for small networks.

Benefits:

- May be used as wall-mounted, under-desk or desktop enclosure
- Free access from three sides for interior installation
- Passive ventilation with vent slots
- Rear panel prepared to accommodate a fan
- Freely selectable door hinging

Material:

- Sheet steel
- Viewing window: Single-pane safety glass, 3 mm

Surface finish:

- Powder-coated

Colour:

- RAL 7035

Supply includes:

- Enclosure with glazed door
- Side panels (1 x fixed, 1 x slot-in) with vent slots
- Knockouts for cable entry via roof or base
- Slot-in rear panel with knockouts for cable entry and fan accommodation
- 482.6 mm (19") mounting level, 5 U, horizontal front and rear, depth-variable, distance between levels 434 – 489 mm
- Security lock 12321 on the door, side and rear panel
- 4 plastic feet, self-adhesive

Technical details:

Available on the Internet

Units U	Packs of	5	Page
Width mm		300	
Height mm		540	
Depth mm		600	
Model No.	1 pc(s).	7501.000	
Accessories			
Brush strip	1 pc(s).	7072.200	657
Wall mounting bracket		see page	587
Fan expansion kit	1 set(s)	7980.100	438
Socket strips	1 pc(s).	7240.220	422
Blanking panel, 482.6 mm (19")	2 pc(s).	7151.035	696
Cable management panel		see page	674
Cable entry panel		see page	677

FlatBox



System accessories Page 507

For flexible use as a wall-mounted or floor-standing enclosure.

Benefits:

- Tool-free quick assembly
- System assembly on the open 482.6 mm (19") frame

Material:

- Sheet steel
- Viewing window: Single-pane safety glass, 3 mm

Surface finish:

- Powder-coated

Colour:

- RAL 7035

Supply includes:

- Flat-packed enclosure
- 1 wall section
- 2 basic supports
- 2 roof/base plates, with cut-outs for cable entry via brush strips
- 2 side panels, lockable
- 1 glazed door, lockable, security lock 3524 E, door hinge point selectable
- Connection components for tool-free, fast assembly
- Earthing kit for system-compatible earthing of all enclosure parts

Please note the product-specific scope of supply.

Note:

- Max. installation depth: Depth -112 mm
- Max. distance between two 482.6 mm (19") levels: Depth -126 mm

Technical details:

Available on the Internet

Photo shows a configuration example with equipment not included in the scope of supply

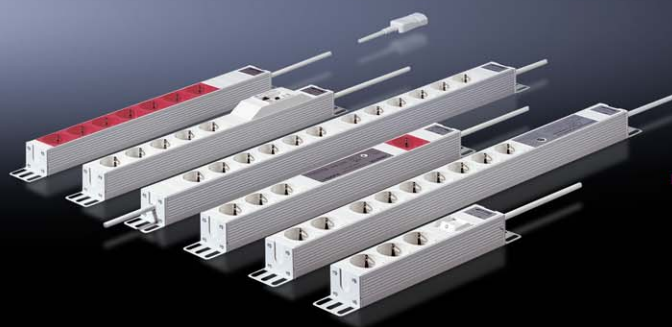
Design with 482.6 mm (19") mounting angles

Units U	Packs of	6	6	9	9	Page
Width mm		600	600	600	600	
Height mm		358	358	492	492	
Depth mm		400	600	400	600	
Model No.	1 pc(s).	7507.000	7507.100	7507.010	7507.110	
Product-specific scope of supply						
482.6 mm (19") mounting angles	2 pc(s).	■	■	■	■	
Accessories						
Mounting angles, 482.6 mm (19")	2 pc(s).	7507.706	7507.706	7507.709	7507.709	686
Levelling feet	4 pc(s).	7507.740	7507.740	7507.740	7507.740	520
Cover plates for fan panels	6 pc(s).	7507.760	7507.760	7507.760	7507.760	440
Earth rail, horizontal	1 pc(s).	7113.000	7113.000	7113.000	7113.000	646
Cable clamp, variable		see page	see page	see page	see page	669
Fan expansion kit		see page	see page	see page	see page	438
Enclosure internal thermostat	1 pc(s).	3110.000	3110.000	3110.000	3110.000	379
Cable management panel	1 pc(s).	5502.205	5502.205	5502.205	5502.205	674
Component shelf 2 U, static installation	1 pc(s).	7119.250	see page	7119.250	see page	631
Component shelves, pull-out	1 set(s)	-	5501.675	-	5501.675	630

Design with 482.6 mm (19") mounting frame

Units U	Packs of	12	12	15	15	18	21	Page
Width mm		600	600	600	700	700	700	
Height mm		625	625	758	758	892	1025	
Depth mm		400	600	400	700	700	700	
Model No.	1 pc(s).	7507.020	7507.120	7507.030	7507.200	7507.210	7507.220	
Product-specific scope of supply								
482.6 mm (19") mounting frame	1 pc(s).	■	■	■	■	■	■	
Levelling feet	4 pc(s).	■	■	■	■	■	■	
Accessories								
Mounting angles, 482.6 mm (19")	2 pc(s).	7507.712	7507.712	7507.715	7507.715	7507.718	7507.721	686
Levelling feet	4 pc(s).	7507.740	7507.740	7507.740	7507.740	7507.740	7507.740	520
Cover plates for fan panels	6 pc(s).	7507.760	7507.760	7507.760	7507.760	7507.760	7507.760	440
Earth rail, horizontal	1 pc(s).	7113.000	7113.000	7113.000	7113.000	7113.000	7113.000	646
Cable clamp, variable		see page	see page	see page	see page	see page	see page	669
Fan expansion kit		see page	see page	see page	see page	see page	see page	438
Enclosure internal thermostat	1 pc(s).	3110.000	3110.000	3110.000	3110.000	3110.000	3110.000	379
Cable management panel	1 pc(s).	5502.205	5502.205	5502.205	5502.205	5502.205	5502.205	674
Component shelf 2 U, static installation	1 pc(s).	7119.250	see page	7119.250	see page	see page	see page	631
Component shelves, pull-out	1 set(s)	–	5501.675	–	5501.675	5501.675	5501.675	630

Accessories



Socket strips

see from page 422

Wall-mounted enclosures EL, 3-part



System accessories Page 507 **Socket strips** Page 422 **Wall mounting bracket** Page 587 **Cable clamps** Page 666

Wall-mounted enclosure with optimum accessibility due to hinged part.

Material:

- Wall and hinged part: Sheet steel, 1.5 mm
- Viewing window: Single-pane safety glass, 3 mm

Surface finish:

- Powder-coated

Colour:

- Wall and hinged part: RAL 7035
- Glazed door: RAL 7035/7015 (slate grey)

Supply includes:

- Wall section
 - Hinged part with 25 mm pitch pattern of holes in the front and rear frame
 - Designer glazed door
- Please note the product-specific scope of supply.

Note:

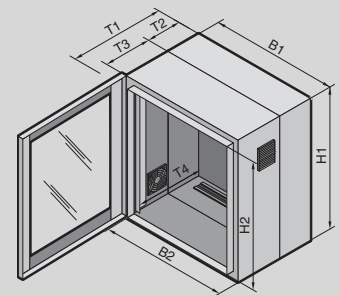
- Protection category IP 54 in conjunction with solid gland plate, top and bottom
- Enclosure 673 mm deep with reinforced wall mounting bracket

Approvals:

- UL
- cUL

Technical details:

Available on the Internet



pre-configured with mounting angles, depth-variable

Units U	Packs of	9	9	15	15	21	21	Page
Width (B1) mm		600	600	600	600	600	600	
Height (H1) mm		478	478	746	746	1012	1012	
Depth (T1) mm		573	673	573	673	573	673	
Clearance width (B2) mm		502	502	502	502	502	502	
Clearance height (H2) mm		415	415	683	683	949	949	
Depth of wall section (T2) mm		135	135	135	135	135	135	
Depth of hinged part (T3) mm		416	516	416	516	416	516	
Max. installation depth (T4) mm		520	620	520	620	520	620	
Load capacity of hinged part (static) kg		45	45	75	75	75	75	
Model No.	1 pc(s).	7709.735	7709.535	7715.735	7715.535	7721.735	7721.535	
Product-specific scope of supply								
Wall section: Gland plate, solid, top		■	■	■	■	■	■	
Wall section: Gland plate with brush strip, bottom		■	■	■	■	■	■	
Wall section: 2 vertical punched rails		■	■	■	■	■	■	
Wall section: C rail mounted horizontally for cable clamping		■	■	■	■	■	■	
Hinged part with two 482.6 mm (19") mounting angles, fully depth adjustable		■	■	■	■	■	■	
Hinged part: Side outlet filters left and right		■	■	■	■	■	■	
Earth rail with star earthing		■	■	■	■	■	■	
4 wall mounting brackets 10 mm		■	■	■	■	■	■	
Mini-comfort handle		■	■	■	■	-	-	
Security lock 3524 E		■	■	■	■	■	■	
Comfort handle and 2-point locking		-	-	-	-	■	■	
Accessories								
Gland plate for metric cable glands	1 pc(s).	7705.235	7705.235	7705.235	7705.235	7705.235	7705.235	656
Fan expansion kit	1 set(s)	7980.100	7980.100	7980.100	7980.100	7980.100	7980.100	438
Spare filter mats	5 pc(s).	3322.700	3322.700	3322.700	3322.700	3322.700	3322.700	371
Wall mounting bracket		see page	-	see page	-	see page	-	587
Component shelf 2 U, static installation	1 pc(s).	7119.250	see page	7119.250	see page	7119.250	see page	631
Cable management panel	1 pc(s).	7257.200	7257.200	7257.200	7257.200	7257.200	7257.200	674

Wall-mounted enclosures EL, 3-part



System accessories Page 507 **Socket strips** Page 422 **Wall mounting bracket** Page 587 **Earthing** Page 644

Wall-mounted enclosure with optimum accessibility due to hinged part.

Material:

- Wall and hinged part: Sheet steel, 1.5 mm
- Viewing window: Single-pane safety glass, 3 mm

Surface finish:

- Powder-coated

Colour:

- Wall and hinged part: RAL 7035
- Glazed door: RAL 7035/7015 (slate grey)

Protection category IP to IEC 60 529:

- IP 55

Supply includes:

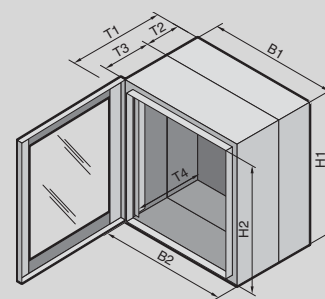
- Wall section
 - Hinged part with 25 mm pitch pattern of holes in the front and rear frame
 - Designer glazed door
- Please note the product-specific scope of supply.

Approvals:

- UL
- cUL

Technical details:

Available on the Internet



with punched rails and mounting angles, depth-variable

Units U	Packs of	6	9	12	15	21	Page
Width (B1) mm		600	600	600	600	600	
Height (H1) mm		345	478	612	746	1012	
Depth (T1) mm		473	473	473	473	473	
Clearance width (B2) mm		502	502	502	502	502	
Clearance height (H2) mm		282	415	549	683	949	
Depth of wall section (T2) mm		135	135	135	135	135	
Depth of hinged part (T3) mm		316	316	316	316	316	
Max. installation depth (T4) mm		420	420	420	420	420	
Load capacity of hinged part (static) kg		30	45	60	75	75	
Model No.	1 pc(s).	7706.135	7709.135	7712.135	7715.135	7721.135	
Product-specific scope of supply							
Wall section: Gland plate, solid, top and bottom		■	■	■	■	■	
Wall section: 2 vertical punched rails		■	■	■	■	■	
Wall section: C rail mounted horizontally for cable clamping		■	■	■	■	■	
Hinged part with two 482.6 mm (19") mounting angles, fully depth adjustable		■	■	■	■	■	
4 wall mounting brackets 10 mm		■	■	■	■	■	
Mini-comfort handle		■	■	■	■	-	
Security lock 3524 E		■	■	■	■	■	
Comfort handle and 2-point locking		-	-	-	-	■	
Accessories							
Gland plate with brush insert	1 pc(s).	7705.035	7705.035	7705.035	7705.035	7705.035	657
Gland plate for metric cable glands	1 pc(s).	7705.235	7705.235	7705.235	7705.235	7705.235	656
Wall mounting bracket		see page	see page	see page	see page	see page	587
Earth rail, horizontal	1 pc(s).	7113.000	7113.000	7113.000	7113.000	7113.000	646
Component shelf 2 U, static installation	1 pc(s).	7119.250	7119.250	7119.250	7119.250	7119.250	631
Cable management panel	1 pc(s).	7257.200	7257.200	7257.200	7257.200	7257.200	674
Lock systems		from page	from page	from page	from page	from page	560

Wall-mounted enclosures EL, 3-part



System accessories Page 507 **Socket strips** Page 422 **Wall mounting bracket** Page 587 **Cable clamps** Page 666

Wall-mounted enclosure with optimum accessibility due to hinged part.

Material:

- Wall and hinged part: Sheet steel, 1.5 mm
- Viewing window: Single-pane safety glass, 3 mm

Surface finish:

- Powder-coated

Colour:

- Wall and hinged part: RAL 7035
- Glazed door: RAL 7035/7015 (slate grey)

Protection category IP to IEC 60 529:

- IP 55

Supply includes:

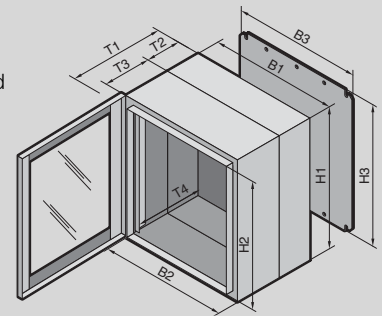
- Wall section
 - Hinged part with 25 mm pitch pattern of holes in the front and rear frame
 - Designer glazed door
- Please note the product-specific scope of supply.

Approvals:

- UL
- cUL

Technical details:

Available on the Internet



with mounting plate and mounting angles, static installation

Units U	Packs of	3	3	6	6	9	9	12	Page
Width (B1) mm		600	600	600	600	600	600	600	
Height (H1) mm		212	212	345	345	478	478	612	
Depth (T1) mm		373	473	373	473	373	473	373	
Clearance width (B2) mm		502	502	502	502	502	502	502	
Clearance height (H2) mm		149	149	282	282	415	415	549	
Depth of wall section (T2) mm		135	135	135	135	135	135	135	
Depth of hinged part (T3) mm		216	316	216	316	216	316	216	
Max. installation depth (T4) mm		320	420	320	420	320	420	320	
Mounting plate width (B3) mm		485	485	485	485	485	485	485	
Mounting plate height (H3) mm		165	165	299	299	432	432	565	
Load capacity of hinged part (static) kg		15	15	30	30	45	45	60	
Model No.	1 pc(s).	2243.605	2253.605	2246.605	2256.605	2249.605	2259.605	2252.605	
Product-specific scope of supply									
Wall section: Gland plate, solid, top and bottom		■	■	■	■	■	■	■	
Wall section: Mounting plate supplied loose		■	■	■	■	■	■	■	
Hinged part with two 482.6 mm (19") mounting angles		■	■	■	■	■	■	■	
Mini-comfort handle		■	■	■	■	■	■	■	
Security lock 3524 E		■	■	■	■	■	■	■	
Accessories									
Gland plate with brush insert	1 pc(s).	7705.035	7705.035	7705.035	7705.035	7705.035	7705.035	7705.035	657
Gland plate for metric cable glands	1 pc(s).	7705.235	7705.235	7705.235	7705.235	7705.235	7705.235	7705.235	656
Wall mounting bracket		see page	see page	see page	see page	see page	see page	see page	587
Cable glands		from page	from page	from page	from page	from page	from page	from page	658
Component shelf 2 U, static installation	1 pc(s).	-	7119.250	-	7119.250	-	7119.250	-	631
Blanking plates, 482.6 mm (19")		-	-	see page	see page	see page	see page	see page	692
Lock systems		from page	from page	from page	from page	from page	from page	from page	560

Wall-mounted enclosures EL, 3-part

with mounting plate and mounting angles, static installation

Units U	Packs of	12	15	15	21	21	Page
Width (B1) mm		600	600	600	600	600	
Height (H1) mm		612	746	746	1012	1012	
Depth (T1) mm		473	373	473	373	473	
Clearance width (B2) mm		502	502	502	502	502	
Clearance height (H2) mm		549	683	683	949	949	
Depth of wall section (T2) mm		135	135	135	135	135	
Depth of hinged part (T3) mm		316	216	316	216	316	
Max. installation depth (T4) mm		420	320	420	320	420	
Mounting plate width (B3) mm		485	485	485	485	485	
Mounting plate height (H3) mm		565	699	699	965	965	
Load capacity of hinged part (static) kg		60	75	75	75	75	
Model No.	1 pc(s).	2262.605	2255.605	2265.605	2261.605	2271.605	
Product-specific scope of supply							
Wall section: Gland plate, solid, top and bottom		■	■	■	■	■	
Wall section: Mounting plate supplied loose		■	■	■	■	■	
Hinged part with two 482.6 mm (19") mounting angles		■	■	■	■	■	
Mini-comfort handle		■	■	■	-	-	
Security lock 3524 E		■	■	■	■	■	
Comfort handle and 2-point locking		-	-	-	■	■	
Accessories							
Gland plate with brush insert	1 pc(s).	7705.035	7705.035	7705.035	7705.035	7705.035	657
Gland plate for metric cable glands	1 pc(s).	7705.235	7705.235	7705.235	7705.235	7705.235	656
Wall mounting bracket		see page	see page	see page	see page	see page	587
Cable glands		from page	from page	from page	from page	from page	658
Component shelf 2 U, static installation	1 pc(s).	7119.250	-	7119.250	-	7119.250	631
Blanking plates, 482.6 mm (19")		see page	see page	see page	see page	see page	692
Lock systems		from page	from page	from page	from page	from page	560

Accessories



Energy-Box,
482.6 mm (19")

see page 425

Wall-mounted enclosures AE



System accessories Page 507 **Socket strips** Page 422 **Cage nuts** Page 624 **Glazed doors** Page 556

Wall-mounted enclosure for small networks with a high protection category.

Material:

- Enclosure: Sheet steel

Surface finish:

- Enclosure: Powder-coated
- Mounting angles: Zinc-plated

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- Up to IP 66 (depending on the selected gland pate)

Supply includes:

- Enclosure with hinged door
- Door hinged on the right, may be swapped to the left
- Cam lock with 3 mm double-bit insert
- Gland plate with brush strip for cable entry in the enclosure base
- Mounting angles, 482.6 mm (19"), fully depth adjustable
- C rail, for cable clamping on the rear panel
- Metal bracket for optional accommodation of an earth rail or 482.6 mm (19") socket strip

Approvals:

- UL
- CSA
- TÜV
- Germanischer Lloyd
- Lloyds Register of Shipping
- VDE

Technical details:

Available on the Internet

with 482.6 mm (19") mounting angles, depth-variable

Units U	Packs of	8	13	16	Page
Width mm		600	600	600	
Height mm		380	600	760	
Depth mm		350	350	350	
Max. installation depth mm		310	310	310	
Cam locks		1	2	2	
Model No.	1 pc(s).	7641.000	7643.000	7645.000	
Gland plate, size		5	5	5	
Gland plates, qty.		1	1	1	
Accessories					
Wall mounting bracket		see page	see page	see page	587
Viewing window		see page	see page	see page	556
Component shelf 2 U, static installation	1 pc(s).	7119.250	7119.250	7119.250	631
Earth rail, horizontal	1 pc(s).	7113.000	7113.000	7113.000	646
Lock systems		from page	from page	from page	560

Small fibre-optic distributors



System accessories Page 507

Benefits:

- Mounting plate with variable accommodation for up to two splicing cassettes (cassette width variable from 92 to 120 mm) and integral anti-twist guard
- Dividing plate with comb strip for cable clamping, to cover the splicing cassette, and to accommodate 2 patch panels
- Cable entry via prepunched knockouts using cable glands (2 x 22.5 mm and 12 x 12.5 mm)

Material:

- Enclosure with cover: Fibre-glass-reinforced polycarbonate
- Cover screws: Polyamide
- Insulating bungs: Polyamide
- Foamed-in PU seal

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

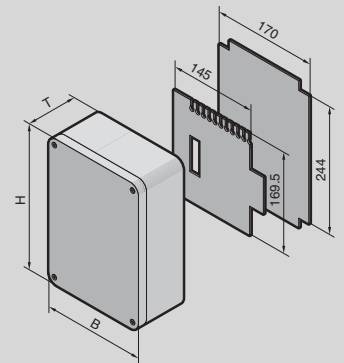
- IP 66

Supply includes:

- Enclosure with knockouts for cable glands
- Hinged cover with seal
- 2 cover screws, prepared for a lead seal
- Insulating bungs for wall mounting
- Mounting plate
- Dividing plate
- 12 cable glands PG 7
- 1 cable gland PG 16

Technical details:

Available on the Internet



with mounting plate and splicing cassette accommodation

Width (B) mm	Packs of	180	Page
Height (H) mm		254	
Depth (T) mm		90	
Maximum number of fibres (when using patch panels)		24	
Model No.	1 pc(s).	7451.000	
Accessories			
Patch panels for small fibre-optic distributors		see page	698
Wall mounting brackets	1 pack(s)	9583.000	27

Rittal – The System.

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Console systems/ PC enclosure systems/ Industrial Workstations

TopConsole system TP

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Industrial Workstations

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TopConsole system TP

Overview of mounting components

- 1 Punched section with mounting flange, 17 x 73 mm
- 2 Support strips
- 3 Partial mounting plates
- 4 Rail for interior installation
- 5 Gland plates
- 6 Cable entry grommets



TopConsole system TP



System accessories Page 507 Monitors, keyboards From page 706/707 Climate control Page 307

Material:

- Enclosure: Sheet steel 1.5 mm
- Door and console cover: Sheet steel, 2.0 mm, all-round foamed-in PU seal
- Mounting plate: Sheet steel 2.5 mm (depth 500 mm), 3.0 mm (depth 400 mm)

Surface finish:

- Enclosure, cover and door: Dipcoat-primed, powder-coated on the outside, textured paint
- Mounting plate: Zinc-plated

Colour:

- RAL 7035

Protection category IP to IEC 60 529

- IP 55 provided gland plates are selected

Protection category NEMA:

- NEMA 12 provided suitable gland plates are selected

Supply includes: Console

- Enclosure
- Cover hinged at bottom, including cover retainer
- Open base for individual cable entry

Desk section

- Enclosure
- Hinged lid, 2 stays with automatic latching, automatic unlatching on the left and manual unlatching on the right
- Opening for cable entry into the enclosure base

Pedestal

- Enclosure open at top
- Door or double door with locking rod (with depth 400 mm at the front, with depth 500 mm at the front and rear)
- Depth-adjustable mounting plate (with depth 500 mm)
- Open base for individual cable entry



Also required:

Gland plates, see page 525

Approvals:

- UL
- cUL

Technical details:

Available on the Internet

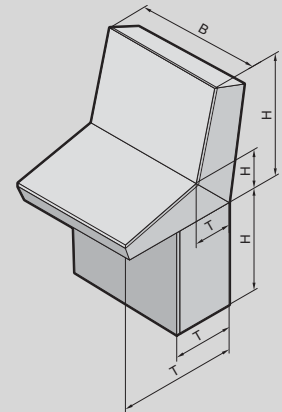
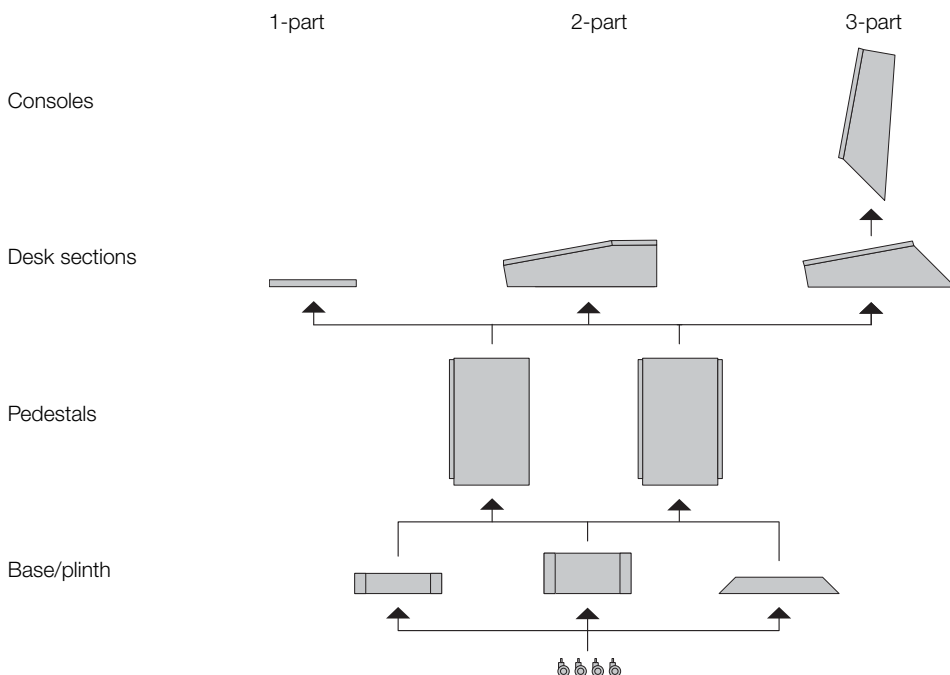


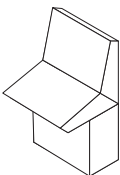
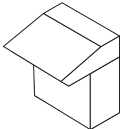
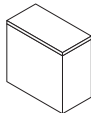
Photo shows a configuration example with equipment not included in the scope of supply

Combination options



TopConsole system TP

600 mm wide

							
Configuration	3-part		2-part		1-part		
Depth of pedestal in mm	400	500	400	500	400	500	

Consoles 700 mm high							
Height (H) mm	Packs of	700					Page
Depth (T) mm		240					
Model No.	1 pc(s).	6720.500					

Accessories							
Partial mounting plates, locatable into rails	Width 200 mm	1 pc(s).	6730.310				597
	Width 500 mm	1 pc(s).	6730.330				597
Rails for interior installation	For width	4 pc(s).	5001.050				605

Desk sections							
Height (H) mm	Packs of	235		235			Page
Depth (T) mm		700		700			
Model No.	1 pc(s).	6714.500		6710.500			

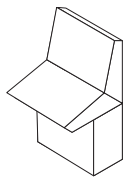
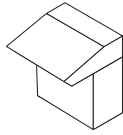
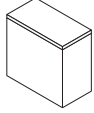
Accessories							
Rails for interior installation	For width	4 pc(s).	5001.050		5001.050		605
Trim panel		1 pc(s).	-		-	5001.130	117

Pedestals								
Height (H) mm	Packs of	675	675	675	675	675	675	Page
Depth (T) mm		400	500	400	500	400	500	
Model No.	1 pc(s).	6700.500	6704.500	6700.500	6704.500	6700.500	6704.500	

Accessories									
Base/plinth components front and rear	Height 100 mm	1 set(s)	8601.600	8601.600	8601.600	8601.600	8601.600	8601.600	513
	Height 200 mm	1 set(s)	8602.600	8602.600	8602.600	8602.600	8602.600	8602.600	513
Base/plinth trim panels, side	Height 100 mm	1 set(s)	8601.040	8601.050	8601.040	8601.050	8601.040	8601.050	514
	Height 200 mm	1 set(s)	8602.040	8602.050	8602.040	8602.050	8602.040	8602.050	514
Cross member		2 pc(s).	8601.450	8601.450	8601.450	8601.450	8601.450	8601.450	520
Gland plates	1-part	1 pc(s).	5001.222	-	5001.222	-	5001.222	-	525
	2-part	1 pc(s).	5001.214	5001.214	5001.214	5001.214	5001.214	5001.214	525
		1 pc(s).	5001.218	5001.222	5001.218	5001.222	5001.218	5001.222	525
Individual For more gland plate variants, see page 532									
Rails for interior installation	For height	4 pc(s).	5001.050	5001.050	5001.050	5001.050	5001.050	5001.050	605
Punched section with mounting flange, 17 x 73 mm	In the depth	4 pc(s).	8612.140	8612.150	8612.140	8612.150	8612.140	8612.150	606
Punched rail 18 x 38 mm	In the depth	4 pc(s).	8612.240	8612.250	8612.240	8612.250	8612.240	8612.250	609
Support strips	In the depth	20 pc(s).	4694.000	4695.000	4694.000	4695.000	4694.000	4695.000	609
Punched section with mounting flange, 17 x 73 mm	For door	4 pc(s).	8612.050	8612.050	8612.050	8612.050	8612.050	8612.050	606
Support strips	For door	20 pc(s).	4596.000	4596.000	4596.000	4596.000	4596.000	4596.000	609
Cable clamp rail		1 pc(s).	5001.080	5001.080	5001.080	5001.080	5001.080	5001.080	665
Sheet steel wiring plan pockets		1 pc(s).	4116.500	4116.500	4116.500	4116.500	4116.500	4116.500	578
TP aluminium strip		1 pc(s).	6731.120	6731.120	6731.120	6731.120	-	-	117
Lock systems	from page 562								

TopConsole system TP

800 mm wide

							
Configuration	3-part		2-part		1-part		
Depth of pedestal in mm	400	500	400	500	400	500	

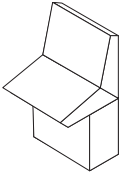
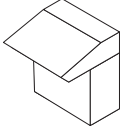
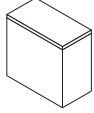
Consoles 700 mm high								
Height (H) mm	Packs of	700	-		-		Page	
Depth (T) mm		240	-		-			
Model No.	1 pc(s).	6721.500	-		-			
Accessories								
Partial mounting plates, locatable into rails	Width 200 mm	1 pc(s).	6730.310	-		-		597
	Width 500 mm	1 pc(s).	6730.330	-		-		597
	Width 700 mm	1 pc(s).	6730.340	-		-		597
Rails for interior installation	For width	4 pc(s).	5001.051	-		-		605

Desk sections								
Height (H) mm	Packs of	235	235		-		Page	
Depth (T) mm		700	700		-			
Model No.	1 pc(s).	6715.500	6711.500		-			
Accessories								
Rails for interior installation	For width	4 pc(s).	5001.051	5001.051		-		605
Trim panel		1 pc(s).	-	-		5001.140	6730.110	117

Pedestals									
Height (H) mm	Packs of	675	675	675	675	675	675	675	Page
Depth (T) mm		400	500	400	500	400	500		
Model No.	1 pc(s).	6701.500	6705.500	6701.500	6705.500	6701.500	6705.500		
Accessories									
Base/plinth components front and rear	Height 100 mm	1 set(s)	8601.800	8601.800	8601.800	8601.800	8601.800	8601.800	513
	Height 200 mm	1 set(s)	8602.800	8602.800	8602.800	8602.800	8602.800	8602.800	513
Base/plinth trim panels, side	Height 100 mm	1 set(s)	8601.040	8601.050	8601.040	8601.050	8601.040	8601.050	514
	Height 200 mm	1 set(s)	8602.040	8602.050	8602.040	8602.050	8602.040	8602.050	514
Cross member		2 pc(s).	8601.450	8601.450	8601.450	8601.450	8601.450	8601.450	520
Gland plates	1-part	1 pc(s).	5001.223	-	5001.223	-	5001.223	-	525
	2-part	1 pc(s).	5001.215	5001.215	5001.215	5001.215	5001.215	5001.215	525
		1 pc(s).	+	+	+	+	+	+	525
	Individual		For more gland plate variants, see page 532						
Rails for interior installation	For height	4 pc(s).	5001.050	5001.050	5001.050	5001.050	5001.050	5001.050	605
Punched section with mounting flange, 17 x 73 mm	In the depth	4 pc(s).	8612.140	8612.150	8612.140	8612.150	8612.140	8612.150	606
Punched rail 18 x 38 mm	In the depth	4 pc(s).	8612.240	8612.250	8612.240	8612.250	8612.240	8612.250	609
Support strips	In the depth	20 pc(s).	4694.000	4695.000	4694.000	4695.000	4694.000	4695.000	609
Support strips	For door	20 pc(s).	4598.000	4598.000	4598.000	4598.000	4598.000	4598.000	609
Cable clamp rail		1 pc(s).	5001.081	5001.081	5001.081	5001.081	5001.081	5001.081	665
Sheet steel wiring plan pockets		1 pc(s).	4118.500	4118.500	4118.500	4118.500	4118.500	4118.500	578
TP aluminium strip		1 pc(s).	6731.120	6731.120	6731.120	6731.120	-	-	117
Lock systems			from page 562						

TopConsole system TP

1200 mm wide

							
Configuration	3-part		2-part		1-part		
Depth of pedestal in mm	400	500	400	500	400	500	

Consoles 700 mm high							
Height (H) mm	Packs of	700	-		-		Page
Depth (T) mm		240	-		-		
Model No.	1 pc(s).	6722.500	-		-		

Accessories								
Partial mounting plates, locatable into rails	Width 200 mm	1 pc(s).	6730.310	-		-		597
	Width 500 mm	1 pc(s).	6730.330	-		-		597
	Width 700 mm	1 pc(s).	6730.340	-		-		597
Rails for interior installation	For width	4 pc(s).	5001.053	-		-		605

Desk sections							
Height (H) mm	Packs of	235	235		-		Page
Depth (T) mm		700	700		-		
Model No.	1 pc(s).	6716.500	6712.500		-		

Accessories								
Rails for interior installation	For width	4 pc(s).	5001.053	5001.053		-		605
Trim panel		1 pc(s).	-	-		5001.160	6730.120	117

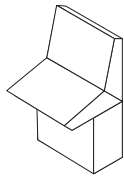
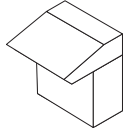
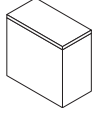
Pedestals								
Height (H) mm	Packs of	675	675	675	675	675	675	Page
Depth (T) mm		400	500	400	500	400	500	
Model No.	1 pc(s).	6702.500	6706.500	6702.500	6706.500	6702.500	6706.500	

Accessories									
Base/plinth components front and rear	Height 100 mm	1 set(s)	8601.200	8601.200	8601.200	8601.200	8601.200	8601.200	513
	Height 200 mm	1 set(s)	8602.200	8602.200	8602.200	8602.200	8602.200	8602.200	513
Base/plinth trim panels, side	Height 100 mm	1 set(s)	8601.040	8601.050	8601.040	8601.050	8601.040	8601.050	514
	Height 200 mm	1 set(s)	8602.040	8602.050	8602.040	8602.050	8602.040	8602.050	514
Cross member		2 pc(s).	8601.450	8601.450	8601.450	8601.450	8601.450	8601.450	520
Gland plates ¹⁾	1-part	1 pc(s).	5001.225	-	5001.225	-	5001.225	-	525
	2-part	1 pc(s).	5001.217	5001.217	5001.217	5001.217	5001.217	5001.217	525
		1 pc(s).	5001.221	5001.225	5001.221	5001.225	5001.221	5001.225	525
	Individual		For more gland plate variants, see page 532						
Rails for interior installation	For height	4 pc(s).	5001.050	5001.050	5001.050	5001.050	5001.050	5001.050	605
Punched section with mounting flange, 17 x 73 mm	In the depth	4 pc(s).	8612.140	8612.150	8612.140	8612.150	8612.140	8612.150	606
Punched rail 18 x 38 mm	In the depth	4 pc(s).	8612.240	8612.250	8612.240	8612.250	8612.240	8612.250	609
Support strips	In the depth	20 pc(s).	4694.000	4695.000	4694.000	4695.000	4694.000	4695.000	609
Punched section with mounting flange, 17 x 73 mm	For door	4 pc(s).	8612.050	8612.050	8612.050	8612.050	8612.050	8612.050	606
Support strips	For door	20 pc(s).	4596.000	4596.000	4596.000	4596.000	4596.000	4596.000	609
Cable clamp rail		1 pc(s).	5001.083	5001.083	5001.083	5001.083	5001.083	5001.083	665
Sheet steel wiring plan pockets		1 pc(s).	4116.500	4116.500	4116.500	4116.500	4116.500	4116.500	578
TP aluminium strip		1 pc(s).	6731.120	6731.120	6731.120	6731.120	-	-	117
Lock systems			from page 562						

¹⁾ With the two-door pedestal, the base opening is divided in two, and 2 sets of gland plates are required.

TopConsole system TP

1600 mm wide

							
Configuration	3-part		2-part		1-part		
Depth of pedestal in mm	400	500	400	500	400	500	

Consoles 700 mm high							
Height (H) mm	Packs of	700					Page
Depth (T) mm		240					
Model No.	1 pc(s).	6723.500					

Accessories							
Partial mounting plates, locatable into rails	Width 200 mm	1 pc(s).	6730.310				597
	Width 500 mm	1 pc(s).	6730.330				597
	Width 700 mm	1 pc(s).	6730.340				597
Rails for interior installation	For width	4 pc(s).	5001.054				605

Desk sections							
Height (H) mm	Packs of	235		235			Page
Depth (T) mm		700		700			
Model No.	1 pc(s).	6717.500		6713.500			

Accessories							
Rails for interior installation	For width	4 pc(s).	5001.054		5001.054		605
Trim panel		1 pc(s).	-		-	6730.030	6730.130
							117

Pedestals								
Height (H) mm	Packs of	675	675	675	675	675	675	Page
Depth (T) mm		400	500	400	500	400	500	
Model No.	1 pc(s).	6703.500	6707.500	6703.500	6707.500	6703.500	6707.500	

Accessories									
Base/plinth components front and rear	Height 100 mm	1 set(s)	8601.920	8601.920	8601.920	8601.920	8601.920	8601.920	513
	Height 200 mm	1 set(s)	8602.920	8602.920	8602.920	8602.920	8602.920	8602.920	513
Base/plinth trim panels, side	Height 100 mm	1 set(s)	8601.040	8601.050	8601.040	8601.050	8601.040	8601.050	514
	Height 200 mm	1 set(s)	8602.040	8602.050	8602.040	8602.050	8602.040	8602.050	514
Cross member		2 pc(s).	8601.450	8601.450	8601.450	8601.450	8601.450	8601.450	520
Gland plates ¹⁾	1-part	1 pc(s).	5001.236	-	5001.236	-	5001.236	-	525
	2-part	1 pc(s).	5001.234	5001.234	5001.234	5001.234	5001.234	5001.234	525
		1 pc(s).	5001.235	5001.236	5001.235	5001.236	5001.235	5001.236	525
	Individual		For more gland plate variants, see page 532						
Rails for interior installation	For height	4 pc(s).	5001.050	5001.050	5001.050	5001.050	5001.050	5001.050	605
Punched section with mounting flange, 17 x 73 mm	In the depth	4 pc(s).	8612.140	8612.150	8612.140	8612.150	8612.140	8612.150	606
Punched rail 18 x 38 mm	In the depth	4 pc(s).	8612.240	8612.250	8612.240	8612.250	8612.240	8612.250	609
Support strips	In the depth	20 pc(s).	4694.000	4695.000	4694.000	4695.000	4694.000	4695.000	609
Support strips	For door	20 pc(s).	4598.000	4598.000	4598.000	4598.000	4598.000	4598.000	609
Cable clamp rail	Width 800 mm	1 pc(s).	5001.081	5001.081	5001.081	5001.081	5001.081	5001.081	665
Sheet steel wiring plan pockets		1 pc(s).	4118.500	4118.500	4118.500	4118.500	4118.500	4118.500	578
TP aluminium strip		1 pc(s).	6731.120	6731.120	6731.120	6731.120	-	-	117
Lock systems			from page 562						

¹⁾ With the two-door pedestal, the base opening is divided in two, and 2 sets of gland plates are required.

One-piece consoles TP



System accessories Page 507 Monitors, keyboards Page 706/707 Climate control Page 307 One-piece consoles, stainless steel Page 186

Material:

- Enclosure: Sheet steel 1.5 mm
- Door and console cover: Sheet steel, 2.0 mm, all-round foamed-in PU seal
- Mounting plate: Sheet steel 3.0 mm

Surface finish:

- Enclosure, cover and door: Dipcoat-primed, powder-coated on the outside, textured paint
- Mounting plate: Zinc-plated

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 55 with selection of the appropriate gland plates

Protection category NEMA:

- NEMA 12 with selection of the appropriate gland plates

Supply includes:

- Enclosure, solid back and sides
- Door or double door at front, with locking rod
- Mounting plate
- Cover hinged at rear, 2 stays with automatic locking. Automatic unlocking on the left, manual unlocking on the right
- Open base for individual cable entry

Note:

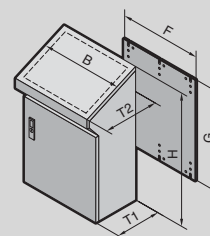
- With the two-door variant, the base opening is divided in two, and two sets of gland plates are required.

Approvals:

- UL
- cUL

Technical details:

Available on the Internet



Width (B) mm	Packs of	600	800	1000	1200	Page
Height (H) mm		960	960	960	960	
Depth, bottom (T1) mm		400	400	400	400	
Depth, top (T2) mm		520	520	520	520	
Mounting plate width (F) mm		530	730	930	1130	
Mounting plate height (G) mm		900	900	900	900	
Model No.	1 pc(s).	6746.500	6748.500	6740.500	6742.500	
Door(s)		1	1	2	2	

Accessories

Base/plinth components, front and rear, 100 mm	1 set(s)	8601.600	8601.800	8601.000	8601.200	513
Base/plinth trim panels, side, 100 mm	1 set(s)	8601.040	8601.040	8601.040	8601.040	514
Base/plinth components, front and rear, 200 mm	1 set(s)	8602.600	8602.800	8602.000	8602.200	513
Base/plinth trim panels, side, 200 mm	1 set(s)	8602.040	8602.040	8602.040	8602.040	514
Cross member	2 pc(s).	8601.450	8601.450	8601.450	8601.450	520
Gland plates		see page	see page	see page	see page	525
Rails for interior installation	4 pc(s).	see page	5001.051	see page	see page	605
TS punched section with mounting flange, 17 x 73 mm		see page	see page	see page	see page	606
TS punched rail 18 x 38 mm	4 pc(s).	8612.240	8612.240	8612.240	8612.240	609
Cable clamp rails	1 pc(s).	5001.080	5001.081	5001.082	5001.083	665
Sheet steel wiring plan pockets	1 pc(s).	4116.500	4118.500	4115.500	4116.500	578
TP aluminium strip	1 pc(s).	6731.120	6731.120	6731.120	6731.120	117
Lock systems		from page	from page	from page	from page	562

Universal consoles TP



System accessories Page 507 Monitors, keyboards Page 706/707 Climate control Page 307

Material:

- Enclosure, gland plates: Sheet steel 1.5 mm
- Door: Sheet steel, 2.0 mm
- Mounting plate: Sheet steel 3.0 mm

Surface finish:

- Enclosure and door: Dipcoat primed, powder-coated on the outside, textured paint
- Mounting plate and gland plates: Zinc-plated

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 55

Protection category NEMA:

- NEMA 12

Supply includes:

- Enclosure with door(s)
- Mounting plate
- Gland plates

Note:

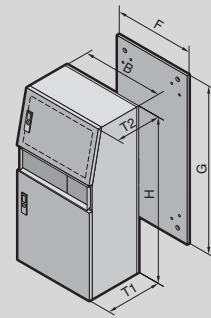
- For universal console with short front door: The drawer or desk section should be fitted in order to preserve the protection category. The keyboard drawer may be installed without a mounting plate.

Approvals:

- UL
- CSA
- TÜV
- Germanischer Lloyd
- Russian Maritime Register of Shipping
- Lloyds Register of Shipping
- VDE

Technical details:

Available on the Internet



Design	Packs of	with short front door			with tall front door	Page
Width (B) mm		600			600	
Height (H) mm		1300			1300	
Depth, bottom (T1) mm		500			500	
Depth, top (T2) mm		417.5			417.5	
Mounting plate width (F) mm		499			499	
Mounting plate height (G) mm		1196			1196	
Model No.	1 pc(s).	2694.500			2695.500	
Weight kg		77.0			80.0	
Also required						
Drawer	1 pc(s).	-	-	4757.500	-	117
Desk section	1 pc(s).	2696.500	2696.500	-	-	117
Accessories						
Base/plinth, complete		see page			see page	519
Cross member	2 pc(s).	8601.450			8601.450	520
Support strips	20 pc(s).	2325.000			2325.000	575
Cable clamp rails	2 pc(s).	4191.000			4191.000	665
Lock systems		from page			from page	562

TopConsole system TP

Accessories

Trim panel

for pedestal

For covering the complete top opening when using the pedestal on its own.

Material:

- Sheet steel

Surface finish:

- Textured paint

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 55

Protection category NEMA:

- NEMA 12

For pedestal		Model No.
Width mm	Depth mm	
600	400	5001.130
800		5001.140
1200		5001.160
1600		6730.030
600	500	6730.100
800		6730.110
1200		6730.120
1600		6730.130

Supply includes:

- Assembly parts



TP aluminium strip

For retrospective external mounting on:

- TP three-part/two-part
- TP one-piece console
- May be mounted on all enclosures/covers with 20 mm fold height (max. metal thickness 2 mm)

Length: 1750 mm

(Easily cut to length for other dimensions)

Sufficient for desk sections and consoles:

- 3 x width 600 mm
- 2 x width 800 mm
- 1 x width 1000 mm + 1 x width 600 mm
- 1 x width 1200 mm
- 1 x width 1600 mm

Length mm	Model No.
1750	6731.120

Material:

- Aluminium strip: Extruded aluminium section
- Cover caps: Plastic

Surface finish:

- Aluminium strip: Natural anodised

Colour:

- Cover caps: RAL 7035

Supply includes:

- 1 aluminium section
- 6 plastic cover caps
- Drilling template
- Assembly parts



Drawer

for TP universal console

For mouse and keyboard with a maximum width of 500 mm. A high level of protection is retained, even with the flap open.

Material:

- Sheet steel

Surface finish:

- Textured paint

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 55

Protection category NEMA:

- NEMA 12

Supply includes:

- Assembly parts

Height mm	Model No.
200	4757.500



Accessories:

- Standard double-bit lock insert may be exchanged for other 27 mm lock inserts, type A, see page 570 or plastic handle, type B, see page 569



Desk section

For installing display and control components and a keyboard. Closed at the side and front. Trim panels for top and bottom.

Material:

- Sheet steel

Surface finish:

- Dipcoat-primed, powder-coated on the outside, textured paint

Colour:

- RAL 7035

Height mm	Model No.
200	2696.500

Protection category IP to IEC 60 529:

- IP 55

Protection category NEMA:

- NEMA 12

Supply includes:

- Assembly parts



PC enclosure systems



System accessories Page 507 Monitors, keyboards Page 706/707 Climate control Page 307 PC enclosure system, stainless steel Page 187

Secure accommodation of all PC components, from monitors, to PCs, to keyboards. For ultimate ease of operation in a modern design. Perfect protection from humidity and dirt, temperature fluctuations and unauthorised access.

Material:

- Enclosure, door, mounting compartment, supports: Sheet steel
- Handles, decorative trim panels: Plastic
- Door trim panels: Aluminium
- Viewing window: Single-pane safety glass

Surface finish:

- Enclosure and door: Dipcoat-primed, powder-coated on the outside, textured paint
- Mounting compartment, support: Powder-coated

Colour:

- Enclosure, door, decorative trim panels, supports: RAL 7035
- Handle: Similar to RAL 9006
- Monitor field, central door section: RAL 7015

Protection category IP to IEC 60 529:

- IP 55

Protection category NEMA:

- NEMA 12

Supply includes:

- Enclosure, door, rear door
- Please note the product-specific scope of supply.

Approvals:

- UL
- cUL

Technical details:

Available on the Internet

Width mm	Packs of	600	600	600	600	600	600	Page
Height mm		1600	1600	1600	1600	1600	1600	
Depth mm		636	636	636	636	636	836	
Product-specific scope of supply								
Glazed door, top		■	■	■	■	-	■	
Keyboard drawer		■	-	-	■	■	■	
Component shelf		■	■	■	■	-	■	
Folding keyboard		-	■	-	-	-	-	
Desk section		-	-	■	-	-	-	
Mounting compartment, small		-	-	-	■	-	-	
Mounting compartment, large		-	-	-	-	■	-	
Model No.	1 pc(s).	5366.000	5366.100	5366.200	5366.300	5366.400	5368.000	
Max. keyboard dimensions (WxHxD) mm		480 x 70 x 260	497 x 50 x 250 497 x 60 x 200	540 x 40 x 175	480 x 70 x 260	480 x 70 x 260	480 x 70 x 260	
Accessories								
Base/plinth, stationary	1 pc(s).	8800.920	8800.920	8800.920	8800.920	8800.920	-	517
Base/plinth components, front and rear, 100 mm	1 set(s)	8601.600	8601.600	8601.600	8601.600	8601.600	8601.600	513
Base/plinth components, front and rear, 200 mm	1 set(s)	8602.600	8602.600	8602.600	8602.600	8602.600	8602.600	513
Base/plinth trim panels, side, 100 mm	1 set(s)	8601.060	8601.060	8601.060	8601.060	8601.060	8601.080	514
Base/plinth trim panels, side, 200 mm	1 set(s)	8602.060	8602.060	8602.060	8602.060	8602.060	8602.080	514
Partial mounting plates	1 pc(s).	8614.675	8614.675	8614.675	8614.675	8614.675	8614.675	596
Component shelf, pull-out	1 pc(s).	6902.960	6902.960	6902.960	6902.960	6902.960	6902.980	627
Drawer tray	1 pc(s).	6902.700	6902.700	6902.700	6902.700	6902.700	6902.700	628
Paper removal flap	1 pc(s).	6903.200	6903.200	6903.200	6903.200	6903.200	6903.200	713
Socket strips in an aluminium duct		see page	see page	see page	see page	see page	see page	422
Lock systems		from page	from page	from page	from page	from page	from page	561



System accessories Page 507 **Comfort Panel** Page 124 **Optipanel** Page 126 **TFT monitor** Page 706

Compact enclosure, ready to connect. Standard commercially available tower PCs, up to W/H/D: 250 x 530 x 600 mm (max. 20 kg) may be attached securely to the base screw fastened to the door using the retaining strap supplied loose. The rear interfaces of the PC are readily accessible with the door open. Because the socket strip and fan-and-filter unit are already pre-installed, the enclosure is ready for immediate use.

Roof prepared for mounting

- worktop
- beneath surfaces

Base prepared for mounting

- cast feet
- on surfaces

Material:

- Enclosure: Sheet steel
- Door: Sheet steel
- Design strips: Aluminium

Surface finish:

- Enclosure: Powder-coated, textured paint
- Door: Powder-coated

Colour:

- Enclosure: RAL 7035
- Door: RAL 7015
- Design strips: RAL 7035

Protection category IP to IEC 60 529:

- IP 54 in conjunction with connector gland supplied loose

Protection category NEMA:

- NEMA 12 in conjunction with connector gland supplied loose

Supply includes:

- Enclosure of all-round solid construction
- R/h door hinge
- Door with base screw-fastened on the inside
- Side cam lock
- Rear panel with two cut-outs for use of the connector gland supplied loose
- Cable gland M20, brass, nickel-plated
- Outlet filter fitted in left side panel
- Fan-and-filter unit fitted in right side panel
- Door-operated switch, supply socket for 230 V power supply, socket strip with 3 sockets and overvoltage protection

Please note the product-specific scope of supply.

Enclosure for tower PC

Width mm	Packs of	760	Page
Height mm		760	
Depth mm		300	
Model No.	1 pc(s).	6900.300	
Weight kg		55.0	
Also required			
Connection cable	5 pc(s).	4315.100	639
Accessories			
Cast feet	2 pc(s).	6902.920	519
Twin castors	1 set(s)	7495.000	522
Worktop	1 pc(s).	6902.310	165
Optipanel	1 pc(s).	6380.040	126
TFT monitor	1 pc(s).	6450.020	706
TopTherm fan-and-filter units		from page	316
Lock systems		from page	562

Industrial Workstations



System accessories Page 507 Comfort Panel Page 124 Optipanel Page 126 TFT monitor Page 706

Material:

- Enclosure, roof, drawer tray, designer door, rear wall and rear door: Sheet steel
- Worktop: Chipboard, plastic-laminated on both sides (edging)
- Handle: Aluminium, powder-coated

Surface finish:

- Enclosure: Dipcoat-primed, powder-coated on the outside, textured paint

Colour:

- Enclosure, worktop: RAL 7035
- Worktop edge strip: RAL 7015
- Worktop handle: RAL 9006

Protection category:

- See table

Supply includes:

Available on the Internet

Technical details:

Available on the Internet

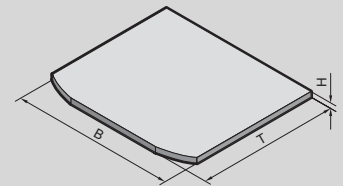
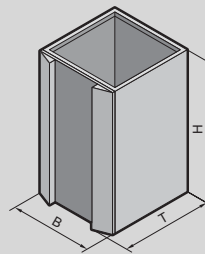
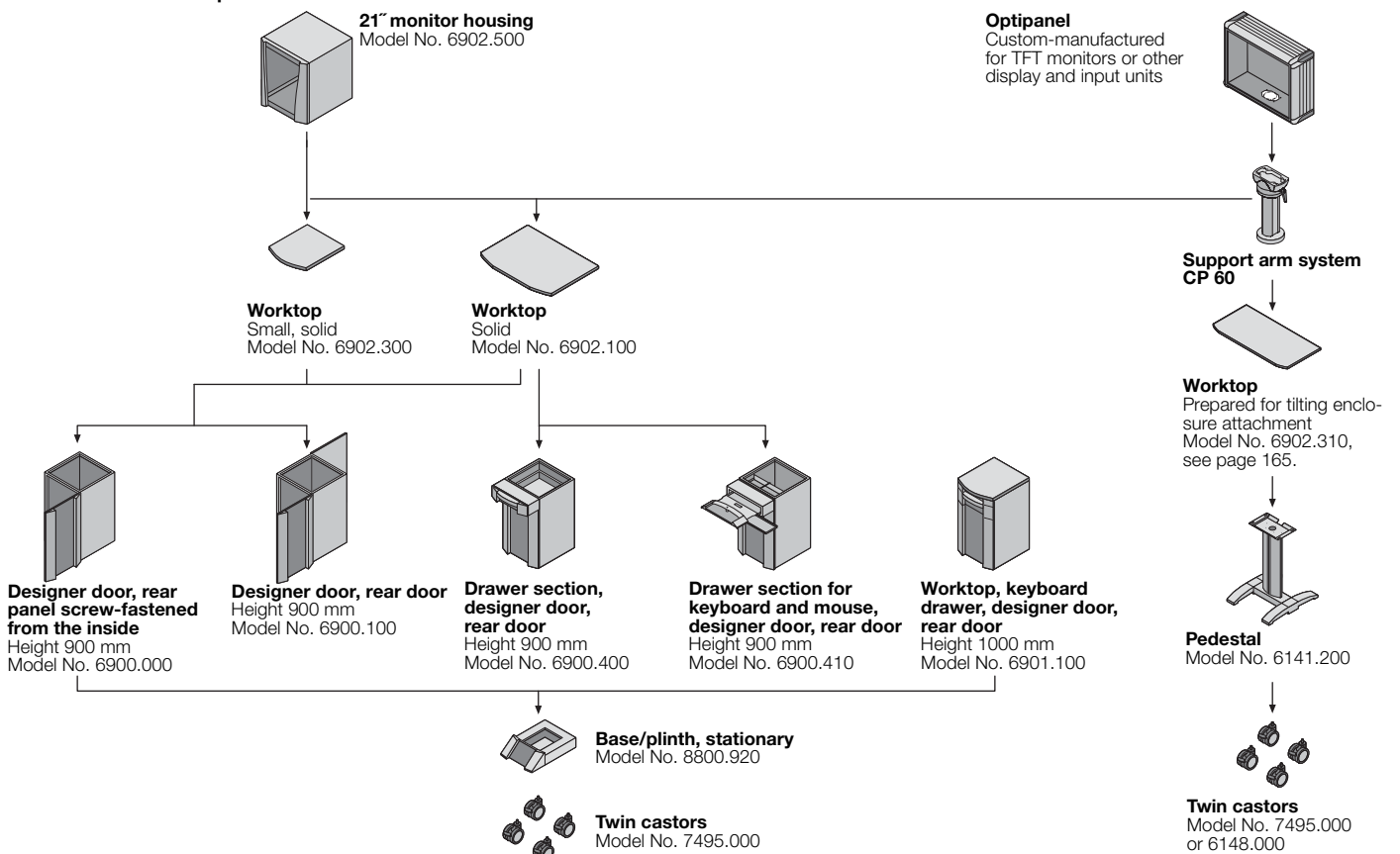










Photo shows a configuration example with equipment not included in the scope of supply

Combination options



IW enclosures and worktops

Enclosure										Page	
Version					Designer door, rear panel screw-fastened from the inside	Designer door, rear door	Drawer section, designer door, rear door	Drawer section for keyboard and mouse, designer door, rear door	Worktop, keyboard drawer, designer door, rear door		
Width (B) mm					600	600	600	600	600		
Height (H) mm					900	900	900	900	1000		
Depth (T) mm					600	600	600 (890)	600 (890)	645		
Weight (kg)					54.9	59.9	73	73	91		
Model No.					6900.000	6900.100	6900.400	6900.410	6901.100		
Protection category IP to IEC 60 529					IP 55		IP 54				
Protection category NEMA					NEMA 12		NEMA 12				
	Width (B) mm	Height (H) mm	Depth (T) mm	Weight kg	Model No.						
Worktops											
	610	38	645	11.6	6902.300	6902.300	–	–	■		
	1000	38	895	24	6902.100	6902.100	6902.100	6902.100	–		
Monitor housing											
	600	600	600	42.5	6902.500	6902.500	6902.500	6902.500	–		
Accessories					Packs of						
Base/plinth, stationary					1 pc(s).	8800.920	8800.920	8800.920	8800.920	8800.920	517
Cross member, adjustable					2 pc(s).	8601.680	8601.680	8601.680	8601.680	–	520
Twin castors					1 set(s)	7495.000	7495.000	7495.000	7495.000	7495.000	522
Handle adaptor for comfort handle					1 pc(s).	8611.300	8611.300	–	–	–	549
Cable gland					1 pc(s).	6902.770	6902.770	6902.770	6902.770	6902.770	660
Mounting plate for enclosure width 600 mm					1 pc(s).	8614.675	8614.675	8614.675	8614.675	8614.680	596
Component shelf, static installation					1 pc(s).	8800.900	8800.900	8800.900	8800.900	8800.900	628
Component shelf, pull-out					1 pc(s).	6902.960	6902.960	6902.960	6902.960	6902.960	627
Drawer tray					1 pc(s).	6902.700	6902.700	6902.700	6902.700	6902.700	628
Paper removal flap					1 pc(s).	6903.200	6903.200	6903.200	6903.200	6903.200	713
Support arm systems								see page 135			
Command panels								see page 130			



Operating housings/support arm systems, stand systems

Comfort Panel

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Comfort Panel, configuration examples.....	125

Optipanel

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Operating housings

Operating housing with handle strips	130
Operating housing for desktop TFT up to 24".....	132
Compact Panel.....	133

Support arm systems

Support arm systems, overview.....	135
Support arm system CP 40, steel	137
Support arm system CP 40, stainless steel.....	140
Support arm system CP 60	145
Support arm system CP 120	149
Support arm system CP 180	153
Accessories	156

Stand systems

Pedestal, modular.....	164
Pedestal, complete.....	165
Pedestal, open, pillar, small	166
Accessories	167



Comfort Panel



System accessories Page 507 Support arm systems Page 135 Stand systems Page 164 Industrial Workstations Page 120

Material:

- Enclosure: Extruded aluminium section
- Corner pieces: Die-cast zinc
- Corner protectors: Plastic

Colour:

- Enclosure: Natural anodised
- Corner pieces: RAL 7035
- Corner protectors: Similar to RAL 7024

Protection category IP to IEC 60 529:

- IP 65

Supply includes:

- Seals and assembly parts for front panels

Note:

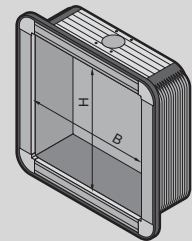
- The support arm connection may be swapped over by rotating the enclosure

Approvals:

- UL

Technical details:

Available on the Internet



For front panel width (B) mm	Packs of	520			520			520			Page
For front panel height (H) mm		400			500			600			
Installation depth mm		74	152	191	74	152	191	74	152	191	
Model No.	1 pc(s).	6372.541	6372.542	6372.543	6372.551	6372.552	6372.553	6372.561	6372.562	6372.563	
Weight kg		7.8	11.7	13.8	8.8	12.3	15.2	9.7	13.5	16.7	

Version

Support arm connection □ 120 x 65 mm		■	–	–	■	–	–	■	–	–	
Support arm connection Ø 130 mm		–	■	■	–	■	■	–	■	■	
Hinged rear panel with screw lock		■	–	–	■	–	–	■	–	–	
Hinged rear panel with cam ¹⁾		–	■	–	–	■	–	–	■	–	
Screw-fastened rear panel ²⁾		–	–	■	–	–	■	–	–	■	

Accessories

Front panel	1 pc(s).	6028.014	6028.014	6028.014	6028.015	6028.015	6028.015	6028.016	6028.016	6028.016	704
Mounting bracket for interior installation	4 pc(s).	6205.100	6205.100	6205.100	6205.100	6205.100	6205.100	6205.100	6205.100	6205.100	617
Spring nut M5	50 pc(s).	6108.000	6108.000	6108.000	6108.000	6108.000	6108.000	6108.000	6108.000	6108.000	625
Earthing plate	1 pc(s).	2570.500	2570.500	2570.500	2570.500	2570.500	2570.500	2570.500	2570.500	2570.500	645

¹⁾ With 3 mm double-bit lock insert, may be exchanged for 41 mm lock inserts, type C, see page 570, plastic handles and T handles, type C, see page 569.

²⁾ Enclosure folds down at the front with side double-bit lock insert, may be exchanged for 41 mm lock inserts, type C, see page 570, plastic handles and T handles, type C, see page 569.

Configuration examples

Front panel height mm	Cut-out dimensions						
400							
	W = 484 mm H = 364 mm 1 = 18 mm all-round for attaching the adaptor plate						
500							
	W = 484 mm H = 464 mm 1 = 18 mm all-round for attaching the adaptor plate						
600							
	W = 484 mm H = 564 mm 1 = 18 mm all-round for attaching the adaptor plate						

↑ ↓ Free space, available for individual installed equipment such as rows of switches etc.

HE = U
 B = Width

Optipanel



System accessories Page 507 Support arm systems Page 135 Stand systems Page 164 Industrial Workstations Page 120

Material:

- Enclosure: Extruded aluminium section
- Corner pieces: Die-cast zinc
- Corner protectors: Plastic

Colour:

- Enclosure: Natural anodised
- Corner pieces: RAL 7035
- Corner protectors: Similar to RAL 7024

Protection category IP to IEC 60 529:

- IP 65

Supply includes:

- Seals

Note:

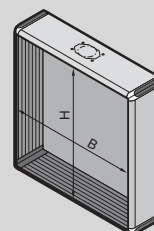
- The support arm connection may be swapped over by rotating the enclosure

Approvals:

- UL

Technical details:

Available on the Internet



For front panel width (B) mm	Packs of	430	482.6	482.6	520	520	520	Page
For front panel height (H) mm		343	310.3	354.8	400	500	600	
Installation depth mm		100	100	100	100	150	150	
Model No.	1 pc(s).	6380.020¹⁾	6380.000	6380.040¹⁾	6380.400	6380.410	6380.510	6380.610
Weight kg		5.3	6.2	6.6	5.8	7.3	8.3	9.2

Version

Support arm connection □ 120 x 65 mm		■	■	■	■	–	–	–
Support arm connection Ø 130 mm		–	–	–	–	■	■	■
Hinged rear panel ²⁾		■	■	■	■	■	■	■
Seals and assembly parts for front panels		–	–	–	■	■	■	■

Accessories

Front panel	1 pc(s).	–	6028.010	–	6028.014	6028.014	6028.015	6028.016	704
Handle set, horizontal	1 pc(s).	–	6385.010	6385.010	–	–	–	–	700
Mounting bracket for interior installation	4 pc(s).	6205.100	6205.100	6205.100	6205.100	6205.100	6205.100	6205.100	617
Mounting bracket	4 pc(s).	4597.000	4597.000	4597.000	4597.000	4597.000	4597.000	4597.000	617
Earthing plate	1 pc(s).	2570.500	2570.500	2570.500	2570.500	2570.500	2570.500	2570.500	645
Spring nut M5	50 pc(s).	6108.000	6108.000	6108.000	6108.000	6108.000	6108.000	6108.000	625

¹⁾ To fit TFT monitors, see page 706.

²⁾ With 3 mm double-bit lock insert, may be exchanged for 41 mm lock inserts, type C, see page 570, plastic handles and T handles, type C, see page 569.

Configuration examples

Front panel height mm	Cut-out dimensions						
400							
	W = 484 mm H = 364 mm 1 = 18 mm all-round for attaching the adaptor plate						
500							
	W = 484 mm H = 464 mm 1 = 18 mm all-round for attaching the adaptor plate						
600							
	W = 484 mm H = 564 mm 1 = 18 mm all-round for attaching the adaptor plate						

↑ ↓ Free space, available for individual installed equipment such as rows of switches etc.

HE = U
 B = Width

Operating housing with handle strips



Uniform design and function

Modern design, adapted to support arm system CP 60/120/180

Convenience in perfection

- Shaped interior installation bracket with TS system punchings, to match TS system accessories
- Fast, safe, simple servicing access from the front or rear
- Lock with integral door runners for easy locking

Built-in added value

- Support arm connection for one-person assembly
- Support arm connection \varnothing 130 mm, preformed off-centre in the reinforcement plate, easily drilled out

Ergonomic design

- Design strip including handle function
- Aluminium front panel, easily dismantled for machining



Operating housing with handle strips



System accessories P. 507 Support arm systems P. 135 Stand systems P. 164 Command panel housing with door, stainless steel P. 189

Material:

- Enclosure and door: Sheet steel
- Handle strips: Aluminium
- Front panel: Aluminium
- Cover caps: Plastic

Surface finish:

- Enclosure and door: Dipcoat-primed, powder-coated on the outside, textured paint
- Handle strip: Natural anodised
- Front panel: Natural anodised

Colour:

- Enclosure and door: RAL 7035
- Handle strip: Natural anodised
- Front panel: Natural anodised
- Cover caps: similar to RAL 7024

Protection category IP to IEC 60 529:

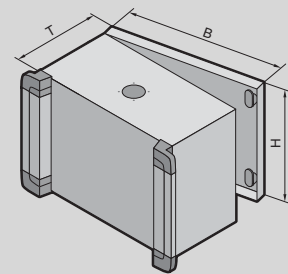
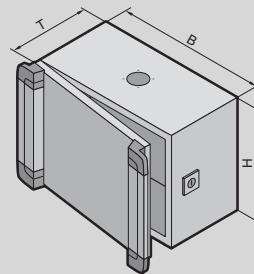
- IP 55

Supply includes:

- Enclosure with cut-out and reinforcement for support arm connection \varnothing 130 mm
- Front with maximum cut-out, covered with easily machinable 3 mm aluminium front panel
- Side handle strips and cover caps
- Cam lock with 3 mm double-bit insert
- Integral interior installation bracket with TS system punchings

Note:

- The support arm connection and door hinge may be swapped over by rotating the enclosure
- Optional: Support arm connection \varnothing 130 mm, preformed off-centre in the reinforcement plate, easily drilled out



- Lock systems for servicing access from the front: 41 mm lock inserts, lock cylinder, plastic handles and T-handles, type C
- Lock systems for servicing access from the rear: 41 mm lock inserts, type A, lock cylinder, plastic handles and T-handles, type B

Approvals:

- CSA

Technical details:

Available on the Internet

Width (B) mm	Packs of	300	300	380	380	380	Page
Height (H) mm		200	300	300	380	380	
Depth (T) mm		155	210	210	210	210	
Model No.	1 pc(s).	6320.000	6315.100	6315.200	6315.300	6320.300	
Weight kg		4.5	7.0	7.5	9.8	9.8	
Servicing access	from the front	–	■	■	■	–	
	from the rear	■	–	–	–	■	
Accessories							
TS punched section with mounting flange, 17 x 73 mm	4 pc(s).	–	8612.130	8612.130	–	–	606
TS punched rail 18 x 38 mm		–	–	–	–	–	609
TS support strips	20 pc(s).	–	–	–	4594.000	4594.000	609
Mounting bracket	4 pc(s).	4597.000	4597.000	4597.000	4597.000	4597.000	617
	4 pc(s).	6205.100	6205.100	6205.100	6205.100	6205.100	617
Mini-comfort handle		–	–	–	–	see page	567

Operating housing with handle strips

Width (B) mm	Packs of	500	500	600	600	600	Page
Height (H) mm		500	500	380	600	600	
Depth (T) mm		210	210	210	210	210	
Model No.	1 pc(s).	6315.400	6320.400	6320.500	6315.600	6320.600	
Weight kg		16.8	16.8	15.4	22.8	18.8	
Servicing access	from the front	■	-	-	■	-	
	from the rear	-	■	■	-	■	
Accessories							
TS punched section with mounting flange, 17 x 73 mm	4 pc(s).	8612.150	8612.150	-	8612.160	8612.160	606
TS punched rail 18 x 38 mm	4 pc(s).	8612.250	8612.250	-	8612.260	8612.260	609
TS support strips	20 pc(s).	4695.000	4695.000	4594.000	4696.000	4696.000	609
Mounting bracket	4 pc(s).	4597.000	4597.000	4597.000	4597.000	4597.000	617
	4 pc(s).	6205.100	6205.100	6205.100	6205.100	6205.100	617
Mini-comfort handle		-	see page	see page	-	see page	567



Support arm system CP 60/120/180

see page 135

New

Operating housing for desktop TFT up to 24"



System accessories Page 507 **Support arm systems** Page 135 **Stand systems** Page 164

For the installation of commercially available desktop TFTs with a screen diagonal of up to 24" in the formats 16:9/16:10.

Design:

- Viewing window with single-pane safety glass

Material:

- Enclosure and door: Sheet steel
- Handle strips: Aluminium
- Cover caps: Plastic
- Viewing window: Single-pane safety glass
- TFT holder: Sheet steel

Surface finish:

- Enclosure and door: Dipcoat primed, powder-coated on the outside, textured paint
- Handle strip: Natural anodised

Colour:

- Enclosure and door: RAL 7035
- Handle strip: Natural anodised
- Cover caps: similar to RAL 7024

Protection category IP to IEC 60 529:

- IP 55

Supply includes:

- Enclosure with cut-out and reinforcement for support arm connection Ø 130 mm
- Viewing window
- Holder for desktop TFT with VESA 75/100 locator
- Side handle strips and cover caps
- Rear door with r/h hinge
- Cam lock with 3 mm double-bit insert

Note:

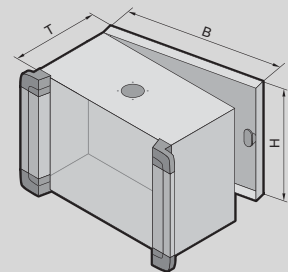
- The support arm connection and door hinge may be swapped over by rotating the enclosure
- Optional: Support arm connection Ø 130 mm, preformed off-centre in the reinforcement plate, easily drilled out
- Lock insert may be exchanged for 27 mm lock inserts, type A, lock cylinder, plastic handles and T-handles, type B

Approvals:

- CSA

Technical details:

Available on the Internet



Width (B) mm	Packs of	650	Page
Height (H) mm		450	
Depth (T) mm		155	
Model No.	1 pc(s).	6321.000	
Weight kg		18.0	
Cam lock		1	
Accessories			
Lock systems		from page	560



System accessories Page 507 **Support arm systems** Page 135 **Stand systems** Page 164

For small operating units built into front panels. The front panel is inserted from the rear and secured with screw clamps. Special front panels with a material thickness of between 2 and 6 mm are possible. Rear panel optionally hinged on the left or right. Roof tray with cut-out and reinforcement for support arm system CP 40, steel.

Design:

- With support arm connection 90 x 71 mm for CP 40, steel

Material:

- Roof tray, base tray, rear panel: Aluminium
- Side parts: Extruded aluminium section
- Screw cover: Plastic

Surface finish:

- Roof tray, base tray, side parts: Powder-coated
- Rear panel: Natural anodised

Colour:

- RAL 7024

Protection category IP to IEC 60 529:

- IP 65

Supply includes:

- Roof tray
- Base tray
- Rear panel
- Side parts
- Screw cover
- Seal and screw clamp

Technical details:

Available on the Internet

Width mm	Packs of	241	241	315	315	Page
Height mm		238	388	238	388	
Depth mm		87	87	87	87	
To fit front panel width mm		178	178	252	252	
To fit front panel height mm		200	350	200	350	
Model No.	1 pc(s).	6340.000	6340.100	6340.300	6340.400	
Weight kg		2.8	3.8	3.4	4.5	
Accessories						
Front panels	1 pc(s).	6028.500	6028.510	6028.530	6028.540	704
Wall mounting bracket	1 set(s)	6341.000	6341.000	6341.000	6341.000	590
Spring nut M5	50 pc(s).	6108.000	6108.000	6108.000	6108.000	625
Cover plate	1 set(s)	6505.200	6505.200	6505.200	6505.200	704

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Support arm systems

Support arm system CP 40

Component overview, steel.....	137
Support section CP 40, steel.....	138
Components CP 40, steel.....	139
Component overview, stainless steel.....	140
Support section CP 40, stainless steel.....	140
Components CP 40, stainless steel.....	141

Support arm system CP 60

Component overview.....	145
Support section CP 60.....	146
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Support arm system CP 120

Component overview.....	149
Support section CP 120.....	150
Components CP 120.....	151

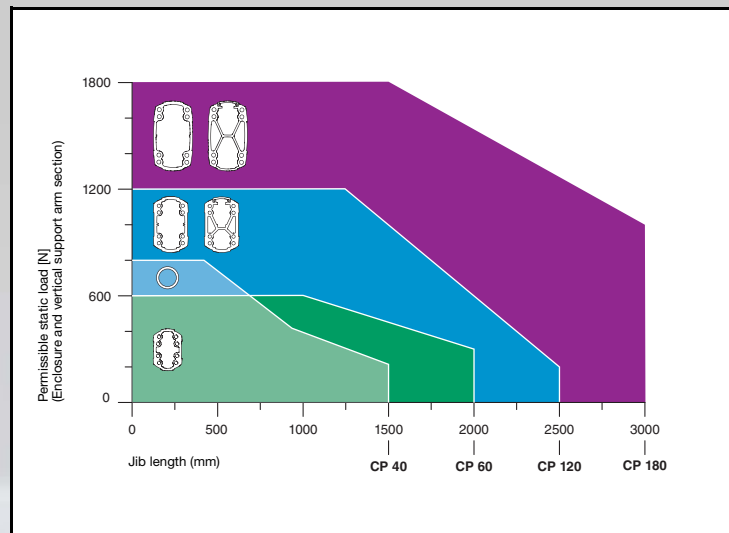
Support arm system CP 180

Component overview.....	153
Support section CP 180.....	154
Components CP 180.....	155



Load information

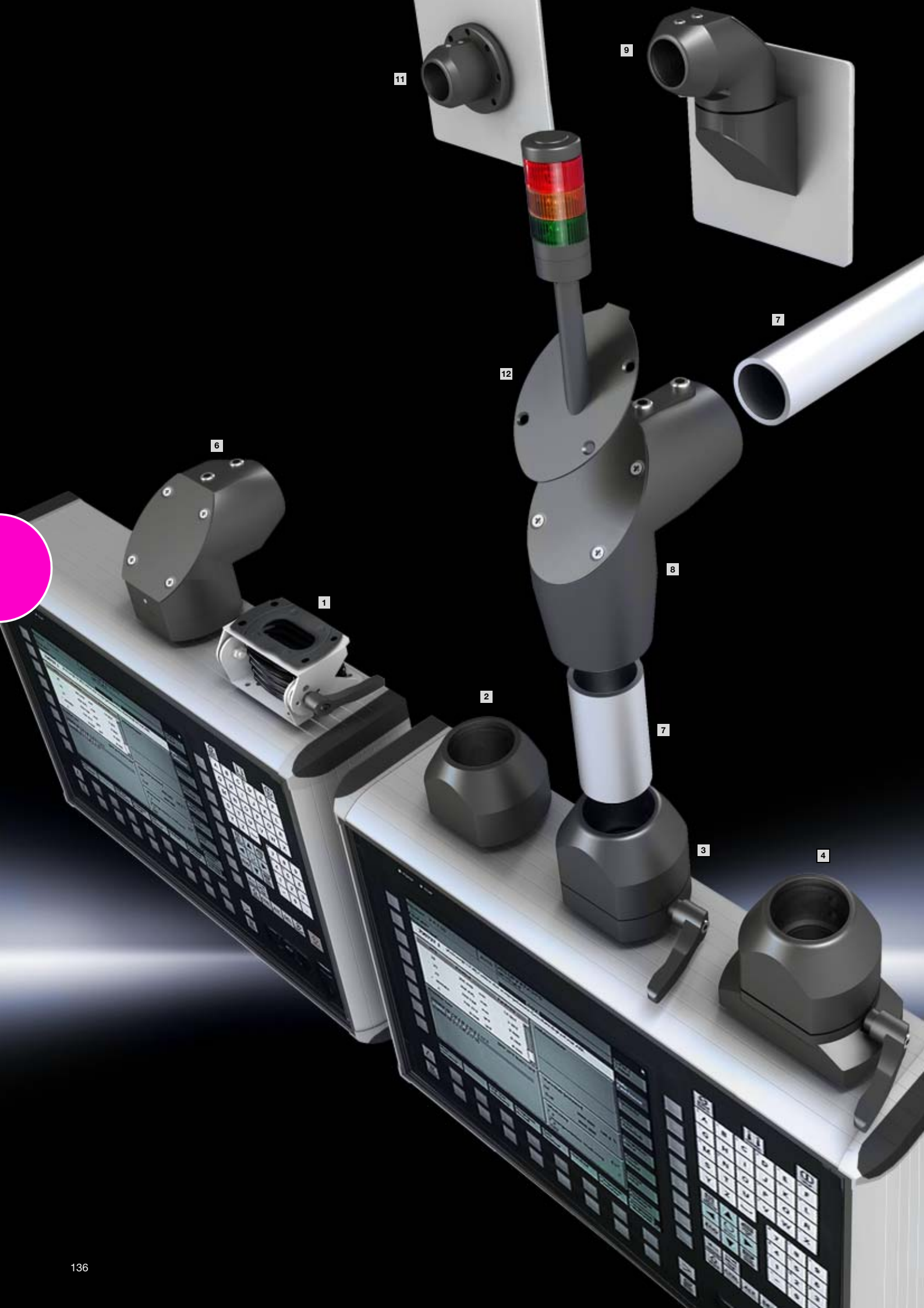
Comparison of support arm systems



Support arm configurator

The support arm configurator determines the correct support arm system according to user-specific parameters.

More detailed information can be found at: www.rittal.com



11

9

7

12

6

1

8

2

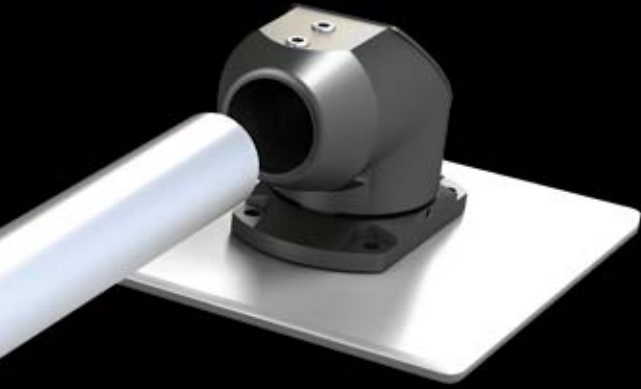
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3

4

Support arm system CP 40, steel

10

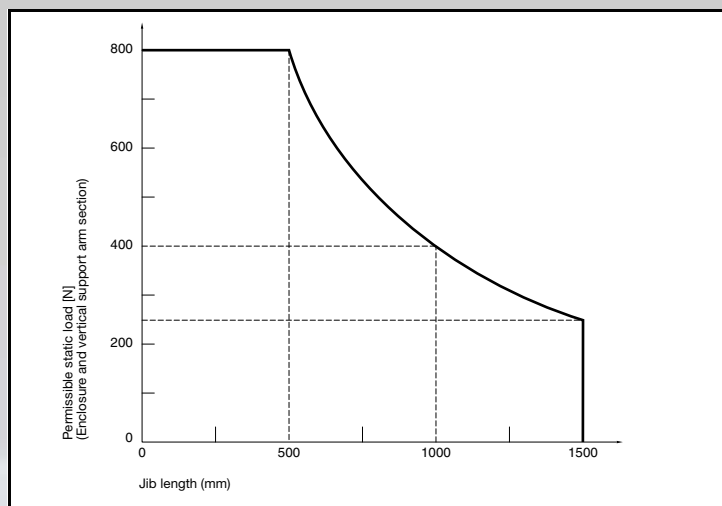


Component overview

- 1 Tilting adaptor +100/-60° for support arm connection □ 120 x 65 mm/
□ 90 x 71 mm (6206.460)
- 2 Attachment CP 40, steel, for support arm connection □ 90 x 71 mm
(6501.070)
- 3 Coupling CP 40, steel, for support arm connection □ 90 x 71 mm
(6501.050)
- 4 Coupling CP 40, steel, for support arm connection □ 120 x 65 mm
(6501.130)
- 5 Connection console Vesa 75/100 for support arm connection
□ 120 x 65 mm (6206.480)
- 6 Angle coupling 90° CP 40, steel
(6501.120)
- 7 Support section CP 40, steel
(6501.000, 6501.020)
- 8 Angle piece 90° CP 40, steel
(6501.140)
- 9 Wall-mounted hinge CP 40, steel
(6501.150)
- 9 Top-mounted joint CP 40, steel
(6501.160)
- 11 Wall/base mounting bracket, CP 40, small
(6501.110)
- 12 Mounting components CP 40, steel, for signal pillar
(2375.030)

Load information

When using support arm system CP 40, steel in conjunction with support arm system CP 60 (in the horizontal path of the machine), the load diagram for support arm system CP 60 shall apply.



5



Support arm system CP 40, steel



Comfort Panel Page 124 Optipanel Page 126 Compact Panel Page 133 Operating housing with handle strips Page 130

Support section CP 40, steel

Attached to the connection components via 2 clamping screws.

Size:

- External diameter: 48.3 mm
- Wall thickness: 4.0 mm

Material:

- Steel conduit, powder-coated

Colour:

- RAL 7035

Supply includes:

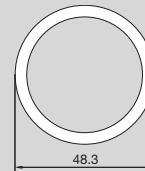
- Support section, steel

Note:

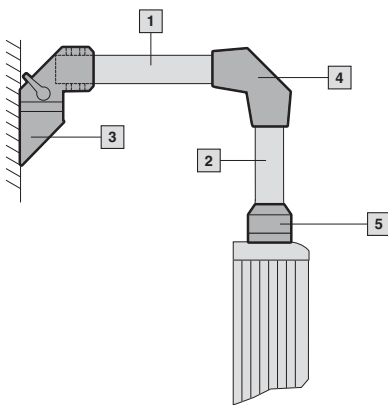
- Stainless steel, see page 140

Technical details:

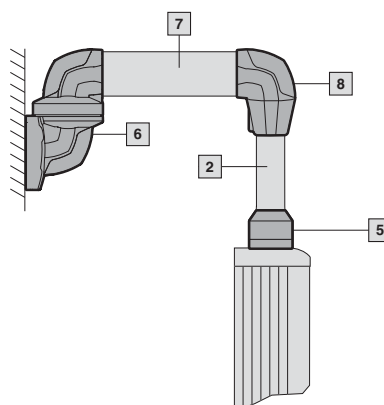
- Available on the Internet



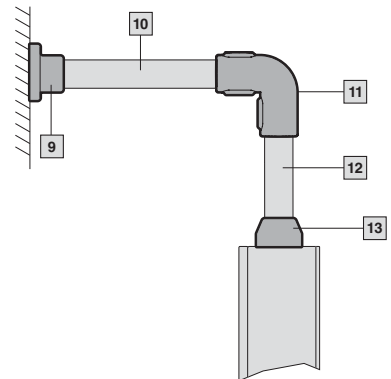
Integral adjustment facility



Combination with support arm system CP 60



Also available in stainless steel, see page 140



- [1] Support section CP 40, steel, 1000 mm (6501.020)
- [2] Support section CP 40, steel, 500 mm (6501.000)
- [3] Wall-mounted hinge CP 40, steel (6501.150)
- [4] Angle piece 90° CP 40, steel (6501.140)
- [5] Coupling CP 40, steel (6501.050)
- [6] Wall-mounted hinge CP 60 (6206.740)
- [7] Support section CP 60, 1000 mm (6206.100)
- [8] Angle adaptor 90° for support arm combination CP 60/40 (6206.640)
- [9] Wall/base mount, rigid, CP 40, stainless steel (6663.000)
- [10] Support section CP 40, stainless steel, 1000 mm (6660.010)
- [11] Angle piece 90° CP 40, stainless steel (6664.300)
- [12] Support section CP 40, stainless steel, 500 mm (6660.050)
- [13] Housing coupling CP 40, stainless steel (6664.000)

Support arm system CP 40, steel

	Rotating/tilting	Fixed	Length mm	Weight kg	Colour RAL	Enclosure section	Centre section	Wall section
						Model No.		
Tilting adaptor +100/-60° for support arm connection □ 120 x 65 mm/□ 90 x 71 mm								
 see page 162	■	-	-	0.8	7035/ 7024	6206.460	-	-
Attachment CP 40, steel, for support arm connection □ 90 x 71 mm								
	-	■	-	1.0	7024	6501.070	-	-
Coupling CP 40, steel, for support arm connection □ 90 x 71 mm								
	■	-	-	1.1	7024	6501.050	-	-
Coupling CP 40, steel, for support arm connection □ 120 x 65 mm								
	■	-	-	1.5	7024	6501.130	-	-
Connection console VESA 75/100 for support arm connection □ 120 x 65 mm								
 see page 156	-	■	-	1.1	7035/ 7024	6206.480	-	-
Angle coupling 90° CP 40, steel, for support arm connection □ 90 x 71 mm								
	■	-	-	1.6	7024	6501.120	-	-
Support section CP 40, steel								
	-	-	500 1000	2.1 4.2	7035 7035		6501.000 6501.020	
Angle piece 90° CP 40, steel								
	-	■	-	1.1	7024	6501.140	-	6501.140
Top-mounted joint CP 40, steel								
	■	-	-	1.8	7024	-	-	6501.160
Wall-mounted hinge CP 40, steel								
	■	-	-	2.2	7024	-	-	6501.150
Wall/base mounting bracket, CP 40, steel								
	-	■	-	0.7	7024	-	-	6501.110
Mounting component CP 40, steel, for signal pillar								
 see page 720	-	■	-	0.3	7024	2375.030	-	-
Accessories								
Angle adaptor 90° for support arm combination CP 60/40 6206.640								see page 158

Support arm system CP 40, stainless steel



Command panel housing with door, stainless steel Page 189 Premium Panel, stainless steel Page 188 Support section CP 40, steel Page 137

Support section CP 40, stainless steel

Attached to the connection components via 2 clamping screws.

Size:

- External diameter: 48.3 mm
- Wall thickness: 3.6 mm

Material:

- Stainless steel

Surface finish:

- Brushed, grain 240 (support section and wall console only)

Protection category IP to DIN 40 050-9:

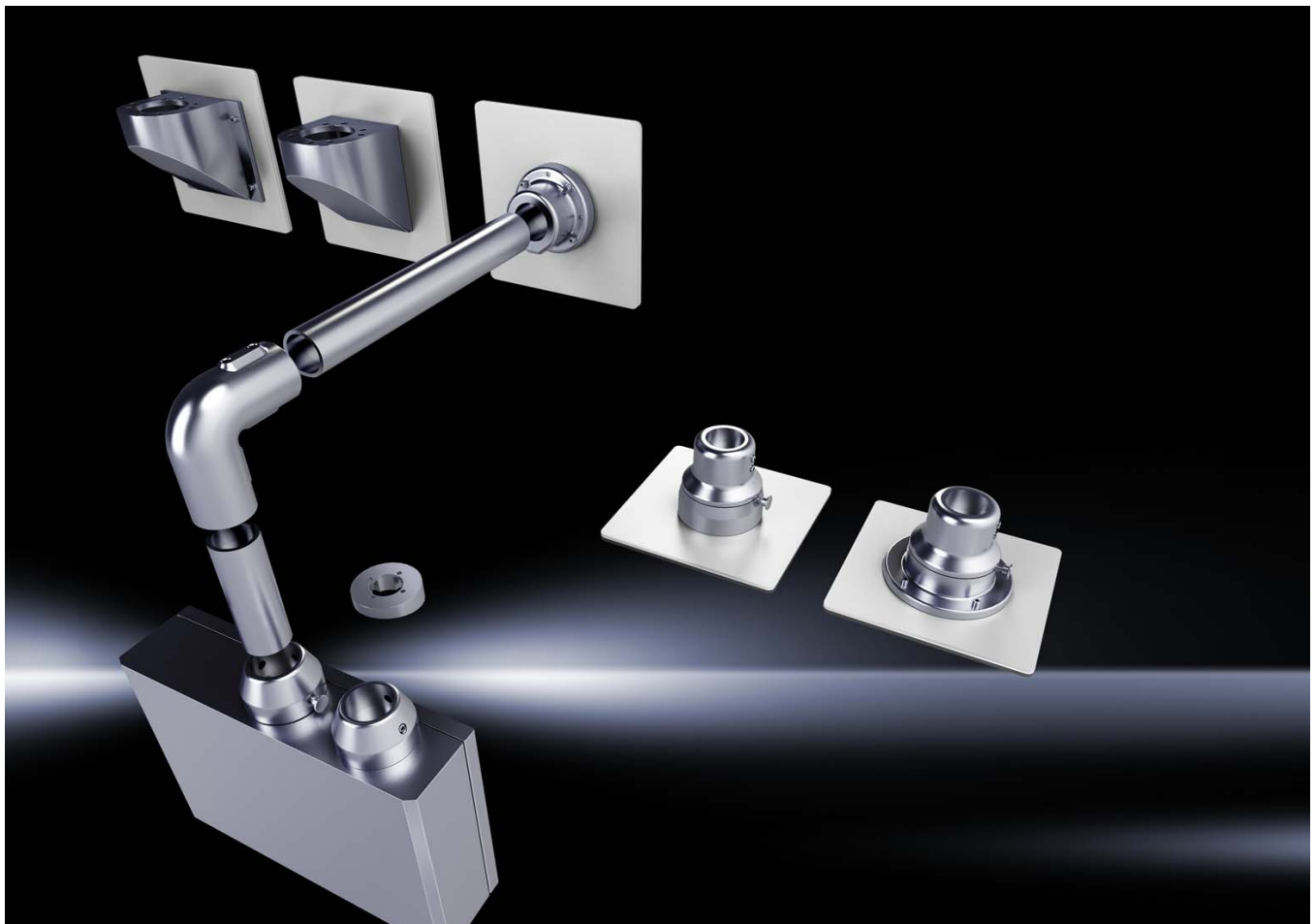
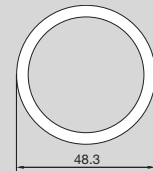
- IP 69K (resistant to high-pressure cleaning)

Supply includes:

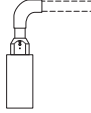
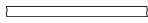
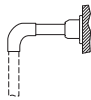




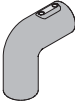


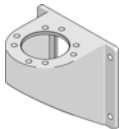
- Support section, stainless steel

Technical details:

Available on the Internet

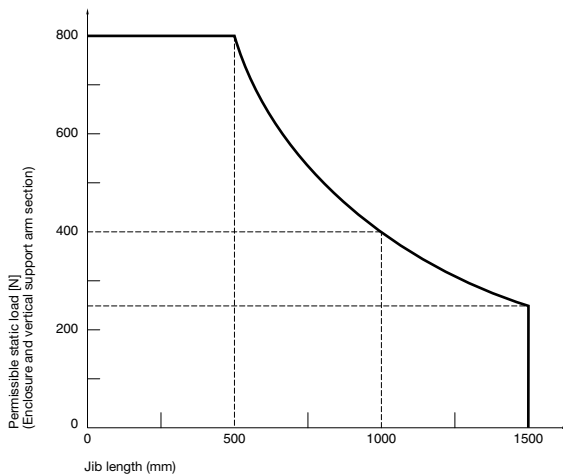


Support arm system CP 40, stainless steel

		Rotating/tilting	Rigid	Length mm	Weight kg	Material	Enclosure section 	Centre section 	Wall section 
Model No.									
Tilting adaptor 10° CP 40, stainless steel									
		-	■	-	0.7	1,4305 (AISI 303)	6664.100	-	-
Mounting bracket CP 40, stainless steel									
		-	■	-	1.3	1,4305 (AISI 303)	6664.500	-	-
Coupling CP 40, stainless steel									
		■	-	-	1.1	1,4305 (AISI 303)	6664.000	-	-
Support section CP 40, stainless steel									
		-	■	500 1000	2.0 3.9	1,4301 (AISI 304)		6660.050 6660.010	
Angle piece 90° CP 40, stainless steel									
		-	■	-	1.3	1,4305 (AISI 303)	6664.300	-	6664.300
Wall/base mounting bracket, rigid, CP 40, stainless steel									
		-	■	-	1.7	1,4305 (AISI 303)	-	-	6663.000
Wall/base mounting bracket, swivel, CP 40, stainless steel									
	Rear, M8 thread Front, hole Ø 9 mm	■	-	-	3.9 4.5	1,4305 (AISI 303)	-	-	6663.500 6663.400
Wall console CP 40, stainless steel									
	Rear, M8 thread Front, hole Ø 9 mm	-	■	-	1.5 1.8	1,4301 (AISI 304)	-	-	6665.000 6665.500

Load information

Permissible load depending on system configuration



Support arm system CP 60/120/180



Uniform engineering

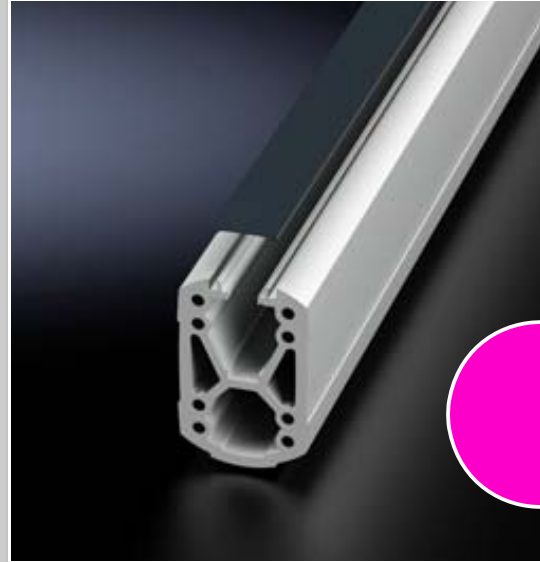
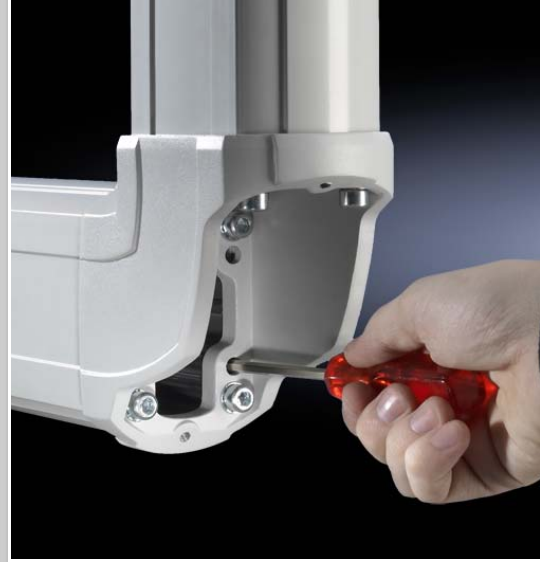
- All load levels from 600 to 1,800 N
- One system
- Simple system replacement in the vertical axis to cut costs and weight
- Consistent combination options

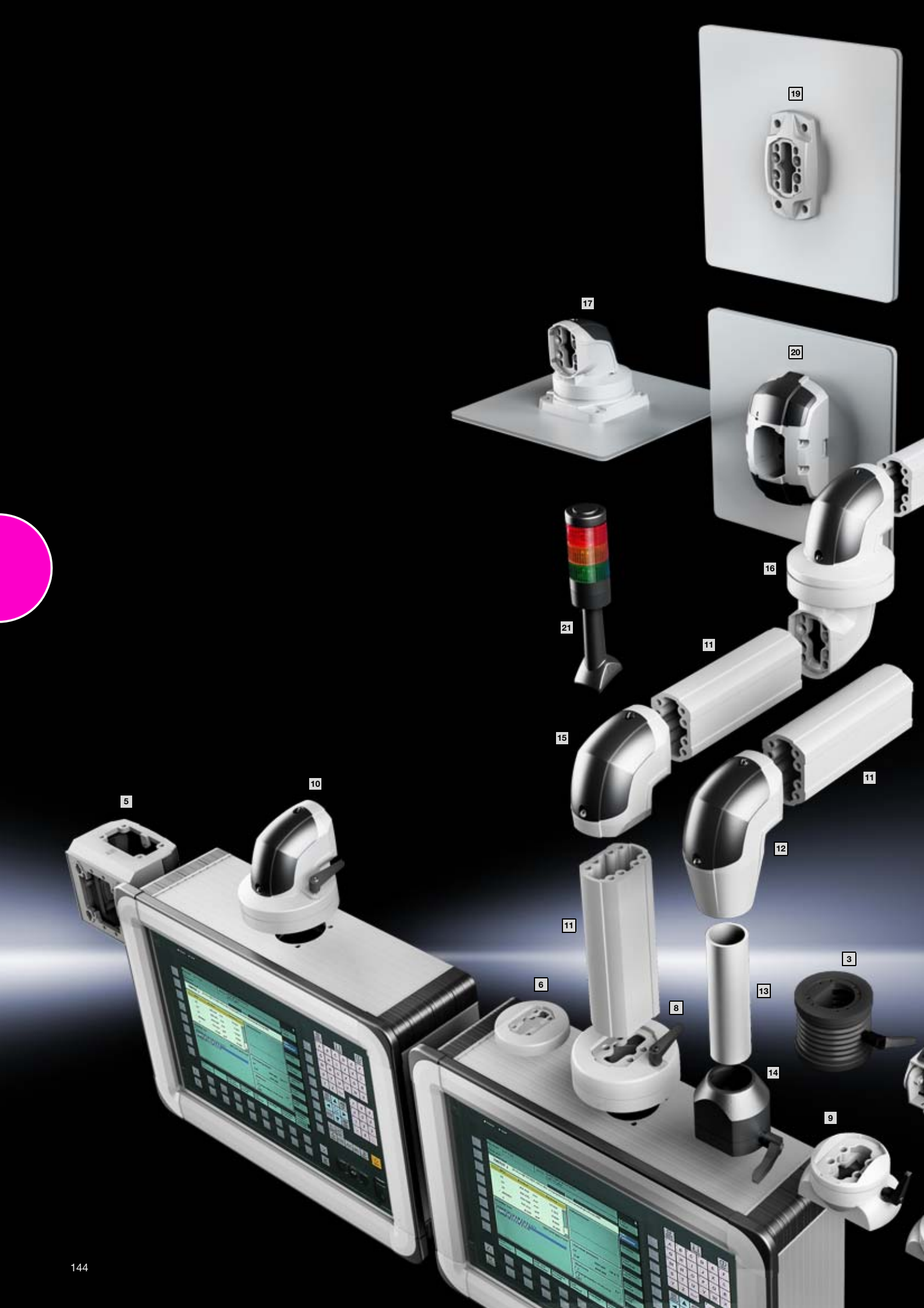
Multi-functional assembly

- Uniform adjustment principle, also possible retrospectively without dismantling
- Perfect limitation of rotation ranges
- Simple, one-person installation
- Sections are easily cut to the required length

Efficient cable management

- Cross-section sufficient for large connectors
- Simple separation between data and power cables is supported
- Flexible cable entry and routing options
- Automatic, consistent potential equalisation of all support arm components
- Open support section for easy upgrade and servicing access

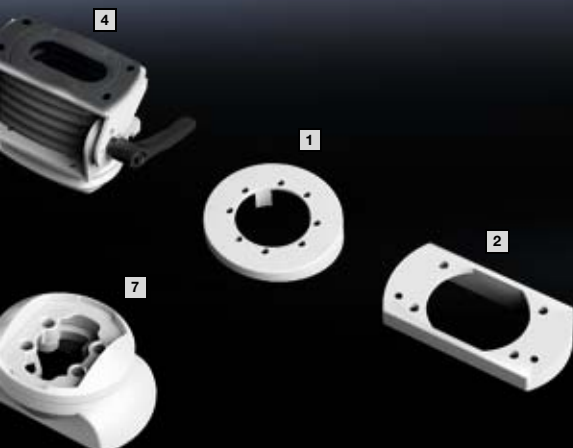




Support arm system CP 60

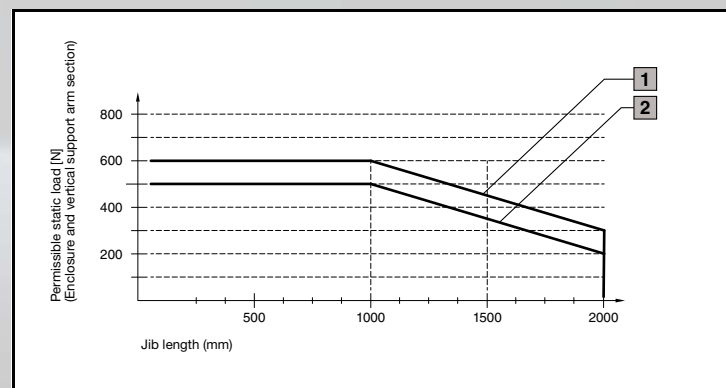
Component overview

- 1 Tilting adaptor 10° for support arm connection Ø 130 mm (6206.400)
- 2 Tilting adaptor 10° for support arm connection □ 120 x 65 mm (6206.440)
- 3 Tilting adaptor +/-45° for support arm connection Ø 130 mm (6206.420)
- 4 Tilting adaptor +100/-60° for support arm connection □ 120 x 65 mm (6206.460)
- 5 Connection console VESA 75/100 for support arm connection □ 120 x 65 mm (6206.480)
- 6 Attachment CP 60, for support arm connection Ø 130 mm (6206.320)
- 7 Attachment CP 60, for support arm connection □ 120 x 65 mm (6206.360)
- 8 Coupling CP 60, for support arm connection Ø 130 mm (6206.300)
- 9 Coupling CP 60, for support arm connection □ 120 x 65 mm (6206.340)
- 10 Angle coupling 90° CP 60 for support arm connection Ø 130 mm (6206.380)
- 11 Support section CP 60, solid (6206.025, 6206.050, 6206.100, 6206.200)
- 12 Angle adaptor 90° for support arm combination CP 60/40 (6206.640)
- 13 Support section CP 40, steel (6501.000)
- 14 Coupling CP 40, steel, for support arm connection □ 90 x 71 mm (6501.050)
- 15 Angle piece 90° CP 60 (6206.600)
- 16 Intermediate hinge CP 60 (6206.620)
- 17 Top-mounted joint CP 60, horizontal outlet (6206.700)
- 18 Wall-mounted hinge CP 60, horizontal outlet (6206.740)
- 19 Wall/base mounting bracket CP 60, small (6206.820)
- 20 Wall/base mounting bracket CP 60, large (6206.800)
- 21 Mounting component CP 60 for signal pillar (6206.900)



Load information

Permissible load depending on system configuration



- 1 System layout without intermediate hinge 6206.620
- 2 System layout with intermediate hinge 6206.620

Note:

- Wall/base mounting bracket, small 6206.820 must not be used in conjunction with intermediate hinge 6206.620!
- Intermediate hinge 6206.620 should only be used once per system!

Support arm system CP 60



Comfort Panel Page 124 Optipanel Page 126 Compact Panel Page 133 Operating housing with handle strips Page 130

Support section CP 60

Attachment to the connection components with 4 self-tapping screws in the screw channel. May be cut to any required length, no thread-tapping required. Closed cable duct with a large cross-section.

Size:

– External dimensions:
59 x 85 mm

Material:

– Support section:
Extruded aluminium section

Colour:

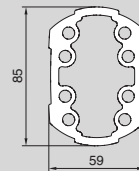
– Support section: RAL 7035

Supply includes:

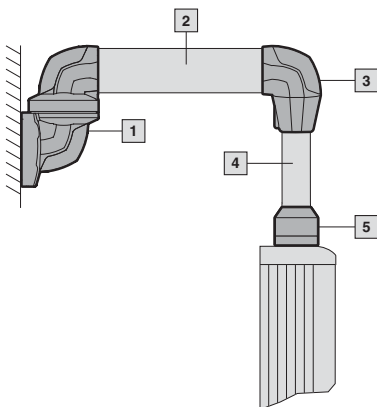
– Support section

Technical details:

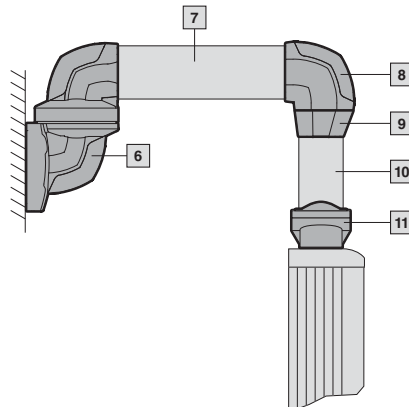
Available on the Internet



Combination with support arm system CP 40














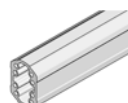



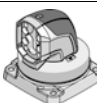






Combination with support arm system CP 120

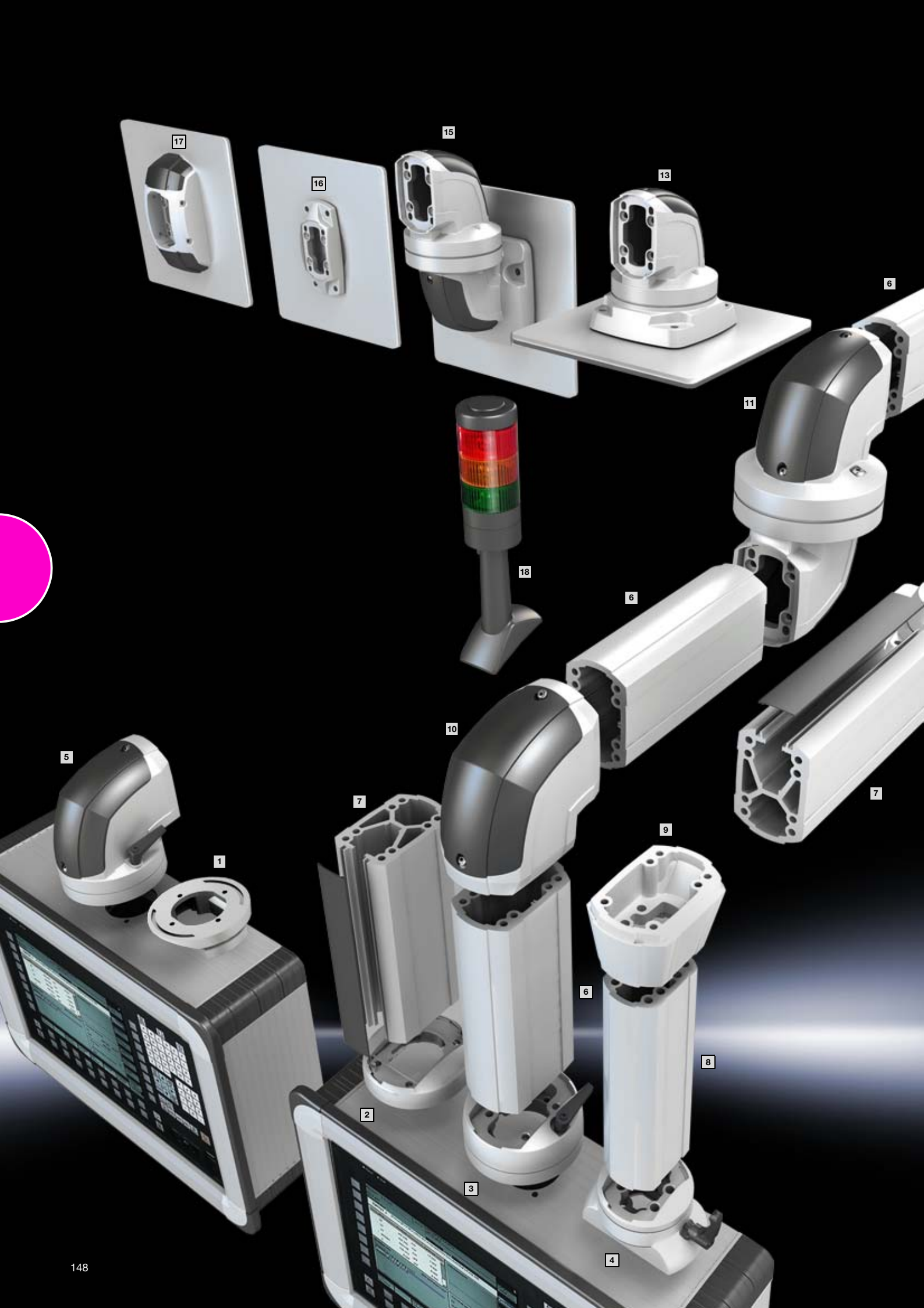


- 1 Wall-mounted hinge CP 60, horizontal outlet (6206.740)
- 2 Support section CP 60, 1000 mm (6206.100)
- 3 90° angle adaptor for support arm combination CP 60/40 (6206.640)
- 4 Support section CP 40, steel, 500 mm (6501.000)
- 4 Coupling CP 40, steel, for support arm connection □ 120 x 65 mm (6501.130)
- 6 Wall-mounted hinge CP 120, horizontal outlet (6212.740)
- 7 Support section CP 120, 1000 mm (6212.100)
- 8 90° angle piece CP 120 (6212.600)
- 9 Adaptor for support arm combination CP 120/60 (6212.640)
- 10 Support section CP 60, 500 mm (6206.050)
- 11 Coupling CP 60 for support arm connection □ 120 x 65 mm (6206.340)

Support arm system CP 60

	Rotating/tilting	Rigid	Length mm	Weight kg	Colour RAL	Enclosure section CP 60	Enclosure section CP 60/40	Centre section CP 60	Wall section CP 60	
						Model No.				
Tilting adaptor 10° for support arm connection										
	Ø 130 mm	-	■	-	0.6	7035	6206.400	-	-	-
	□ 120 x 65 mm	-	■	-	0.4	7035	6206.440	-	-	-
Tilting adaptor +/-45°/tilting adaptor +100°/-60° for support arm connection										
see page 161/162										
	Ø 130 mm	■	-	-	1.2	7024	6206.420	-	-	-
	□ 120 x 65 mm	■	-	-	0.8	7035/7024	6206.460	6206.460	-	-
	□ 90 x 71 mm	■	-	-	0.8	7035/7024	-	6206.460	-	-
Connection console VESA 75/100 for support arm connection										
see page 156										
	□ 120 x 65 mm	-	■	-	1.1	7035/7024	6206.480	-	-	-
Attachment CP 60/40 for support arm connection										
	Ø 130 mm	-	■	-	0.7	7035	6206.320	-	-	-
	□ 120 x 65 mm	-	■	-	1.0	7035	6206.360	-	-	-
	□ 90 x 71 mm	-	■	-	1.0	7024	-	6501.070	-	-
Coupling CP 60/40 for support arm connection										
	Ø 130 mm	■	-	-	2.1	7035	6206.300	-	-	-
	□ 120 x 65 mm	■	-	-	1.2	7035	6206.340	6501.130	-	-
	□ 90 x 71 mm	■	-	-	1.1	7024	-	6501.050	-	-
Angle coupling 90° CP 60/40 for support arm connection										
	Ø 130 mm	■	-	-	1.8	7035/7024	6206.380	-	-	-
Support section CP 60/40										
						CP 60	CP 40 ¹⁾	CP 60	CP 60	
	Solid	-	-	250 500 1000 2000	1.25 2.5 5.0 10.0	7035	6206.025 6206.050 6206.100 6206.200	- 6501.000 6501.020 -	6206.025 6206.050 6206.100 6206.200	6206.025 6206.050 6206.100 6206.200
Angle adaptor 90° for support arm combination CP 60/40										
see page 158										
		-	■	-	1.0	7035/7024	-	6206.640	-	-
Angle piece 90°, CP 60										
		-	■	-	0.5	7035/7024	6206.600	-	-	6206.600
Intermediate hinge CP 60										
		■	-	-	2.2	7035/7024	-	-	6206.620	-
Top-mounted joint CP 60										
	Horizontal outlet	■	-	-	2.2	7035/7024	-	-	-	6206.700
Wall-mounted hinge CP 60										
	Horizontal outlet	■	-	-	2.85	7035/7024	-	-	-	6206.740
Wall/base mounting bracket CP 60, small										
		-	■	-	0.35	7035	-	-	-	6206.820
Wall/base mounting bracket CP 60, large										
		-	■	-	1.4	7035/7024	-	-	-	6206.800
Mounting component CP 60 for signal pillar										
see page 720										
		-	■	-	0.1	7024	6206.900	6206.900	6206.900	6206.900
Accessories										
Adaptor CP 120/60 Ø 130 mm to □ 120 x 65 mm 6212.500									see page 157	

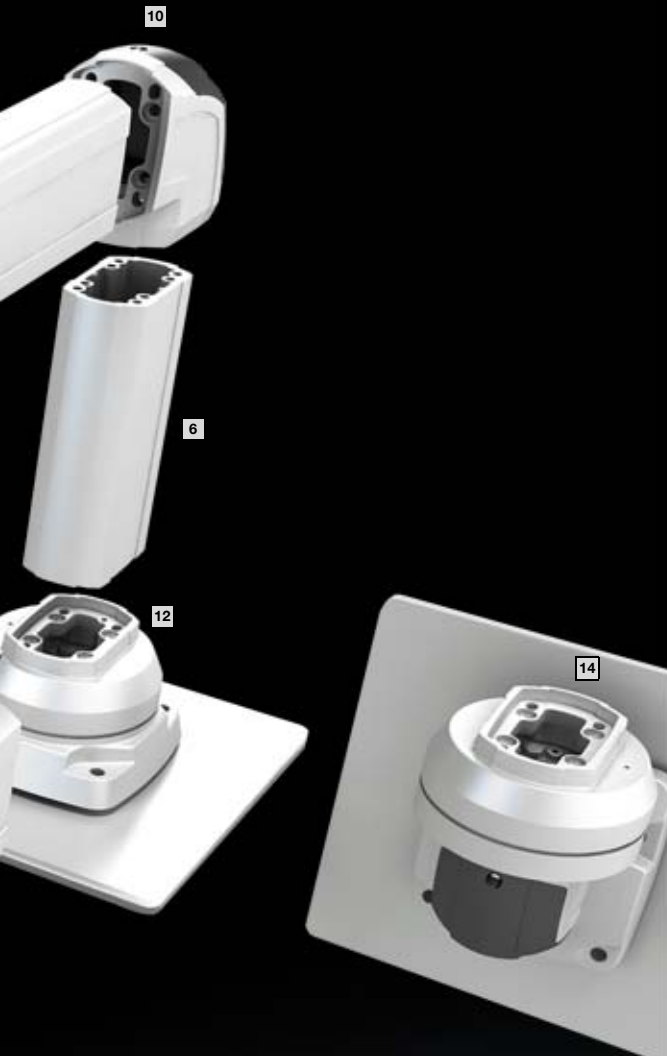
¹⁾ Weight information and diagrams for CP 40, see page 139



Support arm system CP 120

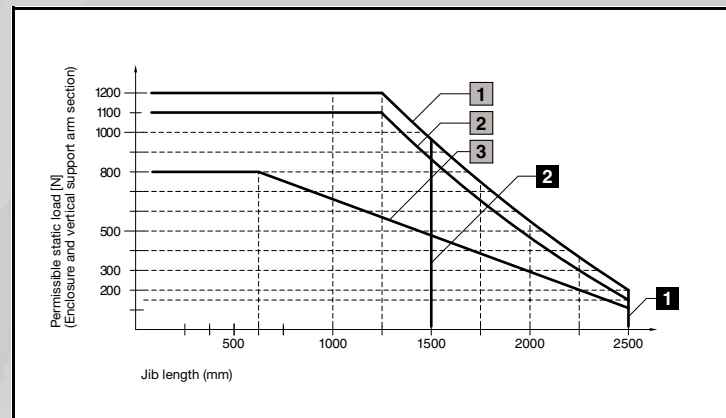
Component overview

- 1 Adaptor CP 120 from support arm connection \varnothing 130 mm to \square 120 x 65 mm (6212.500)
- 2 Attachment CP 120 for support arm connection \varnothing 130 mm (6212.320)
- 3 Coupling CP 120 for support arm connection \varnothing 130 mm (6212.300)
- 4 Coupling CP 60 for support arm connection \square 120 x 65 mm (6206.340)
- 5 Angle coupling 90° CP 120 for support arm connection \varnothing 130 mm (6212.380)
- 6 Support section CP 120, solid (6212.025, 6212.050, 6212.100, 6212.200)
- 7 Support section CP 120, open (6212.150, 6212.110, 6212.210)
- 8 Support section CP 60, solid (6206.025, 6206.050, 6206.100, 6206.200)
- 9 Adaptor for support arm combination CP 120/60 (6212.640)
- 10 Angle piece 90° CP 120 (6212.600)
- 11 Intermediate hinge CP 120 (6212.620)
- 12 Top-mounted joint CP 120, vertical outlet (6212.720)
- 13 Top-mounted joint CP 120, horizontal outlet (6212.700)
- 14 Wall-mounted hinge CP 120, vertical outlet (6212.760)
- 15 Wall-mounted hinge CP 120, horizontal outlet (6212.740)
- 16 Wall/base mounting bracket CP 120, small (6212.820)
- 17 Wall/base mounting bracket CP 120, large (6212.800)
- 18 Mounting component CP 120/180 for signal pillar (6212.900)



Load information

Permissible load depending on system configuration



- 1 System layout without intermediate hinge 6212.620, with solid or open support section
- 2 System layout with intermediate hinge 6212.620 with solid support section
- 3 System layout with intermediate hinge 6212.620 and open support section

- 1 Maximum system length 2500 mm for systems with horizontal outlet at the start of the system.
- 2 Maximum system length 1500 mm for systems with vertical outlet at the start of the system. The overall height with a vertical system start must not exceed 500 mm.

Note:

- Wall/base mounting bracket, small 6212.820 must not be used in conjunction with intermediate hinge 6212.620!
- Intermediate hinge 6212.620 should only be used once per system!

Support arm system CP 120



Comfort Panel Page 124 Optipanel Page 126 Operating housing with handle strips Page 130 Operating housing for desktop TFT Page 132

Support section CP 120

Attachment to the connection components with 4 self-tapping screws in the screw channel. May be cut to any required length, no thread-tapping required. Closed cable duct with a large cross-section. Open cable duct for easy servicing access and for pre-assembled cables with connectors; lockable via cover section.

X-shaped profiling for greater load capacity, large cable routing channels. Upper channel adequate for cables with large connectors (e.g. DVI or VGA) and available/usable throughout the entire system.

Size:

- External dimensions: 75 x 120 mm

Material:

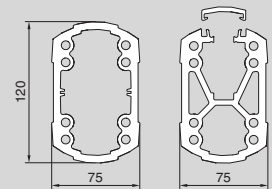
- Support section: Extruded aluminium section

Colour:

- Support section: RAL 7035

Supply includes:

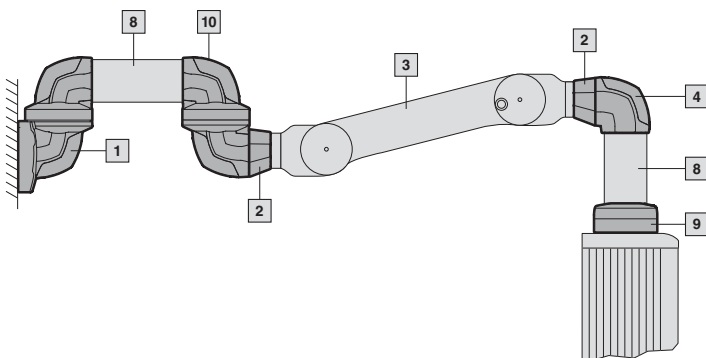
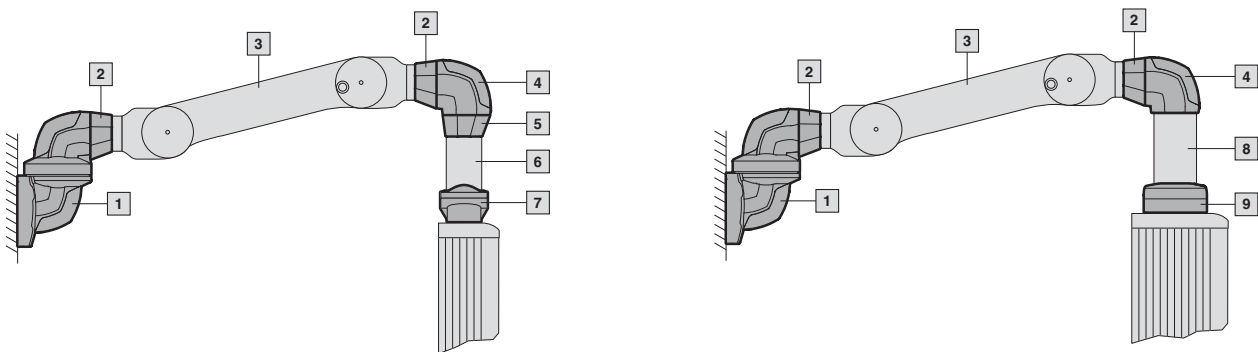
- Support section



Technical details:





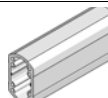




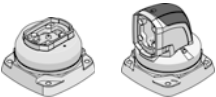




Available on the Internet

Combination with support arm, height adjustable

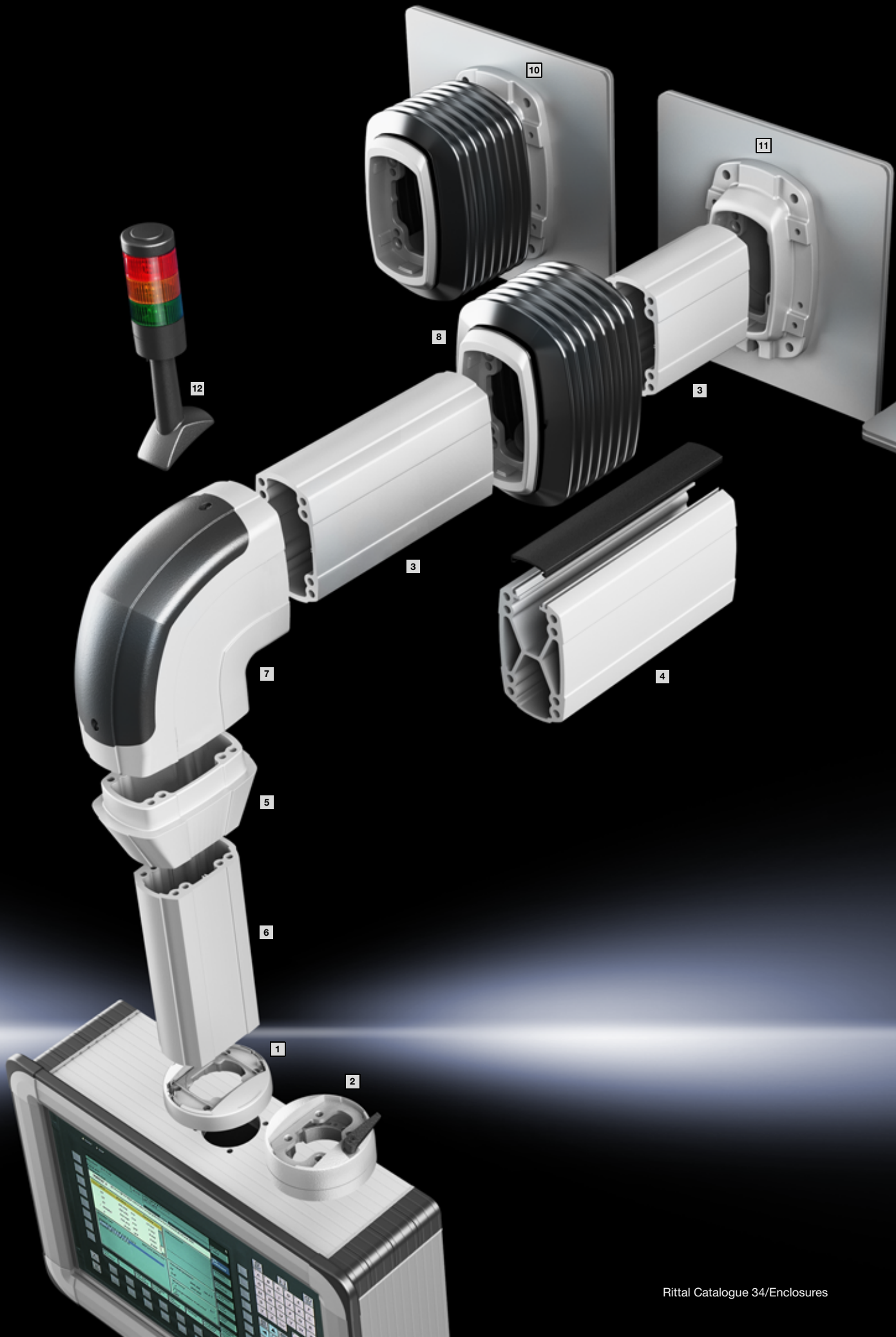


- 1 Wall-mounted hinge CP 120, horizontal outlet (6212.740)
- 2 Adaptor CP 120 to support arm, height-adjustable (6071.600)
- 3 Support arm, height-adjustable, see page 160
- 4 Angle piece 90° CP 120 (6212.600)
- 5 Adaptor for support arm combination CP 120/60 (6212.640)
- 6 Support section CP 60, L = 500 mm (6206.050)
- 7 Coupling CP 60 for support arm connection
□ 120 x 65 mm (6206.340)
- 8 Support section CP 120, solid, L = 500 mm (6212.050)
- 9 Coupling CP 120 for support arm connection Ø 130 mm (6212.300)
- 10 Intermediate hinge CP 120 (6212.620)

Support arm system CP 120

	Rotating/tilting	Rigid	Length mm	Weight kg	Colour RAL	Enclosure section CP 120	Enclosure section CP 120/60	Centre section CP 120	Wall section CP 120	
						Model No.				
Adaptor CP 120/60 from support arm connection Ø 130 mm to □ 120 x 65 mm										
	see page 157	-	■	-	0.5	7035	6212.500	6212.500	-	-
Attachment CP 120/60 for support arm connection										
	Ø 130 mm	-	■	-	0.7	7035	6212.320	6206.320	-	-
	□ 120 x 65 mm	-	■	-	0.7	7035	-	6206.360	-	-
Coupling CP 120/60 for support arm connection										
	Ø 130 mm	■	-	-	2.0	7035	6212.300	6206.300	-	-
	□ 120 x 65 mm	-	-	-	-	-	-	6206.340	-	-
Angle coupling 90° CP 120 for support arm connection										
	Ø 130 mm	■	-	-	2.1	7035/ 7024	6212.380	-	-	-
Support section CP 120/60										
		-	-	250	2.0	7035	CP 120	CP 60 ¹⁾	CP 120	CP 120
Solid	-	-	500	3.9	6212.025		6206.025	6212.025	6212.050	6212.025
	-	-	1000	7.8	6212.100		6206.100	6212.100	6212.100	6212.100
	-	-	2000	15.6	6212.200		6206.200	6212.200	6212.200	6212.200
	Open	-	-	500	4.6	7035/ 7024	6212.150	-	6212.150	6212.150
	-	-	-	1000	9.2	-	6212.110	-	6212.110	6212.110
	-	-	-	2000	18.4	-	6212.210	-	6212.210	6212.210
Adaptor for support arm combination CP 120/60										
	see page 159	-	■	-	0.7	7035	-	6212.640	-	-
Angle piece 90°, CP 120										
		-	■	-	1.1	7035/ 7024	6212.600	-	-	6212.600
Intermediate hinge CP 120										
		■	-	-	4.4	7035/ 7024	-	-	6212.620	-
Top-mounted joint CP 120										
	Vertical outlet	■	-	-	3.8	7035	-	-	-	6212.720
	Horizontal outlet	■	-	-	4.3	7035/ 7024	-	-	-	6212.700
Wall-mounted hinge CP 120										
	Vertical outlet	■	-	-	5.5	7035/ 7024	-	-	-	6212.760
	Horizontal outlet	■	-	-	6.1	7035/ 7024	-	-	-	6212.740
Wall/base mounting bracket CP 120, small										
		-	■	-	0.5	7035	-	-	-	6212.820
Wall/base mounting bracket CP 120, large										
		-	■	-	2.5	7035/ 7024	-	-	-	6212.800
Mounting component CP 120/180 for signal pillar										
	see page 720	-	■	-	0.1	7024	6212.900	6212.900	6212.900	6212.900
Tilting adaptor										
For support arm connection Ø 130 mm and □ 120 x 65 mm									see page 147	
Accessories										
Adaptor CP 120 to support arm, height-adjustable 6071.600									see page 159	

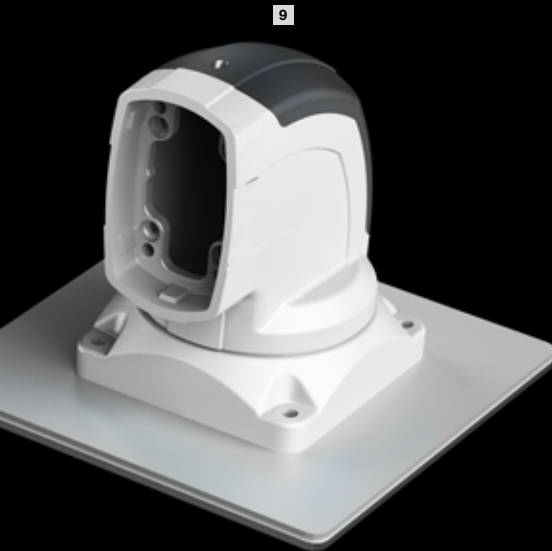
¹⁾ Weight information and diagrams for CP 60, see page 147



Support arm system CP 180

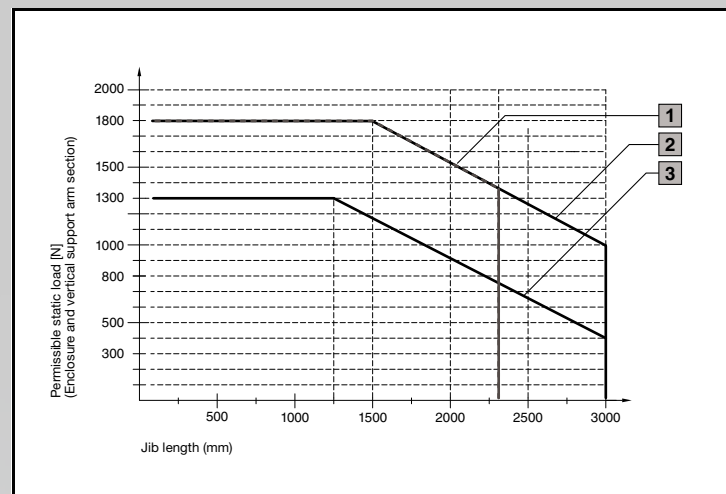
Component overview

- 1 Attachment CP 120 for support arm connection Ø 130 mm (6212.320)
- 2 Coupling CP 120 for support arm connection Ø 130 mm (6212.300)
- 3 Support section CP 180, solid (6218.050, 6218.100, 6218.200)
- 4 Support section CP 180, open (6218.150, 6218.110, 6218.210)
- 5 Adaptor for support arm combination CP 180/120 (6218.640)
- 6 Support section CP 120, solid (6212.025, 6212.050, 6212.100, 6212.200)
- 7 Angle piece 90° CP 180 (6218.600)
- 8 Intermediate hinge CP 120 (6218.620)
- 9 Top-mounted joint CP 180, horizontal outlet (6218.700)
- 10 Wall-mounted hinge CP 180, horizontal outlet (6218.740)
- 11 Wall/base mounting bracket CP 180, small (6218.820)
- 12 Mounting component CP 120/180 for signal pillar (6212.900)



Load information

Permissible load depending on system configuration

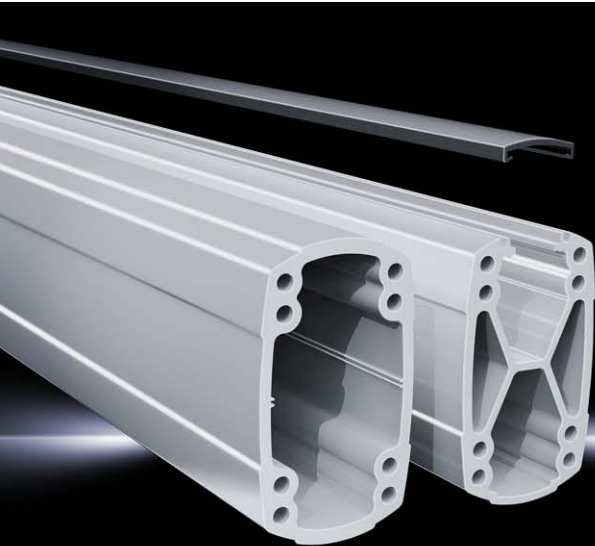


- 1 System layout without intermediate hinge 6218.620 with solid or open support section
- 2 System layout with intermediate hinge 6218.620 with solid support section
- 3 System layout with intermediate hinge 6218.620 and open support section

Note:

- Intermediate hinge 6218.620 should only be used once per system!
- Where possible, Rittal recommends that the support section between components 6218.700, 6218.740, 6218.820 and intermediate hinge 6218.620 should be of a solid design

Support arm system CP 180



Comfort Panel Page 124 Optipanel Page 126 Operating housing with handle strips Page 130 Operating housing for desktop TFT Page 132

Support section CP 180

Attachment to the connection components with 4 self-tapping screws in the screw channel. May be cut to any required length, no thread-tapping required. Closed cable duct with a large cross-section. Open cable duct for easy servicing access and for pre-assembled cables with connectors; lockable via cover section.

X-shaped profiling for greater load capacity, large cable routing channels. Upper channel adequate for cables with large connectors (e.g. DVI or VGA) and available/usable throughout the entire system.

Size:

- External dimensions: 90 x 160 mm

Material:

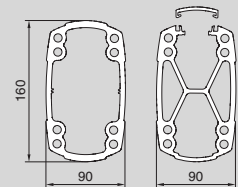
- Support section: Extruded aluminium section

Colour:

- Support section: RAL 7035

Supply includes:

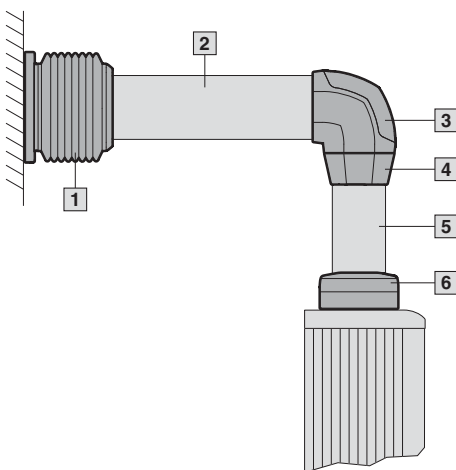
- Support section



Technical details:

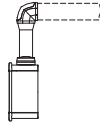
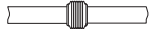
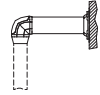


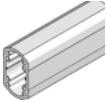








Available on the Internet

Combination with support arm system CP 120



- 1 Wall-mounted hinge CP 180, horizontal outlet (6218.740)
- 2 Support section, solid CP 180, 1000 mm (6218.100)
- 3 Angle piece 90° CP 180 (6218.600)
- 4 Adaptor for support arm combination CP 180/120 (6218.640)
- 5 Support section CP 120, solid, L = 500 mm (6212.050)
- 6 Coupling CP 120 for support arm connection Ø 130 mm (6212.300)

Support arm system CP 180

	Rotating/tilting	Rigid	Length mm	Weight kg	Colour RAL	Enclosure section CP 180/120	Centre section CP 180	Wall section CP 180
								
Model No.								
Attachment CP 120 for support arm connection Ø 130 mm								
	-	■	-	0.7	7035	6212.320	-	-
Coupling CP 120 for support arm connection Ø 130 mm								
	■	-	-	2.0	7035	6212.300	-	-
Support section CP 180/120						CP 120 ¹⁾	CP 180	CP 180
	-	-	250	2.6	7035	6212.025	-	-
	-	-	500	5.2		6212.050	6218.050	6218.050
	-	-	1000	10.5		6212.100	6218.100	6218.100
	-	-	2000	21		6212.200	6218.200	6218.200
	-	-	500	5.8	7035/ 7024	6212.150	6218.150	6218.150
	-	-	1000	11.6		6212.110	6218.110	6218.110
	-	-	2000	23.2		6212.210	6218.210	6218.210
Adaptor for support arm combination CP 180/120								
	-	■	-	1.5	7035	6218.640	-	-
Angle piece 90° CP 180								
	-	■	-	3.6	7035/ 7024	6218.600	-	6218.600
Intermediate hinge CP 180								
	■	-	-	10.3	7035/ 7024	-	6218.620	-
Top-mounted joint CP 180								
	■	-	-	18.0	7035/ 7024	-	-	6218.700
Wall-mounted hinge CP 180								
	■	-	-	13.0	7035/ 7024	-	-	6218.740
Wall/base mounting bracket CP 180, small								
	-	■	-	5.0	7035	-	-	6218.820
Mounting component CP 120/180 for signal pillar								
	-	■	-	0.1	7024	6212.900	-	6212.900

¹⁾ Weight information and diagrams for CP 120, see page 151

Support arm system CP 40/60/120/180



Connection console VESA 75/100

For rear connection of

- Slimline operating housings
- Commercially available TFTs
- Industrial PCs

with VESA 75/100 connection

Connection to Rittal support arm systems

- CP 40
- CP 60
- CP 120 via adaptor from support arm connection Ø 130 mm to □ 120 x 65 mm

Benefits:

- Fast, simple one-person assembly using machined keyholes
- More space for installation and servicing
- Cables may be routed to devices outside and inside the console
- Removable cover for simple cable routing and access to interior device connections
- Integral cable clamping facilities
- Cover with captive screws

Material:

- Cast aluminium

Colour:

- Connection console: RAL 7035
- Cover: RAL 7024

Supply includes:

- Seals and assembly parts
- Cable ties for cable clamping

Weight kg	Model No.
1.1	6206.480



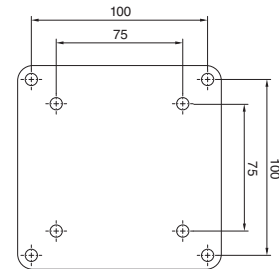
Also required:

- Attachment CP 60, for support arm connection □ 120 x 65 mm, 6206.360
- Coupling CP 60 for support arm connection □ 120 x 65 mm, 6206.340
- Tilting adaptor 10° for support arm connection □ 120 x 65 mm, 6206.440
- Coupling CP 40 for support arm connection □ 120 x 65 mm, 6501.130
- Tilting adaptor +/-45° for support arm connection □ 120 x 65 mm, 6206.460
- Adaptor from support arm connection Ø 130 mm to □ 120 x 65 mm, 6212.500

Technical details:

Available on the Internet

VESA connection hole pattern



Connection console

- For rear connection of slimline operating housings
- Removable lid for simple cable entry

Connection to Rittal support arm systems

- CP 40
- CP 60
- CP 120 via adaptor from support arm connection Ø 130 mm to □ 120 x 65 mm

Material:

- Cast aluminium

Supply includes:

- Seals and assembly parts
- Cable ties for cable clamping

Colour RAL	Weight kg	Model No.
7024	0.7	6508.010

Technical details:

Available on the Internet

Support arm system CP 40/60/120/180

Adaptor

from support arm connection Ø 130 mm to
□ 120 x 65 mm

For external mounting of operating housings with support arm cut-out □ 120 x 65 mm and connection console VESA 75/100 to

- Coupling CP 120, 6212.300
- Mounting bracket CP 120, 6212.320
- Angle coupling 90° CP 120, 6212.380
- Pivot with jib, 6016.600
- Pivot for machine-integrated installation, 6016.700

Material:

– Cast aluminium

Colour:

– RAL 7035

Supply includes:

- Seals
- Assembly parts

Height mm	Weight kg	Model No.
40	0.5	6212.500

Technical details:

Available on the Internet



Adaptor

from support arm connection Ø 180 mm to
Ø 130 mm

For mounting between:

- Enclosures with support arm connection Ø 180 mm
- and
- Coupling CP 60/120 for support arm connection Ø 130 mm, 6206.300, 6212.300
- Mounting bracket CP 60/120 for support arm connection Ø 130 mm, 6206.320, 6212.320
- Pivot, 6016.600, 6016.700

Material:

– Cast aluminium

Colour:

– RAL 7035

Supply includes:

- Seals
- Assembly parts

Height mm	Weight kg	Model No.
20	0.6	6212.520

Technical details:

Available on the Internet



Adaptor

for Siemens Pro-Panel

For the external mounting of Siemens Simatic

- MP 377 15" Pro
- Thin Client 15" Pro
- Flat-Panel Monitor 15", 19" Pro
- HMI IPC477C 15" Pro

to support arm system

- CP 40, steel
- CP 60/120 with support arm connection □ 120 x 65 mm

Material:

– Aluminium

Colour:

– RAL 7035

Supply includes:

- Seals
- Assembly parts

Weight kg	Model No.
0.3	6206.500

Technical details:

Available on the Internet



Support arm system CP 40/60/120/180



Connection plates

with reinforcement plate

- For easy location of the command panel onto the support arm or pedestal
- More space for cable entry

For mounting command panels

- Comfort Panel from a front panel width of 247 mm and installation depth of 152 mm
- Optipanel from a front panel width of 220 mm and installation depth of 150 mm
- Sheet steel from 135 mm installation depth

For mounting on support arm system components

- Mounting bracket CP 60/120 for support arm connection Ø 130 mm, 6206.320, 6212.320
- Coupling CP 60/120 for support arm connection Ø 130 mm, 6206.300, 6212.300
- Angle coupling 90° CP 60/120 for support arm connection Ø 130 mm, 6206.380, 6212.380
- Tilting adaptor 10° CP 60/120 for support arm connection Ø 130 mm, 6206.400
- Tilting adaptor +/-45°, system 60/120 for support arm connection Ø 130 mm, 6206.420

Weight kg	Model No.
1.4	6212.540

Material:

- Connection plate: Cast aluminium
- Reinforcement plate: Sheet steel, 6 mm

Colour:

- RAL 7035

Supply includes:

- Reinforcement plate
- Seals
- Assembly parts

Technical details:

Available on the Internet



Angle adaptor 90°

for support arm combination CP 60 to CP 40

Application:

- Connection component from CP 60 horizontal to CP 40 vertical
- For external mounting of small, slimline operating housings with CP 40 components, if the greater load capacity of CP 60 is needed for large jib lengths or if an intermediate hinge is required for the application.

Benefits:

- With integral adjustment facility
- Removable cover for simple cable entry

Material:

- Angle adaptor 90°: Cast aluminium
- Cover: Plastic

Colour:

- Angle adaptor 90°: RAL 7035
- Cover: RAL 7024

Supply includes:

- Seals
- Adjusting screws
- Self-tapping screws and clamping screws for support section attachment

Weight kg	Model No.
1.0	6206.640



Accessories:

- Mounting component for signal pillars (6206.900), for external mounting on the cover, see page 720

Technical details:

Available on the Internet



Support arm system CP 40/60/120/180

Adaptor

For support arm combination

- CP 120 to 60
- CP 180 to 120

Application:

- Connection component between large and small support arm systems, where this arrangement is chosen for static, visual or cost reasons
- For mounting small, flat command panels if the load capacity of a larger system is needed horizontally for long jib lengths

Benefits:

- Integral adjustment facility

Material:

- Cast aluminium

Colour:

- RAL 7035

Supply includes:

- Seals
- Self-tapping screws for support section attachment

For support arm system	Weight kg	Model No.
CP 120 to 60	0.7	6212.640
CP 180 to 120	1.5	6218.640

Technical details:

Available on the Internet



Adaptor CP 120 to support arm, height-adjustable

Application:

- For integration of the height-adjustable support arm to the support arm system CP 120

Benefits:

- Integral adjustment facility

Material:

- Cast aluminium

Colour:

- RAL 7035

Supply includes:

- Seals
- Self-tapping screws for support section attachment

Weight kg	Model No.
0.6	6071.600

Technical details:

Available on the Internet



Support arm system CP 40/60/120/180



Support arm, height-adjustable

for support arm system CP 120

Offers enhanced ergonomics thanks to

- Adjustment range
 - for tall and short operators
 - for seated and standing work
 - adjustable to a maximum of 800 mm as required via an adjusting screw at the front of the support arm
- Precise coordination of the compression spring to the enclosure weight via an adjusting screw at the rear of the support arm
- Complete functional reliability – if the compression spring breaks, the arm will remain in position
- Clip-off plastic panels for access to integral cable routing
- Tilting angle of the mounted enclosure is identical in every height position

For 6510.330 and 6510.340

- More space for cable routing
- Cables with connectors such as DVI, VGA are also easily inserted
- Integral locking in three stages
- Superior load capacity

Supply includes:

- Assembly parts

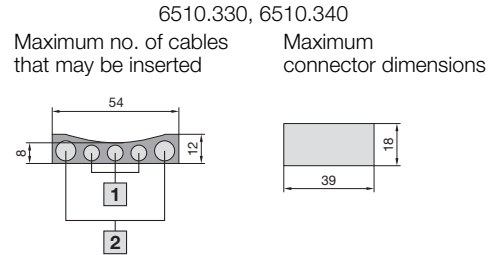
Overall length mm	Colour RAL	Weight range kg ¹⁾	Model No.
962	9006	10 – 20	6510.210
1090	9006	15 – 32	6510.330
1090	9006	20 – 40	6510.340

¹⁾ For populated enclosure and vertical support section

Note:

Maximum cross-section for cable entry:

- 6510.210 = 8 x 15 mm



1 Max. Ø 7 mm (3 x)

2 Max. Ø 8.5 mm (2 x)

Technical details:

Available on the Internet



Housing coupling

for desktop mounting

The stable, rotating connection with extra space for cable routing.

For additional stability of the roof and base with heavy installed equipment.

For mounting

- Command panels from 150 mm installation depth on
- IW worktops
- Horizontal surfaces (floors or ceilings)

Attachment

- of command panels: With one-person assembly via machined keyholes
- on surfaces: Via external screws with cover

Rotation range:

- Max. 350°, lockable via clamping levers
- By using additional M6 cheese-head screws, the rotation range may be limited to ±28°, ±73°, ±118°, ±163°

Material:

- Housing coupling: Cast aluminium/die-cast zinc
- Reinforcement plate: Sheet steel, 6 mm

Surface finish:

- Housing coupling: Powder-coated, textured
- Reinforcement plate: Zinc-plated

Colour:

- Housing coupling: RAL 7024

Supply includes:

- Reinforcement plate
- Seals
- Assembly parts

Version	Optipanel	Comfort Panel	Weight kg	Model No.
B = 418 mm	432 ¹⁾	435 ¹⁾	4.2	6528.410

¹⁾ From front panel width mm without keyboard housing, with keyboard housing on request

Note:

- With the Comfort Panel and Optipanel enclosures, the rectangular support arm cut-out may be selected, ordered and prepared using the command panel configurators at www.rittal.com

Technical details:

Available on the Internet

Support arm system CP 40/60/120/180

Pivot

with/without jib

- For direct, vertically hinged integration into machines and systems
- Enclosure suspended or top-mounted
- With integral rotation range restrictor
- To fit enclosures with mounting cut-out Ø 130 mm

Jib length mm	Colour RAL	Load capacity N	Model No.
–	7024	700	6016.700
200	7024/7035	700	6016.600

Technical details:
Available on the Internet



Tilting adaptor +/-45°

for command panels with support arm connection Ø 130 mm

For mounting between:

- Coupling CP 60, 6206.300
 - Coupling CP 120, 6212.300
- or
- Mounting bracket CP 60, 6206.320
 - Mounting bracket CP 120, 6212.320
- or
- Angle coupling 90°, CP 60, 6206.380
 - Angle coupling 90°, CP 120, 6212.380
- and the command panel

Tilt angle:

- Adjustable in 7.5° increments

Material:

- Tilting adaptor: Cast aluminium
- Concertina section: Plastic

Colour:

- Tilting adaptor: RAL 7035
- Concertina section: RAL 7024

Supply includes:

- Seals
- Concertina section
- Assembly parts

Weight kg	Model No.
1.2	6206.420

Technical details:
Available on the Internet



Support arm system CP 40/60/120/180



Tilting adaptor +100°/-60°

for command panels with support arm connection □ 120 x 65 mm

For mounting on

- IW worktop, prepared for enclosure attachment
Ø 130 mm
- Surfaces
- Attachment/coupling with support arm connection □ 120 x 65 mm

To fit enclosures up to 20 kg with support arm connection

- □ 90 x 71 mm
- Ø 130 mm
- □ 120 x 65 mm
- VESA Standard 75

With cable tube for protected cable entry.

Tilt angle:

- Adjustable in 7.2° increments via clamping lever and may be limited to +100°/-15° using the stop screw supplied loose.

Material:

- Tilting adaptor: Sheet steel, spray-finished
- Concertina section: Plastic

Colour:

- Tilting adaptor: RAL 7035
- Concertina section: RAL 7024

Supply includes:

- Concertina section
- Assembly parts

Weight kg	Model No.
0.8	6206.460

Technical details:

Available on the Internet

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Stand systems for support arm system CP 60/120



ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL

IT INFRASTRUCTURE

SOFTWARE & SERVICES



FRIEDHELM LOH GROUP

Stand systems



Comfort Panel Page 124 Optipanel Page 126 Compact Panel Page 133 Operating housing with handle strips Page 130

Pedestal, modular, consisting of:

- Pedestal base plate/cross member
- Support section
- Enclosure connection

Colour:
– RAL 7035

Technical details:
Available on the Internet

Photo shows a configuration example with equipment not included in the scope of supply

Pedestal, modular

						Page
		15	18	35 ¹⁾	35 ¹⁾	
1 Pedestal base plate		Model No.				
Pedestal base plate/cross member		6146.100	6106.100	6106.200	6106.400	
Dimensions mm	Width	400	400	490	600	
	Height	10	108	100	205	
	Depth	400	400	600	650	
2 Support section		Model No.				
Height-adjustable (adjustment range 732 – 1122 mm)		6146.200	–	–	–	
Closed, length 1000 mm		–	6206.100	6206.100 ¹⁾	6206.100 ¹⁾	
3 Enclosure connection		Model No.				
Enclosure reinforcement, rigid		–	6106.110	–	–	
Attachment CP 40, steel, for support arm connection □ 90 x 71 mm		6501.070	–	–	–	
Coupling CP 40, steel, for support arm connection □ 90 x 71 mm		6501.050	–	–	–	
Coupling CP 40, steel, for support arm connection □ 120 x 65 mm		6501.130	–	–	–	
Attachment CP 60, for support arm connection Ø 130 mm		–	–	6206.320	6206.320	
Attachment CP 60, for support arm connection □ 120 x 65 mm		–	–	6206.360	6206.360	
Coupling CP 60, for support arm connection Ø 130 mm		–	–	6206.300	–	
Coupling CP 60, for support arm connection □ 120 x 65 mm		–	–	6206.340	–	
Tilt adjustment		6146.300	–	–	–	
Accessories						
Twin castors		6148.000	–	6148.000	■	522
Levelling feet		–	–	4612.000	–	521
Base mounting bracket		–	–	1590.000	–	587

¹⁾ Alternative: Support arm system CP 120 may also be used by simply drilling a hole. Weight capacity 50 kg.



Comfort Panel Page 124 **Optipanel** Page 126 **Compact Panel** Page 133 **Operating housing with handle strips** Page 130

The right system to suit any application:

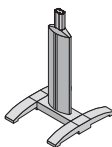
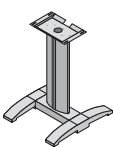
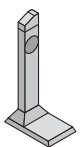
- A range of design variants
- Weight load from 15 – 25 kg
- Reliable protection of cable management

Colour:
– RAL 7035

Technical details:
Available on the Internet

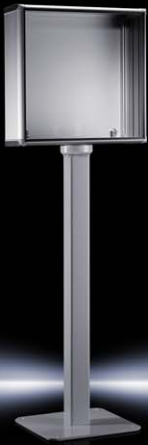
Photo shows a configuration example with equipment not included in the scope of supply

Pedestal, complete

				
Weight capacity kg	25	25	15	Page
Model No.	6106.300	6141.200	6135.000	
Width mm	600	600	360	
Height mm	1093	946	995	
Depth mm	660	660	500	
Supply includes				
Cross member	■	■	–	
Base plate	–	–	■	
Support section	■	–	■	
Vertical aluminium panel moulding, may be opened	■	■	–	
Worktop attachment	–	■	–	
Accessories				
Twin castors	6148.000, 7495.000	6148.000, 7495.000	–	522
Levelling feet	4612.000	4612.000	–	521
Base mounting bracket	6147.000	6147.000	–	167
Trim panel for pedestal	6144.100	6144.100	–	167
Attachment CP 60, for support arm connection Ø 130 mm	6206.320	–	–	147
Attachment CP 60, for support arm connection □ 120 x 65 mm	6206.360	–	–	147
Coupling CP 60, for support arm connection Ø 130 mm	6206.300	–	–	147
Coupling CP 60, for support arm connection □ 120 x 65 mm	6206.340	–	–	147
Worktop without handle ¹⁾	–	6902.310	–	

¹⁾ W x H x D 950 x 38 x 600 mm

Stand systems



Comfort Panel Page 124 **Optipanel** Page 126 **Compact Panel** Page 133 **Operating housing with handle strips** Page 130

The welded alternatives to the pedestal, complete

- Open pedestal for retrospective cable entry with pre-assembled connectors
- Pillar, small: For heavy installed equipment

Material:
– Steel

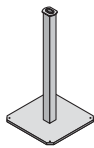
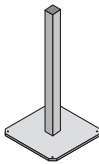
Surface finish:
– Spray-finished

Colour:
– RAL 7035

Technical details:
Available on the Internet

Photo shows a configuration example with equipment not included in the scope of supply

Pedestal, open/pillar, small

			
Weight load kg	40	80	Page
Model No.	6106.500	6112.500	
Supply includes			
Base plate cross section mm	Width	400	500
	Height	10	12
	Depth	400	500
Overall height mm	1095	1150	
Accessories			
Attachment CP 60, for support arm connection Ø 130 mm	6206.320	–	147
Attachment CP 60, for support arm connection □ 120 x 65 mm	6206.360	–	147
Coupling CP 60, for support arm connection Ø 130 mm	6206.300	–	147
Coupling CP 60, for support arm connection □ 120 x 65 mm	6206.340	–	147
Attachment CP 120, for support arm connection Ø 130 mm	–	6212.320	151
Coupling CP 120, for support arm connection Ø 130 mm	–	6212.300	151

Base mounting bracket

Brackets for screw-fastening from below to the cast feet with posidrive raised countersunk screws M12. Optionally with projection at the front, interior or sides, with Ø 11 mm hole for screw-fastening to the base.

Material:

- Steel

Surface finish:

- Zinc-plated

Supply includes:

- Posidrive raised countersunk screws M12

Packs of	Model No.
4 pc(s).	6147.000



Trim panel

Material:

- Cast aluminium

Supply includes:

- Assembly parts for screw-fastening between the cast feet at the front or rear

Colour RAL	Model No.
7035 textured	6144.100



Enclosure reinforcement

For external or internal reinforcement of enclosures of a corresponding size. Smaller enclosures may also be mounted directly without reinforcement.

Supply includes:

- Assembly parts for the enclosure and support section plus 2 seals

Technical details

Available on the Internet

	For enclosure	Support arm connection	Material	Weight kg	Model No.
1	B1 ≥ 300 mm, T1 ≥ 150 mm	CP 40, stainless steel	Stainless steel 1.4301	0.9	6143.310
2	B1 ≥ 300 mm, T1 ≥ 150 mm	CP 60	Sheet steel	0.9	6106.110

B = Width
T = Depth



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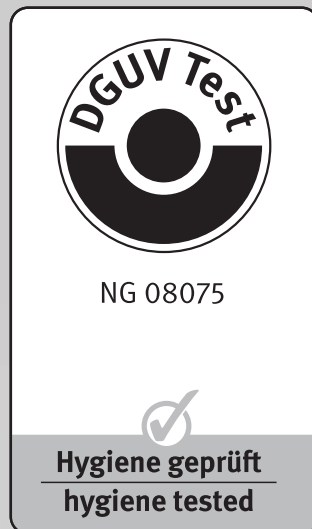
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Hygienic Design

Small and compact enclosures HD

Terminal boxes HD.....	170
Compact enclosures HD.....	171
Accessories.....	172



Hygienic Design



HD accessories Page 172 System accessories Page 507 KL stainless steel Page 177

Material:

- Enclosure and cover: Stainless steel 1.4301 (AISI 304) 1.5 mm
- Mounting bracket: Sheet steel, zinc-plated, passivated, 2.0 mm
- Quick-release fasteners: Stainless steel
- Seal: Silicone, compliant with FDA Guideline 21 CFR 177.2600

Surface finish:

- Enclosure and cover: Brushed, grain 400, peak-to-valley height < 0.8 µm
- Seal: Blue, dyed (RAL 5010)
- Mounting plate: Zinc-plated

Protection category IP to IEC 60 529:

- IP 66

Protection category IP to DIN 40 050-9:

- IP 69K

Protection category NEMA:

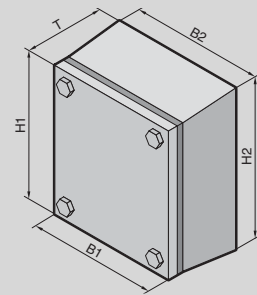
- NEMA 13
- NEMA 3R
- NEMA 4X

Supply includes:

- Enclosure of all-round solid construction
- Cover
- Mounting bracket (pre-assembled)
- Seal and quick-release locks (supplied loose)

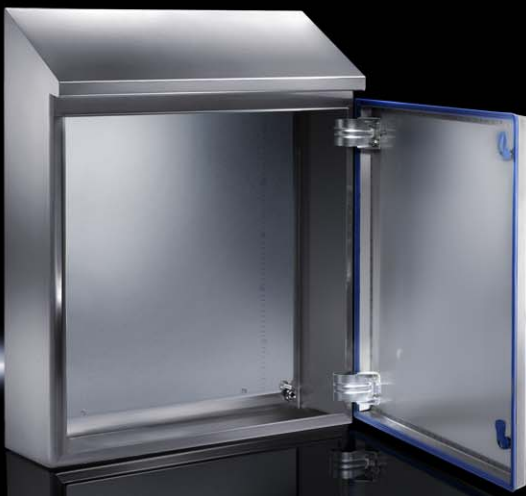
Technical details:

Available on the Internet



Terminal boxes HD

Width (front) (B1) mm	Packs of	150	150	200	300	400	400	Page
Width (rear) (B2) mm		172	177	227	327	427	427	
Height (front) (H1) mm		150	150	200	200	200	300	
Height (rear) (H2) mm		172	177	227	227	227	327	
Depth (T) mm		80	120	120	120	120	120	
Model No.	1 pc(s).	1670.600	1671.600	1672.600	1674.600	1675.600	1676.600	
Accessories								
Wall spacer bracket HD	1 pc(s).	4000.100	4000.100	4000.100	4000.100	4000.100	4000.100	172
Mounting plates	1 pc(s).	1560.700	1560.700	1562.700	1563.700	1564.700	1568.700	591
Support rails TS 35/7.5	10 pc(s).	2314.000	2314.000	2315.000	2316.000	2317.000	2317.000	614
Cable gland HD		see page	see page	see page	see page	see page	see page	659



HD accessories Page 172 System accessories Page 507 AE stainless steel Page 179 Rails for interior installation HD Page 173

Material:

- Enclosure and door: Stainless steel 1.4301 (AISI 304)
- Mounting plate: Sheet steel
- Lock inserts HD: Stainless steel 1.4404 (AISI 316L)
- Seal: Silicone, compliant with FDA Guideline 21 CFR 177.2600

Surface finish:

- Enclosure and door: Brushed, grain 400, peak-to-valley height < 0.8 µm
- Mounting plate: Zinc-plated
- Seal: Blue, dyed (RAL 5010)

Protection category IP to IEC 60 529:

- IP 66

Protection category IP to DIN 40 050-9:

- IP 69K

Protection category NEMA:

- NEMA 13
- NEMA 4X

Supply includes:

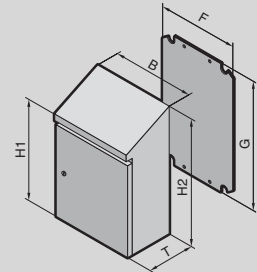
- Enclosure of all-round solid construction
- Door with press-fitted seal
- Interchangeable door hinge
- Mounting plate

Approvals:

- UL
- cUL

Technical details:

Available on the Internet



Compact enclosures HD

Width (B) mm	Packs of	220	390	390	510	610	610	810	810	Page
Height (front) (H1) mm		350	430	650	550	430	650	1050	1250	
Height (rear) (H2) mm		437	549	769	669	601	769	1221	1421	
Depth (T) mm		155	210	210	210	300	210	300	300	
Mounting plate width (F) mm		162	334	334	449	549	549	739	740	
Mounting plate height (G) mm		275	355	570	470	355	570	955	1155	
Model No.	1 pc(s).	1302.600	1306.600	1308.600	1307.600	1320.600	1310.600	1316.600	1317.600	
Accessories										
Wall spacer bracket HD	1 pc(s).	4000.100	4000.100	4000.100	4000.100	4000.100	4000.100	4000.100	4000.100	172
Cable gland HD		see page	see page	see page	see page	see page	see page	see page	see page	659

Hygienic Design

Accessories



Levelling feet HD

Benefits:

- Minimal cleaning time, due to fully covered, permanently sealed threads
- Compensation of floor inclines up to an angle of 10° thanks to flexible base plate
- Baying is even possible on sloping floors, thanks to a large levelling range of 55 mm

Load capacity:

- Max. 5000 N static per levelling foot

Material:

- Stainless steel 1.4301 (AISI 304)

Supply includes:

- Assembly parts and seals

Thread	Levelling range mm	Base mount	Packs of	Model No.
M12	120 – 175	without	4 pc(s).	4000.200
		with	4 pc(s).	4000.210



Wall spacer bracket HD

Benefits:

- Creates space for cleaning behind the enclosure
- Shorter assembly times by eliminating the need for an all-round seal
- Greater hygiene safety by avoiding an uncontrollable dead space or gap between the enclosure and wall

Functional principle:

- Mounting on the wall optionally from the enclosure interior via a through-hole (max. M8) or from the rear via an integral M10 thread

Material:

- Stainless steel 1.4301 (AISI 3304)

Supply includes:

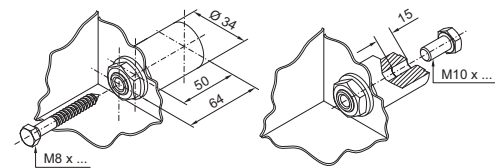
- Assembly parts and seals

Wall distance mm	Packs of	Model No.
50	1 pc(s).	4000.100

Mounting alternatives:

Attachment from inside

Attachment from outside



Enclosure key HD

Packs of	Model No.
1 pc(s).	2549.600



Bit HD

for universal key 2549.500

See page 573

Packs of	Model No.
1 pc(s).	2549.510



Cam lock HD

Hygienic Design variant for easy, safe cleaning.

Applications:

- Compact enclosures AE stainless steel (except 1017.XXX and 1019.XXX).
- May be integrated into customised applications, e.g. covers of machine panels

Material:

- Stainless steel 1.4404 (AISI 316L)

Packs of	Model No.
1 pc(s).	2304.010

+ **Accessories:**

- Enclosure key HD, see page 172

Hygienic Design

Accessories

Rails for interior installation

for compact enclosures HD

For mounting on the existing threaded bolts. With TS system punchings on three sides.

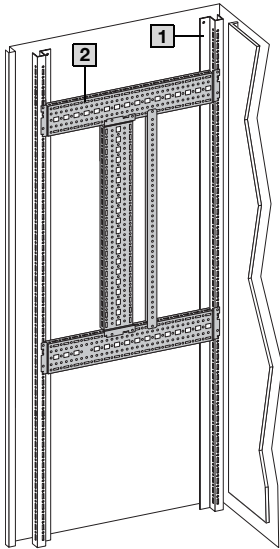
Material:

– Sheet steel, zinc-plated

Supply includes:

– Assembly parts

Length mm	Packs of	Model No.	Page
510	4 pc(s).	5001.050	605
710	4 pc(s).	5001.051	605
910	4 pc(s).	5001.052	605
1110	4 pc(s).	5001.053	605

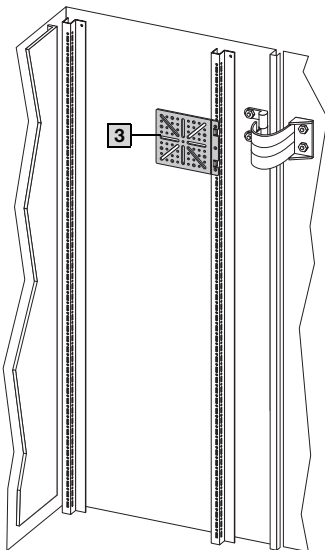


Interior installation, door

Enclosure	1	1	1
Model No.	Model No.		
1316.600	5001.052	5001.050	5001.050
1317.600	5001.053	5001.051 5001.050	5001.051 5001.050

Interior installation, enclosure

Enclosure	1	2	3
	Rails for interior installation 	TS punched section with mounting flange 17 x 73 mm 	Mounting plates
Model No.	Model No.	Model No.	
1308.600 1310.600	5001.050	–	–
1316.600	5001.052	8612.130 (only on lock side)	8612.400 8612.410
1317.600	5001.053	8612.130 (only on lock side)	8612.400 8612.410



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Stainless steel

Small enclosures

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Compact enclosures

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Command panels

Premium Panel IP 69K	188
Command panel housings with door	189

Support arm system

Support arm system CP 40	140
--------------------------------	-----

Switch housings



System accessories Page 507

Material:

- Enclosure: Stainless steel 1.4301 (AISI 304)
- Cover: Stainless steel 1.4301 (AISI 304), all-round foamed-in PU seal

Surface finish:

- Enclosure and cover: Brushed, grain 240

Protection category IP to IEC 60 529:

- IP 66

Protection category NEMA:

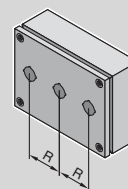
- NEMA 4X

Supply includes:

- Enclosure with cover
- Quick-release fasteners

Technical details:

Available on the Internet

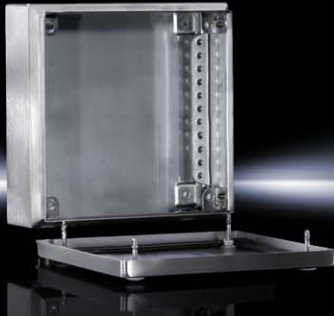


Stainless steel

	Packs of	100	160	220	280	Page
Width mm						
Height mm		100	100	100	100	
Depth mm		90	90	90	90	
Material thickness - enclosure mm		1.25	1.25	1.25	1.25	
Material thickness - cover mm		1.25	1.25	1.25	1.25	
Model No.	1 pc(s).	2384.010	2384.020	2384.030	2384.040	
Pitch pattern (R) mm		–	60	60	60	
No. of switch cut-outs Ø 22.5 mm		1	2	3	4	
Number of quick-release fasteners		2	4	4	4	

Accessories

Wall mounting bracket	4 pc(s).	1594.000	1594.000	1594.000	1594.000	587
Pressure relief stoppers	5 pc(s).	2459.500	2459.500	2459.500	2459.500	533
Cable gland HD		see page	see page	see page	see page	659
Earthing kit	5 pc(s).	2570.100	2570.100	2570.100	2570.100	646
Earth straps		see page	see page	see page	see page	644
Support rails TS 35/7.5	10 pc(s).	–	2314.000	2315.000	2315.000	614



System accessories Page 507 KL sheet steel Page 30 KL for potentially explosive areas Page 192 KL Hygienic Design Page 170

Material:

- Enclosure: Stainless steel 1.4301 (AISI 304)
- Cover: Stainless steel 1.4301 (AISI 304), all-round foamed-in PU seal

Surface finish:

- Enclosure and cover: Brushed, grain 180

Protection category IP to IEC 60 529:

- IP 66

Protection category NEMA:

- NEMA 4X

Supply includes:

- Enclosure with cover
- Quick-release fastener including plastic bushes

Approvals:

- UL
- CSA
- TÜV
- Germanischer Lloyd
- Russian Maritime Register of Shipping
- Lloyds Register of Shipping
- Bureau Veritas
- VDE

Technical details:

Available on the Internet

Stainless steel

Width mm	Packs of	150	150	300	200	200	Page
Height mm		150	150	150	200	200	
Depth mm		80	120	80	80	120	
Material thickness - enclosure mm		1.25	1.25	1.25	1.25	1.25	
Material thickness - cover mm		1.25	1.25	1.25	1.25	1.25	
Model No.	1 pc(s).	1521.010	1527.010	1522.010	1523.010	1528.010	
Weight kg		1.3	1.6	1.8	1.8	2.2	
Number of quick-release fasteners		4	4	4	4	4	

Accessories

Mounting plates	1 pc(s).	1560.700	1560.700	1561.700	1562.700	1562.700	591
Wall mounting bracket	4 pc(s).	1594.000	1594.000	1594.000	1594.000	1594.000	587
Wall angle	4 pc(s).	2583.010	2583.010	2583.010	2583.010	2583.010	588
Pole clamp	1 set(s)	2584.000	2584.000	2584.000	2584.000	2584.000	589
Support rails TS 35/7.5	10 pc(s).	2314.000	2314.000	2316.000	2315.000	2315.000	614
Cover hinge	2 pc(s).	1592.010	1592.010	1592.010	1592.010	1592.010	574
Pressure relief stoppers	5 pc(s).	2459.500	2459.500	2459.500	2459.500	2459.500	533

Stainless steel

Width mm	Packs of	300	300	400	300	400	Page
Height mm		200	200	200	300	300	
Depth mm		80	120	120	120	120	
Material thickness - enclosure mm		1.25	1.25	1.25	1.25	1.25	
Material thickness - cover mm		1.25	1.25	1.25	1.25	1.25	
Model No.	1 pc(s).	1524.010	1529.010	1525.010	1526.010	1530.010	
Weight kg		2.4	2.9	3.6	3.9	4.6	
Number of quick-release fasteners		4	4	4	4	4	

Accessories

Mounting plates	1 pc(s).	1563.700	1563.700	1564.700	1567.700	1568.700	591
Wall mounting bracket	4 pc(s).	1594.000	1594.000	1594.000	1594.000	1594.000	587
Wall angle	4 pc(s).	2583.010	2583.010	2583.010	2583.010	2583.010	588
Pole clamp	1 set(s)	2584.000	2584.000	2584.000	2584.000	2584.000	589
Support rails TS 35/7.5	10 pc(s).	2316.000	2316.000	2317.000	2316.000	2316.000	614
Cover hinge	2 pc(s).	1592.010	1592.010	1592.010	1592.010	1592.010	574
Pressure relief stoppers	5 pc(s).	2459.500	2459.500	2459.500	2459.500	2459.500	533

Bus enclosures BG



System accessories Page 507 BG sheet steel Page 36

Material:

- Enclosure: Stainless steel 1.4301 (AISI 304)
- Cover: Stainless steel 1.4301 (AISI 304), all-round foamed-in PU seal
- 180° hinges: Die-cast zinc

Surface finish:

- Enclosure and cover: Brushed, grain 240
- 180° hinges: Chrome-plated

Protection category IP to IEC 60 529:

- IP 66

Protection category NEMA:

- NEMA 4X

Supply includes:

- Enclosure with cover
- 180° hinges (2)
- Support rail TS 35/7.5

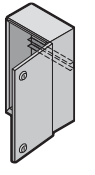
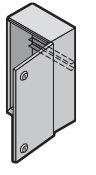
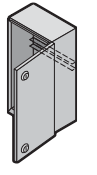
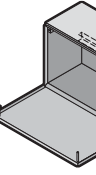
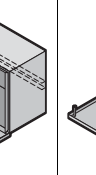
Approvals:

- UL
- cUL
- TÜV
- Lloyds Register of Shipping
- Bureau Veritas
- VDE

Technical details:

Available on the Internet

Stainless steel

							
Width mm	Packs of	200	300	400	400	600	Page
Height mm		300	300	300	200	200	
Depth mm		80	80	80	123	123	
Material thickness - enclosure mm		1.25	1.25	1.25	1.25	1.25	
Material thickness - door mm		1.25	1.25	1.25	1.25	1.25	
Model No.	1 pc(s).	1583.010	1584.010	1585.010	1588.010	1589.010	
Weight kg		2.8	3.7	4.5	4.5	6.0	
Design support rail	adjustable on profile strip	-	-	-	■	■	
	attached to studs	■	■	■	-	-	
Door hinge	bottom	-	-	-	■	■	
	right/left	■	■	■	-	-	
Number of quick-release fasteners		2	2	2	2	3	
Accessories							
Wall mounting bracket	4 pc(s).	1594.000	1594.000	1594.000	1594.000	1594.000	587
Pole clamp	1 set(s)	2584.000	2584.000	2584.000	2584.000	2584.000	589
Condensate discharge	6 pc(s).	2459.000	2459.000	2459.000	2459.000	2459.000	533
Pressure relief stoppers	5 pc(s).	2459.500	2459.500	2459.500	2459.500	2459.500	533

Compact enclosures AE



System accessories Page 507 AE sheet steel Page 46 Hygienic Design Page 171

Material:

- Enclosure: Stainless steel
- Door: Stainless steel, all-round foamed-in PU seal
- Mounting plate: Sheet steel

Surface finish:

- Enclosure and door: Brushed, grain 240
- Mounting plate: Zinc-plated

Supply includes:

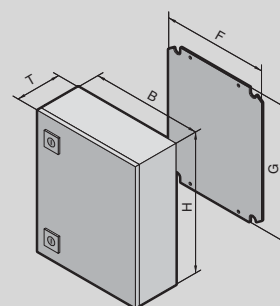
- Enclosure with door(s)
 - Mounting plate
- Please note the product-specific scope of supply.

Approvals:

- UL
- CSA
- TÜV
- Germanischer Lloyd
- Russian Maritime Register of Shipping
- Lloyds Register of Shipping
- Bureau Veritas
- VDE

Technical details:

Available on the Internet



Stainless steel

Width (B) mm	Packs of	200	200	200	300	380	380	Page
Height (H) mm		300	300	300	300	300	300	
Depth (T) mm		120	155	155	210	155	210	
Mounting plate width (F) mm		162	162	162	254	344	334	
Mounting plate height (G) mm		275	275	275	275	275	275	
Material	Stainless steel 1.4301 (AISI 304)	■	-	■	■	■	■	
	Stainless steel 1.4404 (AISI 316L)	-	■	-	-	-	-	
Material of lock	Die-cast zinc, nickel-plated	■	-	■	■	■	■	
	Stainless steel 1.4404 (AISI 316L)	-	■	-	-	-	-	
Model No.	1 pc(s).	1001.600	1002.500	1002.600	1003.600	1004.600	1011.600	
Weight kg		3.6	4.1	4.1	6.9	7.4	8.4	
Protection category IP to IEC 60 529		IP 66	IP 66	IP 66	IP 66	IP 66	IP 66	
Protection category NEMA		NEMA 4X	NEMA 4X	NEMA 4X	NEMA 4X	NEMA 4X	NEMA 4X	
Product-specific scope of supply								
Door(s)		1	1	1	1	1	1	
Cam lock		1	1	1	1	1	1	
3-point lock system		-	-	-	-	-	-	
Accessories								
Rails for interior installation	4 pc(s).	-	-	-	2383.210	-	2383.210	605
Rain canopies, stainless steel	1 pc(s).	-	2470.000	2470.000	2361.000	2471.000	2472.000	580
Wall mounting bracket	4 pc(s).	2433.000	2433.500	2433.000	2433.000	2433.000	2433.000	587
Wall angle	4 pc(s).	2583.010	2583.010	2583.010	2583.010	2583.010	2583.010	588
Pole clamp	1 set(s)	2584.000	2584.000	2584.000	2584.000	2584.000	2584.000	589
Cam locks	1 pc(s).	2304.000	2304.000	2304.000	2304.000	2304.000	2304.000	570
Cam lock HD	1 pc(s).	2304.010	2304.010	2304.010	2304.010	2304.010	2304.010	172
Lock systems		from page	from page	from page	from page	from page	from page	563

Compact enclosures AE

Stainless steel

Width (B) mm	Packs of	300	300	380	380	600	400	Page
Height (H) mm		380	380	380	380	380	500	
Depth (T) mm		210	210	210	210	210	210	
Mounting plate width (F) mm		275	275	334	334	549	354	
Mounting plate height (G) mm		334	334	355	355	355	475	
Material	Stainless steel 1.4301 (AISI 304)	–	■	–	■	■	■	
	Stainless steel 1.4404 (AISI 316L)	■	–	■	–	–	–	
Material of lock	Die-cast zinc, nickel-plated	–	■	–	■	■	■	
	Stainless steel 1.4404 (AISI 316L)	■	–	■	–	–	–	
Model No.	1 pc(s).	1005.500	1005.600	1006.500	1006.600	1009.600	1015.600	
Weight kg		8.4	8.4	9.8	9.8	14.6	12.9	
Protection category IP to IEC 60 529		IP 66	IP 66	IP 66	IP 66	IP 66	IP 66	
Protection category NEMA		NEMA 4X	NEMA 4X	NEMA 4X	NEMA 4X	NEMA 4X	NEMA 4X	
Product-specific scope of supply								
Door(s)		1	1	1	1	1	1	
Cam lock		1	1	1	1	1	2	
3-point lock system		–	–	–	–	–	–	
Accessories								
Rails for interior installation	4 pc(s).	2383.210	2383.210	2383.210	2383.210	2383.210	2383.210	605
Rain canopies, stainless steel	1 pc(s).	2361.000	2361.000	2472.000	2472.000	2473.000	–	580
Wall mounting bracket	4 pc(s).	2433.500	2433.000	2433.500	2433.000	2433.000	2433.000	587
Wall angle	4 pc(s).	2583.010	2583.010	2583.010	2583.010	2583.010	2583.010	588
Pole clamp	1 set(s)	2584.000	2584.000	2584.000	2584.000	2584.000	2584.000	589
Cam locks	1 pc(s).	2304.000	2304.000	2304.000	2304.000	2304.000	2304.000	570
Cam lock HD	1 pc(s).	2304.010	2304.010	2304.010	2304.010	2304.010	2304.010	172
Lock systems		from page	from page	from page	from page	from page	from page	563

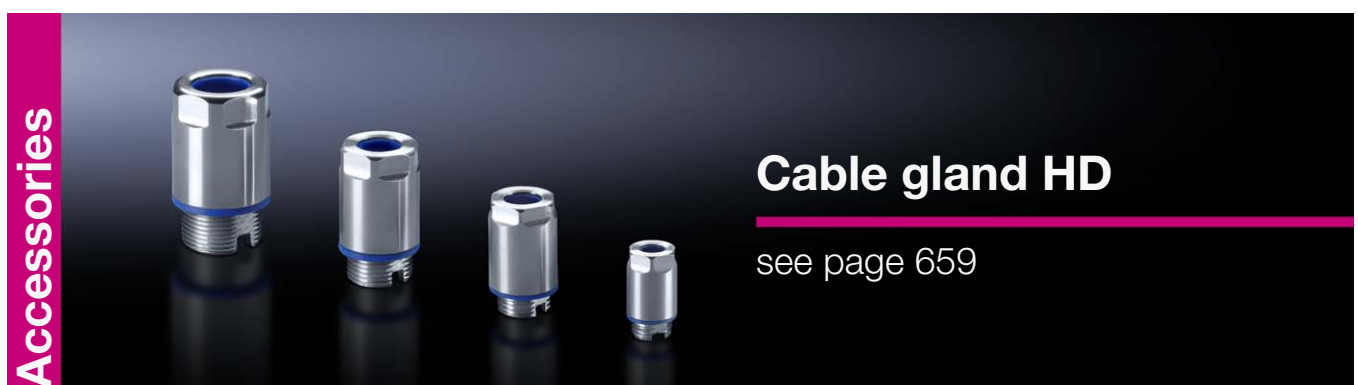
Stainless steel

Width (B) mm	Packs of	500	500	380	600	600	600	Page
Height (H) mm		500	500	600	600	600	760	
Depth (T) mm		210	300	210	210	210	210	
Mounting plate width (F) mm		449	449	334	549	549	549	
Mounting plate height (G) mm		470	470	570	570	570	730	
Material	Stainless steel 1.4301 (AISI 304)	■	■	■	–	■	■	
	Stainless steel 1.4404 (AISI 316L)	–	–	–	■	–	–	
Material of lock	Die-cast zinc, nickel-plated	■	■	■	–	■	■	
	Stainless steel 1.4404 (AISI 316L)	–	–	–	■	–	–	
Model No.	1 pc(s).	1007.600	1013.600	1008.600	1010.500	1010.600	1012.600	
Weight kg		15.7	18.4	15.1	23.5	23.5	30.2	
Protection category IP to IEC 60 529		IP 66	IP 66	IP 66	IP 66	IP 66	IP 66	
Protection category NEMA		NEMA 4X	NEMA 4X	NEMA 4X	NEMA 4X	NEMA 4X	NEMA 4X	
Product-specific scope of supply								
Door(s)		1	1	1	1	1	1	
Cam lock		2	2	2	2	2	2	
3-point lock system		–	–	–	–	–	–	
Accessories								
Rails for interior installation	4 pc(s).	2383.210	2383.300	2383.210	2383.210	2383.210	2383.210	605
Rain canopies, stainless steel	1 pc(s).	2362.000	–	2472.000	2473.000	2473.000	2473.000	580
Wall mounting bracket	4 pc(s).	2433.000	2433.000	2433.000	2433.500	2433.000	2433.000	587
Wall angle	4 pc(s).	2583.010	2583.010	2583.010	2583.010	2583.010	2583.010	588
Pole clamp	1 set(s)	2584.000	2584.000	2584.000	2584.000	2584.000	2584.000	589
Cam locks	1 pc(s).	2304.000	2304.000	2304.000	2304.000	2304.000	2304.000	570
Cam lock HD	1 pc(s).	2304.010	2304.010	2304.010	2304.010	2304.010	2304.010	172
Lock systems		from page	from page	from page	from page	from page	from page	563

Compact enclosures AE

Stainless steel

Width (B) mm	Packs of	760	800	1000	800	1000	1000	Page
Height (H) mm		760	1000	1000	1200	1200	1200	
Depth (T) mm		300	300	300	300	300	300	
Mounting plate width (F) mm		704	739	939	740	940	940	
Mounting plate height (G) mm		730	955	955	1155	1155	1155	
Material	Stainless steel 1.4301 (AISI 304)	■	■	■	■	–	■	
	Stainless steel 1.4404 (AISI 316L)	–	–	–	–	■	–	
Material of lock	Die-cast zinc, nickel-plated	■	■	■	–	–	–	
	Stainless steel 1.4301 (AISI 304)	–	–	–	■	■	■	
Model No.	1 pc(s).	1014.600	1016.600	1018.600	1017.600	1019.500	1019.600	
Weight kg		42.5	52.9	71.0	61.5	76.0	76.0	
Protection category IP to IEC 60 529		IP 66	IP 66	IP 55	IP 66	IP 55	IP 55	
Protection category NEMA		NEMA 4X	NEMA 4X	NEMA 12	NEMA 4X	NEMA 12	NEMA 12	
Product-specific scope of supply								
Door(s)		1	1	2	1	2	2	
Cam lock		2	2	2	–	–	–	
3-point lock system		–	–	–	■	■	■	
Accessories								
Rails for interior installation	4 pc(s).	2383.300	2383.300	2383.300	2383.300	2383.300	2383.300	605
Rain canopies, stainless steel	1 pc(s).	2474.000	2475.000	2363.000	2475.000	2363.000	2363.000	580
Wall mounting bracket	4 pc(s).	2433.000	2433.000	2433.000	2433.000	2433.500	2433.000	587
Wall angle	4 pc(s).	2583.010	2583.010	2583.010	2583.010	2583.010	2583.010	588
Pole clamp		–	–	–	–	–	–	
Cam locks	1 pc(s).	2304.000	2304.000	2304.000	–	–	–	570
Cam lock HD	1 pc(s).	2304.010	2304.010	2304.010	–	–	–	172
Lock systems		from page	from page	from page	from page	from page	from page	563



Baying systems TS 8



System accessories Page 507 Baying systems TS 8, sheet steel Page 62 EMC baying systems TS 8 Page 80

Material and surface finish:

- Enclosure frame: Stainless steel 1.4301 (AISI 304), 1.5 mm, uncoated
- Roof: Stainless steel 1.4301 (AISI 304), 1.5 mm, exterior brushed, grain size 400
- Door: Stainless steel 1.4301 (AISI 304), 2 mm, exterior brushed, grain size 400
- Rear panel: Stainless steel 1.4301 (AISI 304), 1.5 mm, exterior brushed, grain size 400
- Gland plates: Stainless steel 1.4301 (AISI 304), 1.5 mm, uncoated
- Mounting plate: Sheet steel, 3 mm, zinc-plated

Protection category IP to IEC 60 529:

- IP 55

Protection category NEMA:

- NEMA 12

Supply includes:

- Enclosure frame with door(s)
- Roof
- Gland plates
- Rear panel
- Mounting plate
- 4 eyebolts
- Lock: 3 mm double-bit

Note:

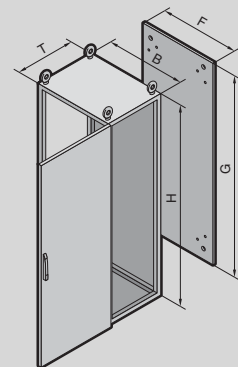
- Due to the hardness of the material, we recommend using metal multi-tooth screws for the interior installation.

Approvals:

- UL
- CSA
- TÜV
- Germanischer Lloyd
- Russian Maritime Register of Shipping
- Lloyds Register of Shipping
- Bureau Veritas
- VDE

Technical details:

Available on the Internet



Stainless steel

Width (B) mm	Packs of	800	1200	1200	800	600	800	1200	600	Page
Height (H) mm		1800	1800	1800	1800	1800	2000	2000	2000	
Depth (T) mm		400	400	500	500	500	600	600	600	
Mounting plate width (F) mm		699	1099	1099	699	499	699	1099	499	
Mounting plate height (G) mm		1696	1696	1696	1696	1696	1896	1896	1896	
Model No.	1 pc(s).	8454.600	8456.600	8453.600	8455.600	8457.600	8450.600	8451.600	8452.600	
Door(s)		1	2	2	1	1	1	2	1	
Weight kg		112.9	170.4	174.9	116.3	92.5	129.7	194.7	104.4	
2 support strips fitted in the enclosure depth		–	–	–	–	–	■	■	■	

Accessories

Side panels, screw-fastened, stainless steel	2 pc(s).	8700.840	8700.840	8700.850	8700.850	8700.850	8700.060	8700.060	8700.060	534
Divider panel	1 pc(s).	8609.840	8609.840	8609.850	8609.850	8609.850	8609.060	8609.060	8609.060	537
Divider panel for module plates	1 pc(s).	–	–	8609.100	8609.100	8609.100	8609.130	8609.130	8609.130	538
Base/plinth trim panels, side, 100 mm	1 set(s)	8701.040	8701.040	8701.050	8701.050	8701.050	8701.060	8701.060	8701.060	518
Base/plinth components, front and rear, 100 mm	1 set(s)	8701.800	8701.200	8701.200	8701.800	8701.600	8701.800	8701.200	8701.600	518
Base/plinth trim panels, side, 200 mm	1 set(s)	8702.040	8702.040	8702.050	8702.050	8702.050	8702.060	8702.060	8702.060	518
Base/plinth components, front and rear, 200 mm	1 set(s)	8702.800	8702.200	8702.200	8702.800	8702.600	8702.800	8702.200	8702.600	518
Base/plinth trim, modular	4 pc(s).	2907.000	2907.000	2908.000	2908.000	2908.000	2913.000	2913.000	2913.000	518
Cable clamp rails	2 pc(s).	4192.000	4196.000	4196.000	4192.000	4191.000	4192.000	4196.000	4191.000	665
Sheet steel wiring plan pockets	1 pc(s).	4118.000	4116.000	4116.000	4118.000	4116.000	4118.000	4116.000	4116.000	578
Metal multi-tooth screws	300 pc(s).	2486.300	2486.300	2486.300	2486.300	2486.300	2486.300	2486.300	2486.300	625
System lights		from page	from page	from page	from page	from page	from page	from page	from page	634
Rail systems		from page	from page	from page	from page	from page	from page	from page	from page	602
Levelling feet	4 pc(s).	4612.000	4612.000	4612.000	4612.000	4612.000	4612.000	4612.000	4612.000	521
Baying system		from page	from page	from page	from page	from page	from page	from page	from page	542
Door stay		from page	from page	from page	from page	from page	from page	from page	from page	578
Lock systems		from page	from page	from page	from page	from page	from page	from page	from page	563



System accessories Page 507 **Cable entry** Page 650

Material and surface finish:

- Enclosure frame: Stainless steel 1.4301 (AISI 304), 1.5 mm, uncoated
- Roof: Stainless steel 1.4301 (AISI 304), 1.5 mm, exterior brushed, grain size 400
- Door: Stainless steel 1.4301 (AISI 304), 2 mm, exterior brushed, grain size 400
- Rear panel: Stainless steel 1.4301 (AISI 304), 1.5 mm, exterior brushed, grain size 400
- Base: Stainless steel 1.4301 (AISI 304), 1.5 mm, uncoated
- Mounting plate: Sheet steel, 3 mm, zinc-plated

Protection category IP to IEC 60 529:

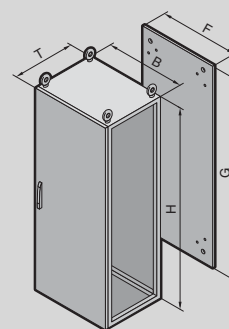
- IP 66

Protection category NEMA:

- NEMA 4X

Supply includes:

- Enclosure frame with door
- Roof
- Base, solid
- Rear panel
- Mounting plate
- 4 eyebolts
- Lock: 3 mm double-bit



IP 66/NEMA 4X

Width (B) mm	Packs of	800	Page
Height (H) mm		2000	
Depth (T) mm		600	
Mounting plate width (F) mm		699	
Mounting plate height (G) mm		1896	
Model No.	1 pc(s).	8450.680	
Door(s)		1	
Accessories			
Side panels, screw-fastened, stainless steel	2 pc(s).	8700.060	534
Baying frame IP 66/NEMA 4, NEMA 4X	1 pc(s).	8700.010	535
Base/plinth trim panels, side, 100 mm	1 set(s)	8701.060	518
Base/plinth components, front and rear, 100 mm	1 set(s)	8701.800	518
Base/plinth trim panels, side, 200 mm	1 set(s)	8702.060	518
Base/plinth components, front and rear, 200 mm	1 set(s)	8702.800	518
Base/plinth trim, modular	4 pc(s).	2913.000	518
Quick-fit baying clamp, one-piece	6 pc(s).	8800.500	543
Baying clamp, horizontal	4 pc(s).	8800.400	543
Angular baying bracket	4 pc(s).	8800.430	545
Rail systems		from page	602
Cable duct for vertical TS section		see page	663
Cable duct		see page	673
Cable clamp rails	2 pc(s).	4192.000	665
Sheet steel wiring plan pockets	1 pc(s).	4118.000	578
System lights		from page	634
Lock systems		from page	563

System enclosures SE 8



System accessories Page 507 SE 8 sheet steel Page 81

The system enclosure is based on the TS 8 platform. System accessories for interior installation in the TS 8 design can be used without restrictions.

Material and surface finish:

- Enclosure: Stainless steel 1.4301 (AISI 304), 1.5 mm, exterior brushed, grain size 400
- Door: Stainless steel 1.4301 (AISI 304), 2 mm, exterior brushed, grain size 400
- Rear panel: Stainless steel 1.4301 (AISI 304), 1.5 mm, exterior brushed, grain size 400
- Mounting plate: Sheet steel, 3 mm, zinc-plated
- Gland plates: Stainless steel 1.4301 (AISI 304), 1.5 mm, uncoated

Protection category IP to IEC 60 529:

- IP 55

Protection category NEMA:

- NEMA 12

Supply includes:

- Enclosure, solid top and sides
- Door(s)
- R/h door hinge with single-door enclosures, may be swapped to opposite side
- Rear panel, one-piece, detachable
- Mounting plate
- Gland plates
- Lock: 3 mm double-bit

Note:

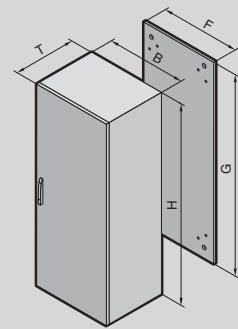
- Due to the hardness of the material, we recommend using metal multi-tooth screws for the interior installation.

Approvals:

- UL
- cUL

Technical details:

Available on the Internet



Stainless steel

Width (B) mm	Packs of	600	600	800	800	1000	1200	Page
Height (H) mm		1600	1800	1800	2000	1800	2000	
Depth (T) mm		400	500	500	600	400	500	
Mounting plate width (F) mm		499	499	699	699	899	1099	
Mounting plate height (G) mm		1496	1696	1696	1896	1696	1896	
Model No.	1 pc(s).	5850.500	5851.500	5852.500	5853.500	5854.500	5855.500	
Door(s)		1	1	1	1	1	2	
Weight kg		87.0	99.0	121.0	139.0	133.0	196.0	
Accessories								
Base/plinth trim panels, side, 100 mm	1 set(s)	8701.040	8701.050	8701.050	8701.060	8701.040	8701.050	518
Base/plinth components, front and rear, 100 mm	1 set(s)	8701.600	8701.600	8701.800	8701.800	8701.000	8701.200	518
Base/plinth trim panels, side, 200 mm	1 set(s)	8702.040	8702.050	8702.050	8702.060	8702.040	8702.050	518
Base/plinth components, front and rear, 200 mm	1 set(s)	8702.600	8702.600	8702.800	8702.800	8702.000	8702.200	518
Eyebolts	4 pc(s).	4568.500	4568.500	4568.500	4568.500	4568.500	4568.500	586
Rail systems		from page	from page	from page	from page	from page	from page	602
Cable clamp rails	2 pc(s).	4191.000	4191.000	4192.000	4192.000	4336.000	4196.000	665
Levelling feet	4 pc(s).	4612.000	4612.000	4612.000	4612.000	4612.000	4612.000	521
Sheet steel wiring plan pockets	1 pc(s).	4116.000	4116.000	4118.000	4118.000	4124.000	4116.000	578
Metal multi-tooth screws	300 pc(s).	2486.300	2486.300	2486.300	2486.300	2486.300	2486.300	625
System lights		from page	from page	from page	from page	from page	from page	634
Earth straps		see page	see page	see page	see page	see page	see page	644
Snap-on nut TS		see page	see page	see page	see page	see page	see page	618
Cable duct for vertical TS section		see page	see page	see page	see page	see page	see page	663
Door stay		from page	from page	from page	from page	from page	from page	578
Lock systems		from page	from page	from page	from page	from page	from page	563



System accessories Page 507 **SE 8 sheet steel** Page 81

The system enclosure is based on the TS 8 platform. System accessories for interior installation in the TS 8 design can be used without restrictions.

Material and surface finish:

- Enclosure: Stainless steel 1.4301 (AISI 304), 1.5 mm, exterior brushed, grain size 400
- Door: Stainless steel 1.4301 (AISI 304), 2 mm, exterior brushed, grain size 400
- Rear panel: Stainless steel 1.4301 (AISI 304), 1.5 mm, exterior brushed, grain size 400
- Mounting plate: Sheet steel, 3 mm, zinc-plated
- Base: Stainless steel 1.4301 (AISI 304), 1.5 mm, uncoated

Protection category IP to IEC 60 529:

- IP 66

Protection category NEMA:

- NEMA 4X

Supply includes:

- Enclosure, solid top and sides
- Door(s)
- Door hinged on the right, may be swapped to the left
- Rear panel
- Mounting plate
- Base, solid
- Lock: 3 mm double-bit

Note:

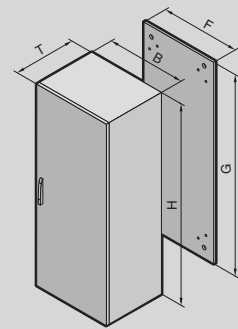
- Due to the hardness of the material, we recommend using metal multi-tooth screws for the interior installation.

Approvals:

- UL
- cUL

Technical details:

Available on the Internet



IP 66/NEMA 4X

Width (B) mm	Packs of	600	800	800	Page
Height (H) mm		1600	1800	2000	
Depth (T) mm		400	500	600	
Mounting plate width (F) mm		499	699	699	
Mounting plate height (G) mm		1496	1696	1896	
Model No.	1 pc(s).	5850.580	5852.580	5853.580	
Accessories					
Base/plinth trim panels, side, 100 mm	1 set(s)	8701.040	8701.050	8701.060	518
Base/plinth components, front and rear, 100 mm	1 set(s)	8701.600	8701.800	8701.800	518
Base/plinth trim panels, side, 200 mm	1 set(s)	8702.040	8702.050	8702.060	518
Base/plinth components, front and rear, 200 mm	1 set(s)	8702.600	8702.800	8702.800	518
Eyebolts	4 pc(s).	4568.500	4568.500	4568.500	586
Rail systems		from page	from page	from page	602
Cable clamp rails	2 pc(s).	4191.000	4192.000	4192.000	665
Sheet steel wiring plan pockets	1 pc(s).	4116.000	4118.000	4118.000	578
System lights		from page	from page	from page	634
Earth straps		see page	see page	see page	644
Metal multi-tooth screws	300 pc(s).	2486.300	2486.300	2486.300	625
Snap-on nut TS		see page	see page	see page	618
Cable duct for vertical TS section		see page	see page	see page	663
Door stay for escape routes	1 pc(s).	4583.500	4583.500	4583.500	578
Lock systems		from page	from page	from page	563

One-piece consoles



System accessories Page 507 Monitors, keyboards Page 706/707 Climate control Page 307 One-piece consoles, sheet steel Page 115

Material:

- Enclosure: Stainless steel 1.4301 (AISI 304), 1.5 mm
- Door or double door and console lid: Stainless steel 1.4301 (AISI 304), 2.0 mm
- Mounting plate: Sheet steel, 3.0 mm

Surface finish:

- Enclosure, door, console lid and gland plates: Brushed, grain size 120
- Mounting plate: Zinc-plated

Protection category IP to IEC 60 529:

- IP 55

Protection category NEMA:

- NEMA 12

Supply includes:

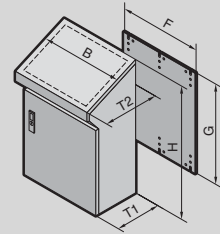
- Enclosure, solid back and sides with locking rod
- Door or double door at front, with locking rod
- Console lid with lid stay and cam lock latched in the enclosure
- Locks with double-bit insert
- Gland plates, divided
- Mounting plate

Approvals:

- UL
- CSA
- TÜV
- Germanischer Lloyd
- Russian Maritime Register of Shipping
- Lloyds Register of Shipping
- VDE

Technical details:

Available on the Internet



Stainless steel

Width (B) mm	Packs of	600	800	1000	1200	Page
Height (H) mm		960	960	960	960	
Depth, bottom (T1) mm		400	400	400	400	
Depth, top (T2) mm		480	480	480	480	
Mounting plate width (F) mm		530	730	930	1130	
Mounting plate height (G) mm		780	780	780	780	
Model No.	1 pc(s).	2683.600	2684.600	2685.600	2686.600	
Door(s)		1	1	2	2	
Weight kg		52.0	65.2	79.5	90.3	

Accessories						
Base/plinth, complete, 100 mm	1 pc(s).	2865.000	2869.000	2867.000	2870.000	519
Cable clamp rails	2 pc(s).	4191.000	4192.000	4336.000	4196.000	665
Support rails TS 35/15	6 pc(s).	4934.000	4935.000	4933.000	4937.000	614
Hose-proof hood		see page	see page	see page	see page	372
Lock systems		from page	from page	from page	from page	563



System accessories Page 507 **Monitors, keyboards** Page 706/707 **PC enclosure system, sheet steel** Page 118

PC enclosure systems based on SE, stainless steel 1.4301 (AISI 304), for the secure accommodation of all your computer equipment, from the monitor, computer system, printer, keyboard to the mouse.

Material:

- Enclosure: Stainless steel 1.4301 (AISI 304), 1.5 mm
- Rear door: Stainless steel 1.4301 (AISI 304), 2.0 mm
- Gland plates: Stainless steel 1.4301 (AISI 304), 1.5 mm
- Monitor field: Single-pane safety glass, 4 mm

Surface finish:

- Brushed, grain size 400

Protection category IP to IEC 60 529:

- IP 55

Protection category NEMA:

- NEMA 12

Supply includes:

- Enclosure, solid top and sides
- Rear door with locking rod
- Glazed door at the top, latched from the inside
- Component shelf
- Keyboard drawer with swing-down front for handrest and mouse pad support
- Lock insert, lock no. 3524 E
- Bottom door with locking rod
- Gland plates, divided

Approvals:

- UL
- cUL

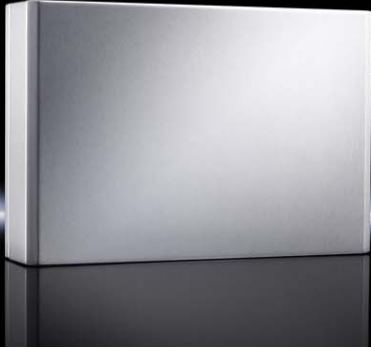
Technical details:

Available on the Internet

Stainless steel

Width mm	Packs of	600	Page
Height mm		1600	
Depth mm		630	
Model No.	1 pc(s).	4650.100	
Weight kg		115.0	
Accessories			
Base/plinth components, front and rear, 100 mm	1 set(s)	8701.600	518
Base/plinth trim panels, side, 100 mm	1 set(s)	8701.060	518
Levelling feet	4 pc(s).	2859.000	521
Base/plinth trim, modular	4 pc(s).	2913.000	518
Adaptor pieces, 482.6 mm (19")	4 pc(s).	8613.010	684
Component shelf, pull-out	1 pc(s).	6902.960	627
Cable clamp rails	2 pc(s).	4191.000	665
System lights		from page	634
Lock systems		from page	563

Premium Panel IP 69K



System accessories Page 507 Support arm system CP 40 stainless steel Page 140 Hygienic Design Page 169

Benefits:

- **Resistant to high-pressure cleaning:** (protection category IP 69K). The seal lies between two seals and is optimally compressed by the screw fastening.
- **Suitable for clean room use:** Screw fastening to comply with high standards in the food industry. With plastic stoppers on the inside or hex screws on the outside.

Optimum EMC conditions:

- The labyrinth seal achieves a particularly high level of RF shielding of the enclosure.

Material:

- Stainless steel 1.4301 (AISI 304)

Surface finish:

- Brushed, grain size 240

Protection category IP to DIN 40 050-9:

- IP 69K

Clean room class:

- Air purity class 1 to DIN EN ISO 14 644-1

Technical details:

- Available on the Internet

Stainless steel

Width mm	Packs of	530	Page
Height mm		360	
Depth mm		120	
Operating housing for panel width mm		482.6	
Operating housing for panel height mm		310	
Installation depth mm		115	
Model No.	1 pc(s).	6681.000	
Support arm connection		Top or bottom (by rotating the enclosure)	

Command panel housings with door



System accessories Page 507 Support arm system CP 40 stainless steel Page 140 Hygienic Design Page 169

Material:

- Enclosure and door: Stainless steel 1.4301 (AISI 304)
- Handle strips: Plastic approved for use with foodstuffs

Surface finish:

- Brushed, grain size 240

Colour:

- Handle strips: similar to RAL 5002

Protection category IP to IEC 60 529:

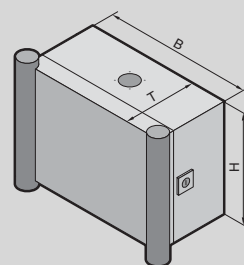
- IP 66

Supply includes:

- Enclosure of all-round solid construction
- Cut-out and reinforcement for support arm system CP 40 stainless steel
- Fastener with guide plate
- Door with sealing frame and side handle strips
- Lock: 3 mm double-bit

Note:

- The support arm connection and door hinge may be swapped over by rotating the enclosure
- Matching mounting plates from compact enclosures AE may be used
- 3 mm double-bit lock insert may be exchanged for 41 mm lock inserts, plastic handles and T handles, type C



Approvals:

- UL
- TÜV
- CSA

Technical details:

Available on the Internet

Stainless steel

Width (B) mm	Packs of	300	400	400	600	Page
Height (H) mm		300	300	400	400	
Depth (T) mm		150	150	150	150	
Model No.	1 pc(s).	6535.010	6536.010	6538.010	6539.010	
Weight kg		6.3	7.5	8.8	12.1	
Accessories						
Support rails TS 35/7.5	10 pc(s).	2316.000	2317.000	2317.000	-	614
Lock systems		from page	from page	from page	from page	563

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Ex enclosures

Ex enclosures

Stainless steel, empty enclosure with screw-fastened cover	192
Stainless steel, empty enclosure with hinged door	193
Plastic, empty enclosure with hinged door	194



Ex enclosures



System accessories Page 507

Applications:

- Zone 1 and 2 or 21 and 22 to 94/9/EC
- Ambient temperature range: -30°C...+80°C
- Protection type to EN 60 079: Equipment protection due to increased safety, equipment protection due to enclosure

Material:

- Enclosure: Stainless steel 1.4301 (AISI 304)
- Cover: Stainless steel 1.4301 (AISI 304), all-round foamed-in silicone seal

Surface finish:

- Enclosure: Brushed, grain 240

Protection category IP to IEC 60 529:

- IP 66

Supply includes:

- Enclosure
- Cover

Certificates:

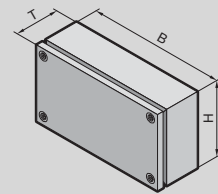
- PTB 03 ATEX 1013U
- IEC Ex PTB 09.0033U

Approvals:

- ATEX
- IEC

Technical details:

Available on the Internet



Stainless steel, empty enclosure with screw-fastened cover

Width (B) mm	Packs of	150	200	300	300	300	400	Page
Height (H) mm		150	200	150	200	300	200	
Depth (T) mm		80	80	80	80	120	120	
Model No.	1 pc(s).	9301.000	9303.000	9302.000	9304.000	9306.000	9305.000	
Weight kg		1.3	1.8	1.8	2.4	3.9	3.6	
Accessories								
Mounting plates	1 pc(s).	1560.700	1562.700	1561.700	1563.700	1567.700	1564.700	591
Wall mounting bracket	4 pc(s).	1594.000	1594.000	1594.000	1594.000	1594.000	1594.000	587
Support rails TS 35/7.5	10 pc(s).	2314.000	2315.000	2316.000	2316.000	2316.000	2317.000	614
Earth straps		see page	see page	see page	see page	see page	see page	644



System accessories Page 507

Applications:

- Zone 1 and 2 or 21 and 22 to 94/9/EC
- Ambient temperature range: -30°C...+80°C
- Protection type to EN 60 079: Equipment protection due to increased safety, equipment protection due to enclosure

Material:

- Enclosure: Stainless steel 1.4301 (AISI 304)
- Door: Stainless steel 1.4301 (AISI 304), all-round foamed-in silicone seal
- Mounting plate: Sheet steel

Surface finish:

- Enclosure: Brushed, grain 240
- Mounting plate: Zinc-plated

Protection category IP to IEC 60 529:

- IP 66

Supply includes:

- Enclosure
- Door
- Mounting plate

Certificates:

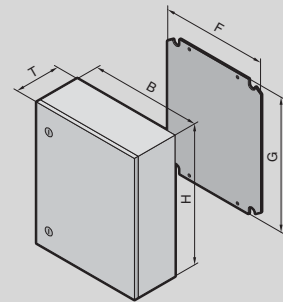
- PTB 02 ATEX 1082U
- IEC Ex PTB 09.0035U

Approvals:

- ATEX
- IEC

Technical details:

Available on the Internet



Stainless steel, empty enclosure with hinged door

Width (B) mm	Packs of	200	300	380	380	380	600	600	760	800	Page
Height (H) mm		300	380	300	380	600	600	760	760	1000	
Depth (T) mm		155	210	155	210	210	210	210	300	300	
Mounting plate width (F) mm		162	334	334	334	334	549	549	704	739	
Mounting plate height (G) mm		275	275	275	355	570	570	730	730	955	
Model No.	1 pc(s).	9401.600	9409.600	9402.600	9403.600	9404.600	9405.600	9406.600	9407.600	9408.600	
Cam lock with 3 mm double-bit insert		1	1	1	1	2	2	2	2	2	
Reinforcement section in the door		-	-	-	-	-	■	■	■	■	
Weight kg		3.8	7.7	7.4	9.7	13.3	15.6	22.3	30.5	36.3	

Accessories

Wall mounting bracket	4 pc(s).	2433.000	2433.000	2433.000	2433.000	2433.000	2433.000	2433.000	2433.000	2433.000	587
Support rails TS 35/7.5	10 pc(s).	2315.000	2316.000	-	-	-	-	-	-	-	614
Rails for interior installation	4 pc(s).	-	2383.210	-	2383.210	2383.210	2383.210	2383.210	2383.300	2383.300	605
Support rails TS 35/15	10 pc(s).	-	-	-	-	-	2319.000	2319.000	-	-	614
Earth straps		see page	see page	see page	see page	see page	see page	see page	see page	see page	644

Ex enclosures



System accessories Page 507

Applications:

- Zone 1 and 2 or 21 and 22 to 94/9/EC
- Ambient temperature range: -30°C...+80°C
- Protection type to EN 60 079: Equipment protection due to increased safety, equipment protection due to enclosure

Material:

- Fibre-glass-reinforced unsaturated polyester, surface resistance: $< 10^9 \Omega$
- Door: Fibre-glass-reinforced unsaturated polyester, surface resistance: $< 10^9 \Omega$ all-round foamed-in silicone seal
- Mounting plate: Sheet steel, zinc-plated

Colour:

- RAL 9011

Protection category IP to IEC 60 529:

- IP 66

Supply includes:

- Enclosure
- Door
- Mounting plate

Certificates:

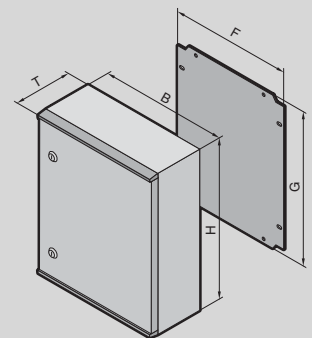
- PTB 03 ATEX 1011U
- IEC Ex PTB 10.0011U

Approvals:

- ATEX
- IEC

Technical details:

Available on the Internet



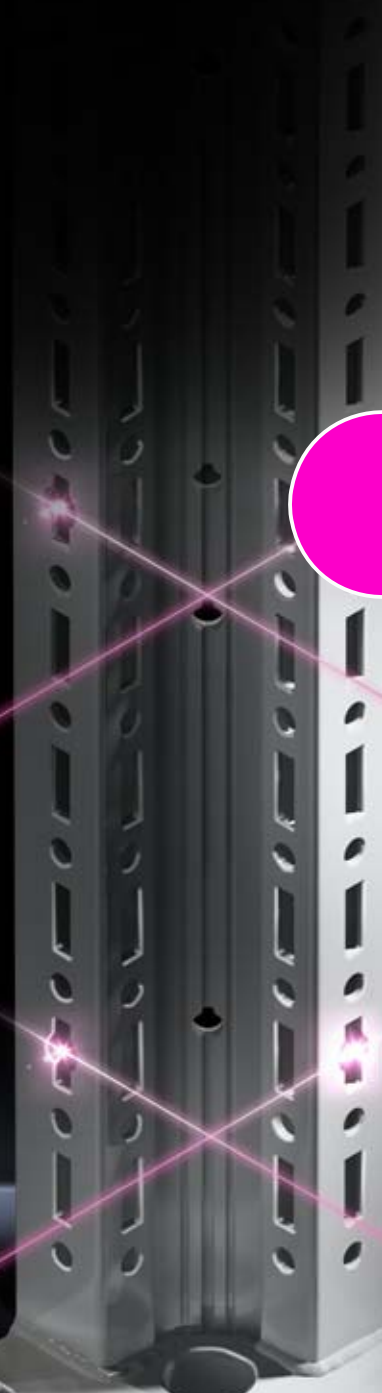
Plastic, empty enclosure with hinged door

Width (B) mm	Packs of	200	250	300	400	400	500	600	600	800	Page
Height (H) mm		300	350	400	400	600	500	600	800	1000	
Depth (T) mm		150	150	200	200	200	300	200	300	300	
Mounting plate width (F) mm		145	195	245	345	345	417	545	517	717	
Mounting plate height (G) mm		250	300	350	350	550	450	550	750	950	
Model No.	1 pc(s).	9201.600	9202.600	9203.600	9204.600	9205.600	9207.600	9206.600	9208.600	9209.600	
Cam lock with 3 mm double-bit insert		1	2	2	2	2	2	2	-	-	
3-point locking rod		-	-	-	-	-	-	-	■	■	
Reinforcement section in the door		-	-	-	-	-	■	■	-	-	
Weight kg		3.7	4.6	6.0	6.5	11.5	12.9	15.9	24.3	39.0	
Accessories											
Wall mounting bracket	4 pc(s).	9266.000	9266.000	9266.000	9266.000	9266.000	9266.000	9266.000	9266.000	9266.000	588
Threaded inserts M6	20 pc(s).	1482.000	1482.000	1482.000	1482.000	1482.000	1482.000	1482.000	1482.000	1482.000	625
Mounting plate adjustment bracket	4 pc(s).	1481.000	1481.000	1481.000	1481.000	1481.000	1491.000	1481.000	1491.000	1491.000	594
Support rails TS 35/7.5	10 pc(s).	2315.000	-	2316.000	2317.000	2317.000	-	-	-	-	614
Support rails TS 35/15	10 pc(s).	-	-	-	-	-	2318.000	2319.000	2319.000	-	614
Earth straps		see page	see page	see page	see page	see page	see page	see page	see page	see page	644

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Power distribution

Busbar systems

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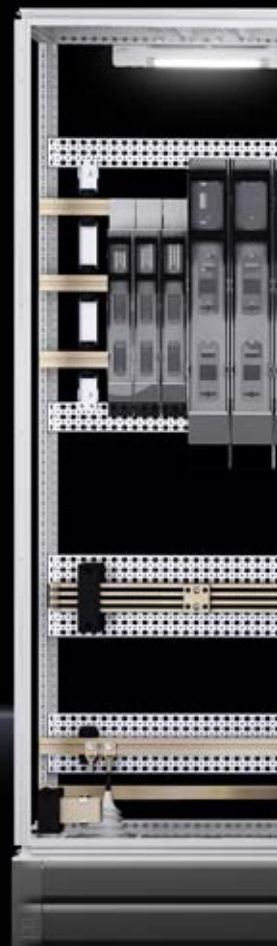
Rittal – The System.

Faster – better – everywhere.

Power distribution from the smallest to the largest

The tried-and-trusted, super-flexible power distribution system for individual requirements. From small power distribution, to individual switchgear and controlgear, through to heavy-current power distribution for infrastructure and industry applications.

- RiLine – Busbar systems and components for switchgear and controlgear
- Ri4Power – The modular system for low-voltage switchgear
- Ri4Power ISV – The modular distribution enclosure system for infrastructure power supply



ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL

FRIEDHELM LOH GROUP

- Design verification to IEC 61 439 – Made easy with tested system solutions
- Increased planning confidence – Power Engineering ensures optimised designs



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Your benefits

As a system supplier, Rittal is a leading global provider of tested system engineering solutions.

Planning

- Eplan – Engineering tools
- Power Engineering with heat loss calculation
- Therm – Climate control design



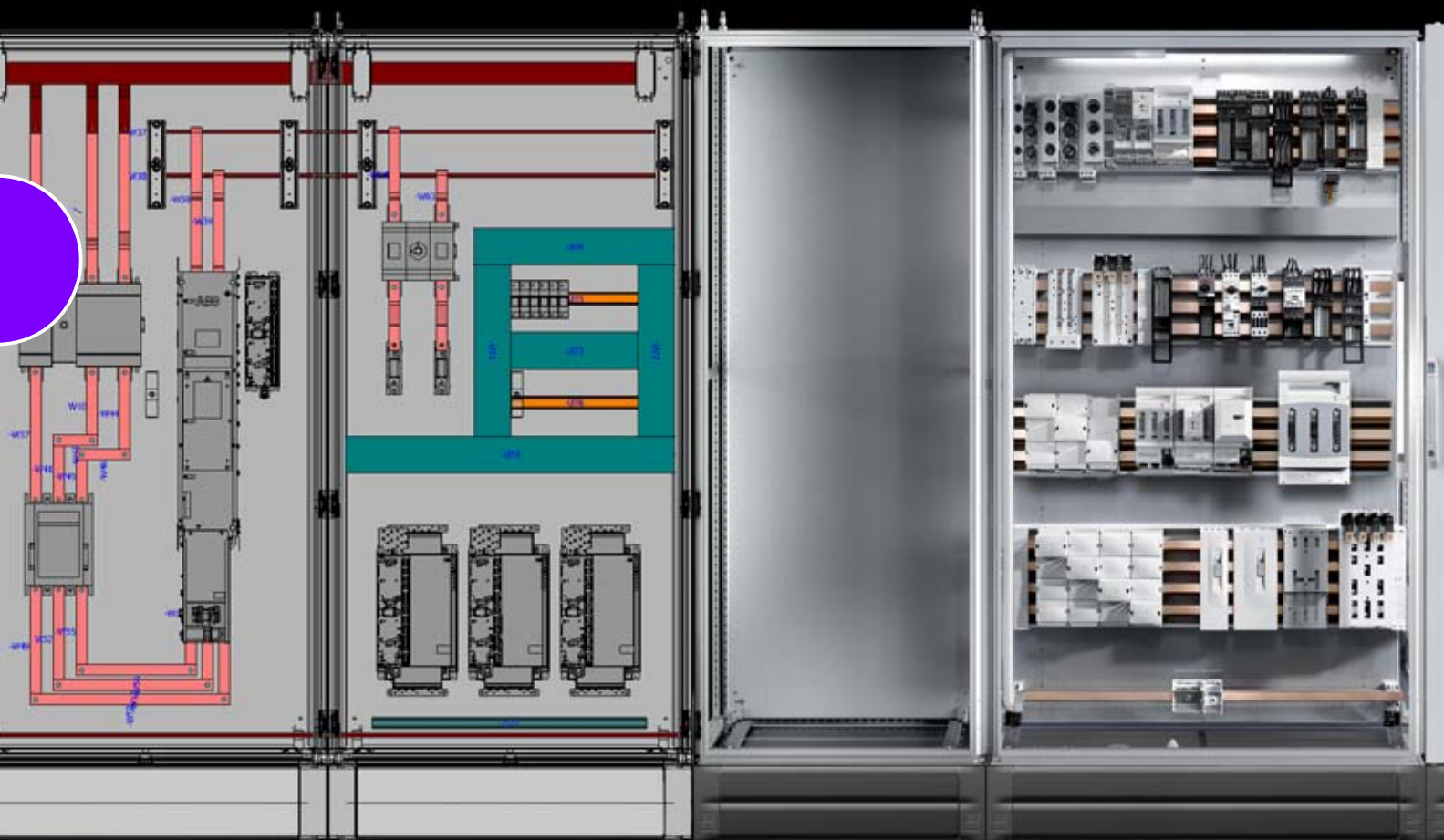
Enclosures

- Strength requirements (IEC 61 439) tested
- IP protection category tested
- Verified PE conductor function



Busbars

- Short-circuit withstand strength
- Current carrying capacity
- Dielectric properties
- Clearance and creepage distances
- All verified in conjunction with the enclosure



ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL

Climate control

- Cooling units
- Air cooling
- Liquid cooling



Switchgear

- Rittal fuse technology
- Protection devices, switchgear and controlgear from all well-known manufacturers



≡ **Simple generation:
Design verification
to IEC 61 439**

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Busbar systems

Mini-PLS busbar system (40 mm)

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RiLine busbar systems (60 mm)

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Mini-PLS busbar system (40 mm)



Component adaptors Page 208 Fuse components Page 207

Busbar supports, busbar connection adaptors

Material:
 – Polyamide (PA 6.6)
 – Fire protection corresponding to UL 94-V0

Colour:
 – RAL 7035
 – RAL 9011 (busbar connection adaptor chassis)

Contact hazard protection

Material:
 – Thermally modified hard PVC
 – Fire protection corresponding to UL 94-V0

Colour:
 – RAL 7035

Technical details:
 Available on the Internet

Mini-PLS busbar supports (3-pole)			
	Busbar support, suitable for top mounting	Packs of	■
	Bar centre distance mm		40
	Approvals		UL
	Model No.	4 pc(s).	9600.000

A Mini-PLS special busbars E-Cu, bar thickness 3 mm, bar cross-section 120 mm ²						
	Length mm	Packs of	500	700	1100	1500
	Approvals		UL	UL	UL	UL
	Model No.	3 pc(s).	9601.000	9602.000	9603.000	9624.000
Accessories						
	B Busbar connectors	Approvals		Model No.		
		UL	3 pc(s).	9611.000		

Mini-PLS contact hazard protection					
	Components	Approvals	Length mm	Packs of	Model No.
	C Base tray	UL	500	1 pc(s).	9605.000
			700	1 pc(s).	9606.000
			1100	1 pc(s).	9607.000
	D Cover section	UL	250	1 pc(s).	9608.000
			500	1 pc(s).	9609.000
E End cover	UL	–	2 pc(s).	9610.000	

Mini-PLS busbar connection adaptors (3-pole)					Page
	Rated current max. A	Packs of	63	250	
	Rated operating voltage V, ~		690, 3~	690, 3~	
	Cable outlet		Top/bottom	Top/bottom	
	Connection of round conductors mm ²		1.5 – 35	10 – 120	
	Clamping area for laminated copper bars, W x H mm		10 x 8	17 x 15	
	Width mm		54	115	
	Height mm		160	182	
	Approvals		UL	UL	
	Model No.	1 pc(s).	9613.000	9612.000	
	Accessories				
Laminated copper bars			■	■	255



Busbar system Page 206 **Busbar connection adaptors** Page 206 **Component adaptors** Page 208/209

Bus-mounting fuse base

Material:

- Polyamide (PA 6.6)
- Fire protection corresponding to UL 94-V0

Colour:

- Chassis: RAL 9011
- Cover: RAL 7035

NH fuse-switch disconnecter

Material:

- Fibreglass-reinforced polyamide
- Fire protection corresponding to UL 94-V0
- Contact tracks: Silver-plated hard copper

Colour:

- RAL 7035

Basis of test:

- IEC 60 947-3
- IEC 60 269-2 (fuse inserts)

Busbar adaptor

Material:

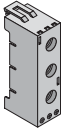
- Polyamide (PA 6.6)
- Fire protection corresponding to UL 94-V0

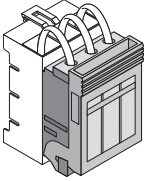
Colour:

- RAL 9011

Technical details:

Available on the Internet

Mini-PLS bus-mounting fuse base (3-pole)			
	Fuse insert	Packs of	D 02-E18
	Rated current max. A		63
	Rated operating voltage V, ~		400, 3~
	Connection of round conductors mm ²		1.5 – 16
	Width mm		38
	Height mm		160
	Model No.	1 pc(s).	

NH fuse-switch disconnecter size 000 (3-pole)			
	Rated current max. A	Packs of	100
	Rated operating voltage V, ~		690, 3~
	Cable outlet		Top/bottom
	Type of connection		Box terminal
	Connection of round conductors mm ²		1.5 – 50
	Clamping area for laminated copper bars, W x H mm		10 x 10
	Width mm		89
	Height mm		141.5
	Model No.	1 pc(s).	

Also required

Mini-PLS busbar adaptors (3-pole)			
With connection cables mm ²			35
Width mm			90
Height mm			160
Model No.	1 pc(s).		9629.100
Accessories			
Micro-switch	5 pc(s).		3071.000
			263

Mini-PLS component adaptor



Busbar system Page 206 **Busbar connection adaptors** Page 206 **Fuse components** Page 207 **Allocation of switchgear** Page 209

Material:

- Polyamide (PA 6.6)
- Fire protection corresponding to UL 94-V0

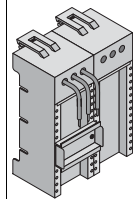
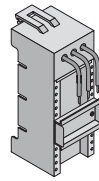
Colour:

- RAL 7035
- RAL 9011 (9629.000)

Technical details:

Available on the Internet

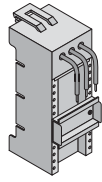
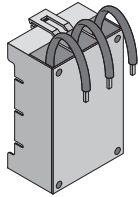




Rated current max. 12 – 25 A



Rated current max. A	Packs of	12	25	25	25	25	25	25	Page
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	690, 3~	690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	3-pole	3-pole	3-pole	3-pole	
Connection cables		AWG 14	AWG 12	AWG 12	AWG 12	AWG 12	AWG 12	AWG 12	
Support rails quantity/height mm		1/7.5	1/7.5	1/15	1/7.5	1/15	1/7.5	1/7.5	
Width mm		45	45	45	54	54	72	90	
Height mm		160	160	160	160	160	160	160	
Approvals									
Model No.	1 pc(s).	9614.110	9614.100	9615.100	9614.000	9615.000	9625.000	9629.010	
Accessories									
Insert strip	2 pc(s).	9623.000	9623.000	9623.000	9623.000	9623.000	9623.000	9623.000	258
Support rails, Height 7.5 mm	Width 45 mm	10 pc(s).	9320.150	9320.150	9320.150	-	-	-	258
	Width 54 mm	10 pc(s).	-	-	-	3548.000	3548.000	-	258
	Width 72 mm	10 pc(s).	-	-	-	-	-	3549.000	258

Mini-PLS component adaptor

Rated current max. 40 – 100 A

						
Rated current max. A	Packs of	40	40	40	100	Page
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	3-pole	
Connection cables		AWG 10	AWG 10	AWG 10	35 mm ²	
Support rails quantity/height mm		1/7.5	1/15	1/7.5	–	
Width mm		54	54	72	90	
Height mm		160	160	160	160	
Approvals						
Model No.	1 pc(s).	9616.000	9617.000	9627.000	9629.000	
Accessories						
Insert strip		2 pc(s).	9623.000	9623.000	9623.000	258
Support rails	Height 7.5 mm	Width 54 mm	10 pc(s).	3548.000	3548.000	258
		Width 72 mm	10 pc(s).	–	–	258
	Height 15 mm	Width 72 mm	5 pc(s).	–	–	9320.120

Allocation of switchgear – Mini-PLS component adaptors 12 A/25 A

Make/model	Model No.
ABB	
MS116	9614.100
MS325	9614.000
MS450 (max. 25 A)	9614.000
MS451 (max. 25 A)	9614.000
Eaton	
PKZM0 (up to 25 A)	9614.100
PKZM01 (up to 25 A)	9614.100
PKZM4 (up to 25 A)	9614.000
PKE12	9614.100
PKE32 (up to 25 A)	9614.100
PKE65 (up to 25 A)	9614.000
Schneider Electric	
GV2-P (up to 25 A)	9614.100
GV2-RT	9614.100
GV2-LE10	9614.100
GV3 (up to 25 A)	9614.100

Make/model	Model No.
Siemens	
S0	
3RV10 21...	9614.100
3RV20 21... (up to 25 A)	9614.100
S00	
3RV10 11...	9614.100 ¹⁾
3RV20 11...	9614.100 ¹⁾
S2	
3RV10 31... (up to 25 A)	9614.000

¹⁾ Support rail must be offset

Allocation of switchgear – Mini-PLS component adaptors 40 A/100 A

Make/model	Model No.	Accessories Model No.
ABB		
MS450 (max. 40 A)	9617.000	–
MS451 (max. 40 A)	9629.000	9320.120
MS495	9629.000	9320.120
MS496	9629.000	9320.120
MS497	9629.000	9320.120
Tmax		
T1	9629.000	–
T2	9629.000	–
Eaton		
NZM 1	9629.000	–
PKZ2	9627.000	–
PKZM4 (max. 40 A)	9617.000	–
PKZM4	9629.000	9320.120

Make/model	Model No.	Accessories Model No.
Schneider Electric		
NS 80	9629.000	–
GV3 (max. 40 A)	9616.000	–
GV3	9629.000	9320.120
Siemens		
S2		
3RV10 31... (max. 40 A)	9616.000	–
3RV10 31...	9629.000	9320.120
S3		
3RV1341/42	9629.000	9320.120

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RiLine

Busbar systems 3 and 4-pole and DC

Support + bars + contact hazard protection

- Flat copper bar system, see page 212
- PLS busbar system, see page 214
- Accessories, see page 251

Connection system 3 and 4-pole

- Busbar connection adaptor, see page 216
- Connection clamps, see page 257
- Connection block, see page 258
- Accessories, see page 257

Component adaptor 3 and 4-pole

- OM adaptor, see page 219
- Circuit-breaker component adaptor, see page 226
- Accessories, see page 259

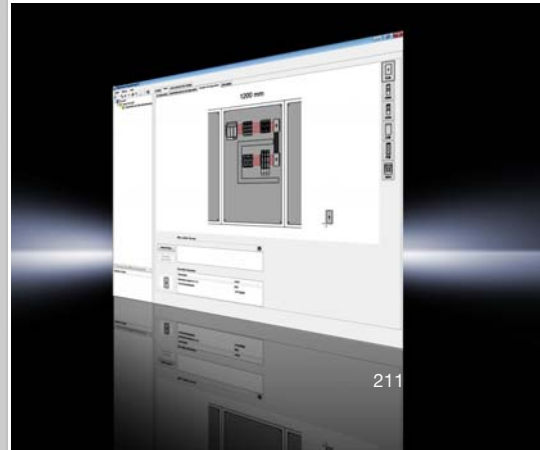
Fuse elements 3-pole

- Bus-mounting fuse bases, see page 236
- NH fuse-switch disconnectors, see page 238
- NH slimline fuse-switch disconnectors, see page 246
- Fuse holders, see page 249
- Accessories, see page 262

Rittal Power Engineering with update function

Model No. 3020.500,
see page 295

- Configuration of RiLine busbar systems
- Simple component selection, integral switchgear database
- Automatic calculation of rated currents and heat losses



RiLine shrouded busbar systems up to 800 A (60 mm)



Busbar connection adaptors Page 216 **Component adaptors** Page 219 **Fuse elements** Page 236

Material:

- Polyamide (PA 6.6)
- Fire protection corresponding to UL 94-V0

Colour:

- RAL 7035



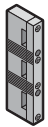
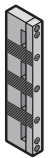
Note:

- UL approval only valid in conjunction with AC applications
- The use of a base tray is required for UL applications

Technical details:




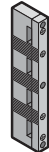
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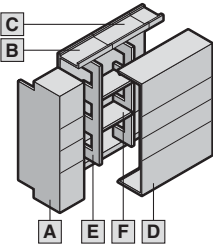
Flat copper bar system

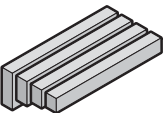
Busbar support						
Number of poles	Packs of	3-pole	3-pole	3-pole	4-pole	Page
Bar centre distance mm		60	60	60	60	
External attachment		■	-	-	-	
Internal attachment		-	■	■	■	
For busbars mm	12 x 5/10	■	■	-	■	
	15 x 5 – 25 x 10, 30 x 5	■	■	■	■	
	30 x 10	■	■	■	■	
Rated operating voltage V, ~		1000, 3~	1000, 3~	1000, 3~	1000, 3~	
		-	-	1500 (DC)	-	
Approvals		-	-	UL	UL	
Model No.	4 pc(s).	9340.010	9340.000	9340.050	9340.004	
Also required						
Spacers when using busbars 12 x 5/10 mm		■	■	-	■	
Model No.	12 pc(s).	9340.090	9340.090	-	9340.090	251

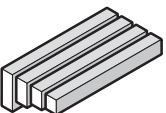
RiLine shrouded busbar systems up to 800 A (60 mm)

Flat copper bar system

Busbar support						
						
Number of poles	Packs of	3-pole	3-pole	3-pole	4-pole	Page
Bar centre distance mm		60	60	60	60	
Model No.	4 pc(s).	9340.010	9340.000	9340.050	9340.004	212
Also required						
Spacer when using busbars 12 x 5/10 mm		■	■	–	■	
Model No.	12 pc(s).	9340.090	9340.090	–	9340.090	251

Contact hazard protection									
	Components	Length mm	Approvals	Packs of	Model No.			Model No.	Page
	A End covers	–	UL	2 pc(s).	9340.070	9340.070	9340.070	9340.074	–
	B Base trays	500	UL	2 pc(s).	–	9340.100	9340.100	–	256
		700	UL	2 pc(s).	–	9340.110	9340.110	–	256
		900	UL	2 pc(s).	–	9340.120	9340.120	–	256
		1100	UL	2 pc(s).	–	9340.130	9340.130	9340.134	256
		2400	UL	1 pc(s).	–	9340.170	–	–	256
	C Base tray infills	100	UL	2 pc(s).	–	9340.140	9340.140	–	256
	D Cover sections	700	UL	2 pc(s).	–	9340.200	9340.200	–	256
		1100	UL	2 pc(s).	–	9340.210	9340.210	9340.214	256
E Support panels	–	UL	5 pc(s).	–	9340.220	9340.220	9340.224	256	
F Cross members	160	UL	2 pc(s).	–	–	9340.230	–	256	

Busbars E-Cu; length: 2400 mm/bar										
	Dimensions mm	Max. rated current A acc. to		Approvals	Packs of	Model No.			Model No.	Page
		DIN EN	UL 508							
	12 x 5	210	–	UL	6 pc(s).	3580.000	3580.000	3580.000	3580.000	252
	12 x 10	340	–	UL	6 pc(s).	3580.100	3580.100	3580.100	3580.100	252
	15 x 5	260	175	UL	6 pc(s).	3581.000	3581.000	3581.000	3581.000	252
	15 x 10	360	350	UL	6 pc(s).	3581.100	3581.100	3581.100	3581.100	252
	20 x 5	319	230	UL	6 pc(s).	3582.000	3582.000	3582.000	3582.000	252
	20 x 10	497	465	UL	3 pc(s).	3585.005	3585.005	3585.005	3585.005	252
	25 x 5	384	290	UL	6 pc(s).	3583.000	3583.000	3583.000	3583.000	252
	30 x 5	447	350	UL	6 pc(s).	3584.000	3584.000	3584.000	3584.000	252
30 x 10	800	700	UL	3 pc(s).	3586.005	3586.005	3586.005	3586.005	252	

CUPONAL busbars; length: 2400 mm/bar										
	Dimensions mm	Max. rated current A acc. to		Approvals	Packs of	Model No.			Model No.	Page
		DIN EN	UL 508							
	20 x 5	235	–	–	6 pc(s).	–	3582.020	3582.020	–	252
	20 x 10	363	–	–	3 pc(s).	–	3585.020	3585.020	–	252
	30 x 5	328	–	–	6 pc(s).	–	3584.020	3584.020	–	252
30 x 10	493	–	–	3 pc(s).	–	3586.020	3586.020	–	252	

Accessories								
Components	For busbars mm	Approvals	Packs of	Model No.			Model No.	Page
Busbar connectors for single connection	12 x 5 – 15 x 10	UL	3 pc(s).	9350.075	9350.075	9350.075	9350.075	254
	20 x 5 – 30 x 10	UL	3 pc(s).	9320.020	9320.020	9320.020	9320.020	254
Busbar connectors for baying connection ¹⁾	20 x 5 – 30 x 10	UL	3 pc(s).	9320.030	9320.030	9320.030	9320.030	254
Busbar cover sections Length: 1000 mm/section	12 x 5 – 30 x 10	RU	10 pc(s).	3092.000	3092.000	3092.000	3092.000	253
	12/15 x 5	RU	4 pc(s).	9350.010	9350.010	9350.010	9350.010	253
	12/15 x 10	RU	4 pc(s).	9350.060	9350.060	9350.060	9350.060	253

¹⁾ Connection from enclosure to enclosure

RiLine shrouded busbar systems 800 A/1600 A (60 mm)



Connection systems Page 216 **Component adaptors** Page 219 **Fuse elements** Page 236

Material:

- Polyamide (PA 6.6)
- Fire protection corresponding to UL 94-V0

Colour:

- RAL 7035

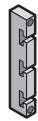
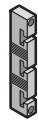

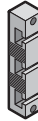
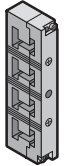
Note:

- UL approval only valid in conjunction with AC applications
- The use of a base tray is required for UL applications

Technical details:





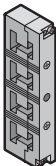
Available on the Internet

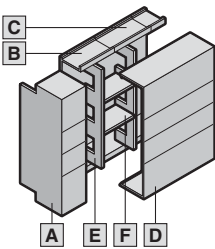
PLS busbar system

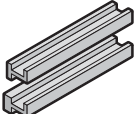
Busbar support						 PLS 1600 PLUS
For Rittal system	Packs of	PLS 800		PLS 1600		
Number of poles		3-pole	3-pole	3-pole	3-pole	4-pole
Bar centre distance mm		60	60	60	60	60
Internal attachment		■	■	■	■	■
Busbar support, suitable for top mounting		■	■	■	■	-
Rated operating voltage V, ~		1000, 3~	1000, 3~	1000, 3~	1000, 3~	1000, 3~
		-	1500 (DC)	-	1500 (DC)	-
Approvals		-	UL	-	UL	UL
Model No.	4 pc(s).	9341.000	9341.050	9342.000	9342.050	9342.004

RiLine shrouded busbar systems 800 A/1600 A (60 mm)

PLS busbar system

Busbar support									
									
For Rittal system	Packs of	PLS 800		PLS 1600				Page	
Number of poles		3-pole	3-pole	3-pole	3-pole	4-pole			
Bar centre distance mm		60	60	60	60	60			
Model No.	4 pc(s).	9341.000	9341.050	9342.000	9342.050	9342.004		214	

Contact hazard protection										
	Components	Length mm	Approvals	Packs of	Model No.		Model No.			Page
	A End covers	–	UL	2 pc(s).	9341.070	9341.070	9342.070	9342.070	9342.074	–
	B Base trays	500	UL	2 pc(s).	9341.100	9341.100	9342.100	9342.100	–	256
		700	UL	2 pc(s).	9341.110	9341.110	9342.110	9342.110	–	256
		900	UL	2 pc(s).	9341.120	9341.120	9342.120	9342.120	–	256
		1100	UL	2 pc(s).	9341.130	9341.130	9342.130	9342.130	9342.134	256
		2400	UL	1 pc(s).	9341.170	–	9342.170	–	–	256
	C Base tray infills	100	UL	2 pc(s).	9341.140	9341.140	9342.140	9342.140	–	256
D Cover sections	700	UL	2 pc(s).	9340.200	9340.200	9340.200	9340.200	–	256	
	1100	UL	2 pc(s).	9340.210	9340.210	9340.210	9340.210	9340.214	256	
E Support panels	–	UL	5 pc(s).	9340.220	9340.220	9340.220	9340.220	9340.224	256	
F Cross members	160	UL	2 pc(s).	–	9340.230	–	9340.230	–	256	

PLS special busbars E-Cu											
	Version			Packs of	PLS 800		PLS 1600			Page	
	Bar cross-section mm ²				300		900				
	Bar thickness mm				5		10				
	Max. rated current A acc. to		DIN EN			800		1600			
			UL 508			700		1400			
	Length mm	For enclosure width mm	Approvals			Model No.		Model No.			
	495	600	UL	3 pc(s).		3524.000		3527.000			253
	695	800	UL	3 pc(s).		3525.000		3528.000			253
895	1000	UL	3 pc(s).		3525.010		3528.010			253	
1095	1200	UL	3 pc(s).		3526.000		3529.000			253	
2400	variable	UL	1 pc(s).		3509.000		3516.000			253	

Accessories										
Components		Approvals	Packs of	Model No.		Model No.			Page	
PLS busbar connectors	Single connection	UL	3 pc(s).	3504.000		3514.000			254	
	Baying connection ¹⁾	UL	3 pc(s).	3505.000		3515.000			254	
PLS expansion connectors ²⁾		UL	3 pc(s).	9320.060		9320.070			254	

¹⁾ Connection from enclosure to enclosure

²⁾ Two PLS busbar connectors (single connection) are required to fit one expansion connector

Connection adaptors



Busbar system Page 212 **OM adaptors** Page 219 **Circuit-breaker component adaptors** Page 226 **Fuse elements** Page 236

Material:

- Cover: ABS
- Chassis: Polyamide (PA 6.6)
- Chassis 3439.010: Fibreglass-reinforced, thermoplastic polyester (PBT)
- Fire protection corresponding to UL 94-V0

Colour:

- RAL 7035

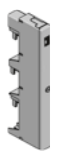



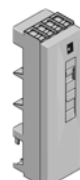
Note:

- The technical data may vary for UL applications
- UL approval only applies in conjunction with AC application
- The rated operating voltage for DC applications depends on the busbar arrangement in the busbar support 9340.050/9341.050/9342.050.

Technical details:




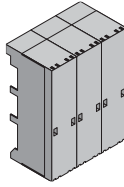
Available on the Internet

Rated current max. 63 – 125 A

							
Rated current max. A	Packs of	63	63	125	125	125	Page
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	690, 3~	690, 4~	
Rated operating voltage (L1 + L2) V		-	1000 (DC)	-	1000 (DC)	-	
Rated operating voltage (L1 + L3) V		-	1500 (DC)	-	1500 (DC)	-	
Number of poles		3-pole	3-pole	3-pole	3-pole	4-pole	
Cable outlet		Top	Bottom	Top/bottom	Bottom	Top/bottom	
Connection of round conductors, fine wire with wire end ferrule mm ²		2.5 - 10	2.5 - 10	10 - 25	10 - 25	10 - 25	
Connection of round conductors, multi-wire mm ²		2.5 - 10	2.5 - 10	16 - 35	16 - 35	16 - 35	
Connection of round conductors, single-wire mm ²		2.5 - 10	2.5 - 10	-	-	-	
Clamping area for laminated copper bars, W x H mm		-	-	10 x 7.8	10 x 7.8	10 x 7.8	
Clamping area for laminated copper bars, W x H (for 5 mm bar thickness) mm		-	-	-	-	-	
Clamping area for laminated copper bars, W x H (for 10 mm bar thickness) mm		-	-	-	-	-	
Width mm		20	20	55	55	75	
Height mm		215	215	210	210	270	
Approvals		UL	UL	UR	UL	UL	
For bar systems with centre-to-centre spacing mm		60	60	60	60	60	
For bar thickness mm		5/10	5/10	5/10	5/10	5/10	
Model No.	1 pc(s).	9342.200	9342.210	9342.220	9342.240	9342.224	
Accessories							
Laminated copper bars		-	-	see page	see page	see page	255
Connection adaptor expansion set		-	-	-	-	-	

Connection adaptors



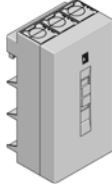
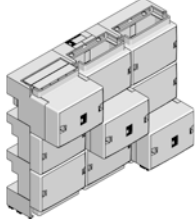
Rated current max. 250 – 600 A

					
Rated current max. A	250	250	250	600	Page
Rated operating voltage V, ~	690, 3~	690, 3~	690, 4~	690, 3~	
Rated operating voltage (L1 + L2) V	–	1000 (DC)	–	–	
Rated operating voltage (L1 + L3) V	–	1500 (DC)	–	–	
Number of poles	3-pole	3-pole	4-pole	3-pole	
Cable outlet	Top/bottom	Bottom	Top/bottom	Top/bottom	
Connection of round conductors, fine wire with wire end ferrule mm ²	35 - 120	35 - 120	35 - 120	35 - 240	
Connection of round conductors, multi-wire mm ²	35 - 120	35 - 120	35 - 120	35 - 240	
Connection of round conductors, single-wire	–	–	–	–	
Clamping area for laminated copper bars, W x H mm	18.5 x 15.5	18.5 x 15.5	18.5 x 15.5	24 x 21	
Clamping area for laminated copper bars, W x H (for 5 mm bar thickness) mm	–	–	–	–	
Clamping area for laminated copper bars, W x H (for 10 mm bar thickness) mm	–	–	–	–	
Width mm	90	90	118	180	
Height mm	210	210	270	247	
Approvals	UL	UL	UL	–	
For bar systems with centre-to-centre spacing mm	60	60	60	60	
For bar thickness mm	5/10	5/10	5/10	5/10	
Model No.	9342.250	9342.270	9342.254	3439.010	
	Packs of	1 pc(s).	1 pc(s).	1 pc(s).	1 set(s)

Accessories

Laminated copper bars		see page	see page	see page	see page	255
Connection adaptor expansion set		–	–	–	–	

Rated current max. 800 – 1600 A

					
Rated current max. A	800	800	800	1600	Page
Rated operating voltage V, ~	690, 3~	690, 3~	690, 3~	690, 3~	
Rated operating voltage (L1 + L2) V	–	1000 (DC)	1000 (DC)	1000 (DC)	
Rated operating voltage (L1 + L3) V	–	1500 (DC)	1500 (DC)	1500 (DC)	
Number of poles	3-pole	3-pole	3-pole	3-pole	
Cable outlet	Top/bottom	Top/bottom	Bottom	Top/bottom	
Connection of round conductors, fine wire with wire end ferrule mm ²	95 - 185	95 - 185	95 - 185	–	
Connection of round conductors, multi-wire mm ²	95 - 300	95 - 300	95 - 300	–	
Connection of round conductors, single-wire	–	–	–	–	
Clamping area for laminated copper bars, W x H mm	33 x 20	–	33 x 20	–	
Clamping area for laminated copper bars, W x H (for 5 mm bar thickness) mm	–	33 x 26	–	65 x 27	
Clamping area for laminated copper bars, W x H (for 10 mm bar thickness) mm	–	33 x 21	–	65 x 22	
Width mm	129	150	129	255	
Height mm	246	210	246	210	
Approvals	UR	UL	UL	UL	
For bar systems with centre-to-centre spacing mm	60	60	60	60	
For bar thickness mm	5/10	5/10	5/10	5/10	
Model No.	9342.280	9342.310	9342.300	9342.320	
	Packs of	1 pc(s).	1 set(s)	1 pc(s).	1 set(s)

Accessories

Laminated copper bars		see page	see page	see page	see page	255
Connection adaptor expansion set	1 pc(s).	–	9342.314	–	9342.324	218

Connection adaptor expansion set



Busbar system Page 212 **OM adaptors** Page 219 **Circuit-breaker component adaptors** Page 226 **Fuse elements** Page 236

Single-pole extra set to complement the 3-pole connection adaptor for 4-pole configurations.

Material:

- Cover: ABS
- Chassis: Polyamide (PA 6.6)
- Fire protection corresponding to UL 94-V0

Colour:

- RAL 7035

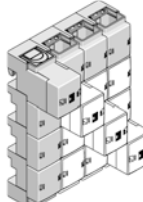
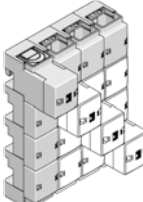
Note:

- The technical data may vary for UL applications
- UL approval only applies in conjunction with AC application

Technical details:

Available on the Internet

for 4-pole configuration

				
To fit Model No.	Packs of	9342.310	9342.320	Page
Rated current max. A		800	1600	
Rated operating voltage V, ~		690, 1~	690, 1~	
Number of poles		Single-pole	Single-pole	
Connection of round conductors, fine wire with wire end ferrule mm ²		95 - 185	-	
Connection of round conductors, multi-wire mm ²		95 - 300	-	
Clamping area for laminated copper bars, W x H (for 5 mm bar thickness) mm		33 x 26	65 x 27	
Clamping area for laminated copper bars, W x H (for 10 mm bar thickness) mm		33 x 21	65 x 22	
Width mm		50	85	
Height mm		270	270	
Approvals		UL	UL	
For bar systems with centre-to-centre spacing mm		60	60	
For bar thickness mm		5/10	5/10	
Model No.	1 pc(s).	9342.314	9342.324	
Accessories				
Laminated copper bars		see page	see page	255



Busbar system Page 212 **Connection adaptors** Page 216 **Fuse elements** Page 236 **Allocation of switchgear** Page 231

Material:

- Polyamide (PA 6.6)
- Fire protection corresponding to UL 94-V0

Note:

- The technical data may vary for UL applications

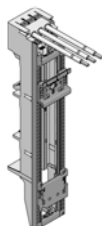

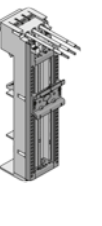
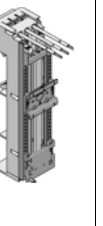
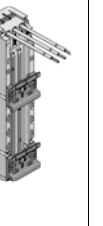
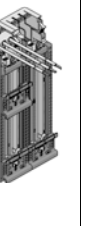
Technical details:

Available on the Internet

Colour:

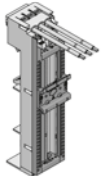
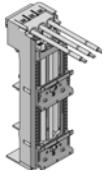
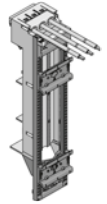
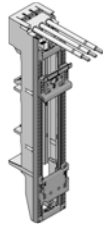
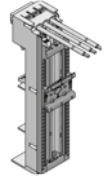
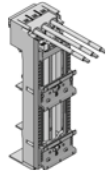
- Chassis: RAL 7035

Rated current max. 16 – 25 A, with connection cables

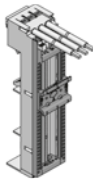
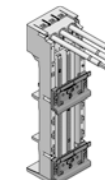
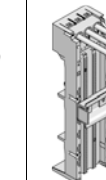
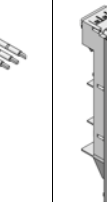
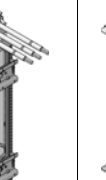
								
Rated current max. A	Packs of	16	25	25	25	25	25	Page
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	3-pole	3-pole	3-pole	
Connection cables, design		AWG 12	AWG 12	AWG 12	AWG 12	AWG 12	AWG 12	
Connection cables, length mm		165	130	130	130	130	130	
With support frame mm		45 x 237	-	45 x 170	45 x 170	-	45 x 170	
With support frame support		■	-	-	-	-	-	
With PinBlock		■	-	-	■	-	-	
With insert strips		-	-	-	-	-	-	
Support rails Qty/height mm		1 / 10	1 / 10	1 / 10	1 / 10	2 / 10	3 / 10	
Support rail version		TS 45D	TS 45C	TS 45C	TS 45C	TS 45D	TS 45D TS 45D-V	
Width mm		45	45	45	45	45	90	
Height mm		272	208	208	208	208	208	
Approvals		UL	UL	UL	UL	UL	UL	
For bar systems with centre-to-centre spacing mm		60	60	60	60	60	60	
For bar thickness mm		5/10	5/10	5/10	5/10	5/10	5/10	
Model No.	1 pc(s).	9340.760	9340.310	9340.340	9340.370	9340.320	9340.400	
Accessories								
Connection pin	20 pc(s).	9340.280	9340.280	9340.280	9340.280	9340.280	-	260
Insert strip	2 pc(s).	9340.290	9340.290	9340.290	9340.290	9340.290	-	259
Support rails		from page	from page	from page	from page	from page	from page	259
OM supports		see page	see page	see page	see page	see page	-	225
PinBlock	5 pc(s).	-	-	9342.800	-	-	9342.800	260

OM adaptors

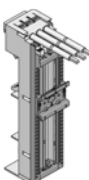
Rated current max. 32 A, with connection cables

								
Rated current max. A	Packs of	32	32	32	32	32	32	Page
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	3-pole	3-pole	3-pole	
Connection cables, design		AWG 10	AWG 10	AWG 10	AWG 10	AWG 10	AWG 10	
Connection cables, length mm		130	130	130	165	130	130	
With support frame mm		45 x 170	45 x 170	45 x 237	45 x 237	55 x 170	55 x 170	
With support frame support		-	-	■	■	-	-	
With PinBlock		-	-	-	■	-	-	
With insert strips		-	-	-	-	-	-	
Support rails Qty/height mm		1 / 10	2 / 10	2 / 10	1 / 10	1 / 10	2 / 10	
Support rail version		TS 45C	TS 45D TS 45D-V	TS 45D TS 45D-V	TS 45D	TS 55D	TS 55D TS 55D-V	
Width mm		45	45	45	45	55	55	
Height mm		208	208	272	272	208	208	
Approvals		UL	UL	UL	UL	UL	UL	
For bar systems with centre-to-centre spacing mm		60	60	60	60	60	60	
For bar thickness mm		5/10	5/10	5/10	5/10	5/10	5/10	
Model No.	1 pc(s).	9340.350	9340.380	9340.390	9340.770	9340.460	9340.470	
Accessories								
Connection pin	20 pc(s).	9340.280	9340.280	9340.280	9340.280	9340.280	9340.280	260
Insert strip	2 pc(s).	9340.290	9340.290	9340.290	9340.290	9340.290	9340.290	259
Support rails		from page	from page	from page	from page	from page	from page	259
OM supports		see page	see page	see page	see page	see page	see page	225
PinBlock	5 pc(s).	9342.800	9342.800	9342.800	9342.800	9342.810	9342.810	260

Rated current max. 40 A, with connection cables

							
Rated current max. A	Packs of	40	40	40	40	40	Page
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	3-pole	3-pole	
Connection cables, design		AWG 8	AWG 8	AWG 8	AWG 8	AWG 8	
Connection cables, length mm		130	130	130	130	130	
With support frame mm		55 x 170	-	-	55 x 237	-	
With support frame support		-	-	-	■	-	
With PinBlock		-	-	-	-	-	
With insert strips		-	-	-	-	■	
Support rails Qty/height mm		1 / 10	2 / 10	1 / 15	2 / 10	2 / 7.5	
Support rail version		TS 55D	TS 55D	Metal	TS 55D TS 55D-V	Metal	
Width mm		55	55	55	55	75	
Height mm		208	208	208	272	208	
Approvals		UL	UL	UL	UL	UL	
For bar systems with centre-to-centre spacing mm		60	60	60	60	60	
For bar thickness mm		5/10	5/10	5/10	5/10	5/10	
Model No.	1 pc(s).	9340.720	9340.740	9340.750	9340.730	9340.710	
Accessories							
Connection pin	20 pc(s).	9340.280	9340.280	9340.280	9340.280	9340.280	260
Insert strip	2 pc(s).	9340.290	9340.290	9340.290	9340.290	-	259
Support rails		from page	from page	from page	from page	from page	259
OM supports		see page	see page	see page	see page	see page	225
PinBlock	5 pc(s).	9342.810	-	-	9342.810	-	260

Rated current max. 65 A, with connection cables

						
Rated current max. A	Packs of	65	65	65	65	Page
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	3-pole	
Connection cables, design		AWG 6	AWG 6	AWG 6	AWG 6	
Connection cables, length mm		130	130	130	130	
With support frame mm		–	55 x 170	55 x 237	–	
With support frame support		–	–	■	–	
With PinBlock		–	–	–	–	
With insert strips		–	–	–	■	
Support rails Qty/height mm		1 / 10	1 / 10	2 / 10	1 / 7.5	
Support rail version		TS 55E	TS 55E	TS 55E TS 55D-V	Metal	
Width mm		55	55	55	75	
Height mm		208	208	272	208	
Approvals		UL	UL	UL	UL	
For bar systems with centre-to-centre spacing mm		60	60	60	60	
For bar thickness mm		5/10	5/10	5/10	5/10	
Model No.	1 pc(s).	9340.410	9340.430	9340.450	9340.700	
Accessories						
Connection pin	20 pc(s).	9340.280	9340.280	9340.280	–	260
Insert strip	2 pc(s).	9340.290	9340.290	9340.290	–	259
Support rails		from page	from page	from page	from page	259
OM supports		see page	see page	see page	see page	225
PinBlock	5 pc(s).	–	9342.810	9342.810	–	260

Accessories



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see page 295

OM adaptors



Busbar system Page 212 **Connection adaptors** Page 216 **Fuse elements** Page 236 **Allocation of switchgear** Page 231

Material:

- Polyamide (PA 6.6)
- Fire protection corresponding to UL 94-V0





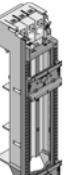
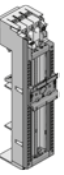
Technical details:

Available on the Internet




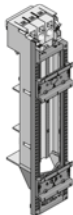
Colour:

- Chassis: RAL 7035


Rated current max. 32 A, with tension spring clamp

								
Rated current max. A	Packs of	32	32	32	32	32	32	Page
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	3-pole	3-pole	3-pole	
Connection of round conductors mm ²		1.5 - 6	1.5 - 6	1.5 - 6	1.5 - 6	1.5 - 6	1.5 - 6	
With support frame mm		-	-	45 x 170	45 x 170	45 x 237	55 x 170	
With support frame support		-	-	-	-	■	-	
With PinBlock		-	-	-	■	-	-	
Support rails Qty/height mm		1 / 10	2 / 10	1 / 10	1 / 10	2 / 10	1 / 10	
Support rail version		TS 45C	TS 45D	TS 45C	TS 45C	TS 45D TS 45D-V	TS 55D	
Width mm		45	45	45	45	45	55	
Height mm		208	208	208	208	272	208	
For bar systems with centre-to-centre spacing mm		60	60	60	60	60	60	
For bar thickness mm		5/10	5/10	5/10	5/10	5/10	5/10	
Model No.	1 pc(s).	9340.510	9340.520	9340.530	9340.550	9340.560	9340.660	
Accessories								
Cable set		see page	see page	see page	see page	see page	see page	260
Twin cords		-	-	-	-	-	-	
Connection pin	20 pc(s).	9340.280	9340.280	9340.280	9340.280	9340.280	9340.280	260
Insert strip	2 pc(s).	9340.290	9340.290	9340.290	9340.290	9340.290	9340.290	259
Support rails		from page	from page	from page	from page	from page	from page	259
OM supports		see page	see page	see page	see page	see page	see page	225
PinBlock	5 pc(s).	-	-	9342.800	9342.800	9342.800	9342.810	260

Rated current max. 65 A, with tension spring clamp

						
Rated current max. A	Packs of	65	65	65	65	Page
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	3-pole	
Connection of round conductors mm ²		2.5 - 16	2.5 - 16	2.5 - 16	2.5 - 16	
With support frame mm		–	–	55 x 170	55 x 237	
With support frame support		–	–	–	■	
With PinBlock		–	–	–	–	
Support rails Qty/height mm		1 / 10	2 / 10	1 / 10	2 / 10	
Support rail version		TS 55E	TS 55E TS 55D	TS 55E	TS 55E TS 55D-V	
Width mm		55	55	55	55	
Height mm		208	208	208	272	
For bar systems with centre-to-centre spacing mm		60	60	60	60	
For bar thickness mm		5/10	5/10	5/10	5/10	
Model No.	1 pc(s).	9340.610	9340.620	9340.630	9340.650	
Accessories						
Cable set		see page	see page	see page	see page	260
Twin cords		see page	see page	see page	see page	260
Connection pin	20 pc(s).	9340.280	9340.280	9340.280	9340.280	260
Insert strip	2 pc(s).	9340.290	9340.290	9340.290	9340.290	259
Support rails		from page	from page	from page	from page	259
OM supports		see page	see page	see page	see page	225
PinBlock	5 pc(s).	–	–	9342.810	9342.810	260

Accessories



Therm software

see page 385

OM adaptors



Busbar system Page 212 **Connection adaptors** Page 216 **Fuse elements** Page 236

Material:

- Polyamide (PA 6.6)
- Fire protection corresponding to UL 94-V0

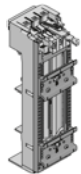
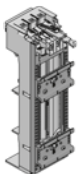
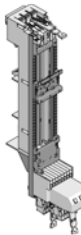
Technical details:

Available on the Internet

Colour:

- Chassis: RAL 7035

Rated current max. 25 A, with plug-in cable outlet

					
Rated current max. A	Packs of	25	25	25	Page
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	
Connection of round conductors mm ²		1.5 - 4	1.5 - 4	1.5 - 4	
With support frame mm		45 x 170	55 x 170	45 x 237	
With support frame support		-	-	■	
With PinBlock		-	-	■	
Support rails Qty/height mm		2 / 10	2 / 10	1 / 10	
Support rail version		TS 45D TS 45D-V	TS 55D TS 55D-V	TS 45C	
Width mm		45	55	45	
Height mm		208	208	292	
For bar systems with centre-to-centre spacing mm		60	60	60	
For bar thickness mm		5/10	5/10	5/10	
Model No.	1 pc(s).	9340.910	9340.930	9340.900	
Product-specific supply scope					
Connector with connection facility for 3 main contacts (1.5 – 4 mm ²)		■	■	-	
Sub-unit with connection facilities for 3 main contacts (1.5 – 4 mm ²) and 8 auxiliary contacts (0.5 – 2.5 mm ²) including connectors		-	-	■	
Accessories					
Cable set		see page	see page	see page	260
Support rails		from page	from page	from page	259



Busbar system Page 212 **Connection adaptors** Page 216 **Fuse elements** Page 236

For mounting of switchgear with external power supply.

Material:

- Polyamide (PA 6.6)
- Fire protection corresponding to UL 94-V0


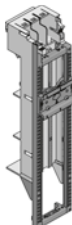

Colour:

- Chassis: RAL 7035

Technical details:

Available on the Internet

without contact system

					
Number of poles	Packs of	3-pole	3-pole	3-pole	Page
With support frame mm		45 x 170	55 x 237	-	
With support frame support		-	■	-	
With PinBlock		■	-	-	
Support rails Qty/height mm		-	1 / 10	2 / 10	
Support rail version		-	TS 55D-V	TS 45D	
Width mm		45	55	45	
Height mm		208	272	208	
Approvals		UL	UL	UL	
For bar systems with centre-to-centre spacing mm		60	60	60	
For bar thickness mm		5/10	5/10	5/10	
Model No.	1 pc(s).	9340.260	9340.270	9340.300	
Accessories					
Connection pin	20 pc(s).	9340.280	9340.280	9340.280	260
Insert strip	2 pc(s).	9340.290	9340.290	9340.290	259
Support rails		from page	from page	from page	259

Circuit-breaker component adaptors



Busbar system Page 212 **Connection adaptors** Page 216 **Fuse elements** Page 236

Material:

- Polyamide (PA 6.6)
- Fire protection corresponding to UL 94-V0

Colour:

- RAL 7035

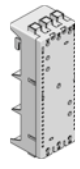
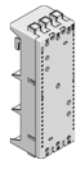
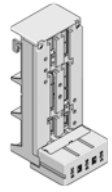
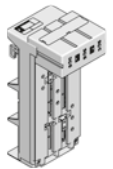
Note:

- The technical data may vary for UL applications
- Cable outlet: Switch outlet or as outgoing cable from the switchgear

Technical details:

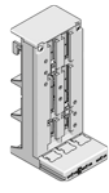
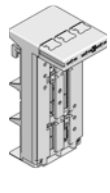
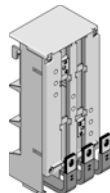
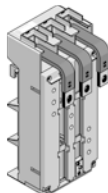
Available on the Internet

Rated current max. 100 – 125 A, 3-pole

						
Rated current max. A	Packs of	100	100	125	125	Page
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	3-pole	
Cable outlet		Top	Bottom	Top	Bottom	
Type of connection		Box terminal	Box terminal	Box terminal	Box terminal	
Connection of round conductors mm ²		10 - 35	10 - 35	35 - 120	35 - 120	
Clamping area for laminated copper bars, W x H mm		10 x 7.8	10 x 7.8	18.5 x 15.5	18.5 x 15.5	
For switchgear make (model)		ABB (MS 497) Eaton (PKZ2) Schneider Electric (GV3ME80) Siemens (S3)	ABB (MS 497) Eaton (PKZ2) Schneider Electric (GV3ME80) Siemens (S3)	ABB (S2, T1, T1 UL, T2, T2 UL) Allen Bradley (140-CMN) Eaton (NZM1, NZM1 UL, BZM B1) GE (FD) OEZ (BC160N) Schneider Electric (NS80, NSC100, NSE75, NSE100) Siemens (3RV13 53, 3VT1) Terasaki (E125, S125)	ABB (S2, T1, T1 UL, T2, T2 UL) Allen Bradley (140-CMN) Eaton (NZM1, NZM1 UL, BZM B1) GE (FD) OEZ (BC160N) Schneider Electric (NS80, NSC100, NSE75, NS100) Siemens (3RV13 53, 3VT1) Terasaki (E125, S125)	
Width mm		72	72	90	90	
Height mm		210	210	225	225	
Approvals		UL	UL	UL	UL	
For bar systems with centre-to-centre spacing mm		60	60	60	60	
For bar thickness mm		5/10	5/10	5/10	5/10	
Model No.	1 pc(s).	9342.400	9342.410	9342.540	9342.550	
Product-specific supply scope						
Terminal cover		-	-	■	■	
Sliding blocks		-	-	■	■	
Accessories						
Support rails 35 x 15 mm	5 pc(s).	9320.120	9320.120	-	-	261
Sliding blocks	6 pc(s).	-	-	9342.560	9342.560	261
Connection bracket	3 pc(s).	-	-	9342.570	9342.570	261
Insert strip		-	-	-	-	

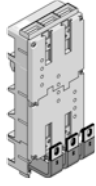
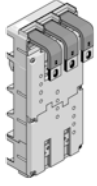
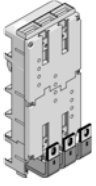
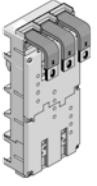
Circuit-breaker component adaptors

Rated current max. 160 – 250 A, 3-pole

						
Rated current max. A	Packs of	160	160	250	250	Page
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	3-pole	
Cable outlet		Top	Bottom	Top	Bottom	
Type of connection		Box terminal	Box terminal	–	–	
Connection of round conductors mm ²		35 - 120	35 - 120	–	–	
Clamping area for laminated copper bars, W x H mm		18.5 x 15.5	18.5 x 15.5	–	–	
For switchgear make (model)		ABB (S2, T1, T2, XT1, XT2) Allen Bradley (140-CMN) Eaton (NZM1, BZM B1) GE (FD) OEZ (BC160N) Schneider Electric (NS80, NSC100) Siemens (3RV13 53, 3VT1) Terasaki (E125, S125)	ABB (S2, T1, T2, XT1, XT2) Allen Bradley (140-CMN) Eaton (NZM1, BZM B1) GE (FD) OEZ (BC160N) Schneider Electric (NS80, NSC100) Siemens (3RV13 53, 3VT1) Terasaki (E125, S125)	ABB (S3, T3, T4, T3 UL, T4 UL) Allen Bradley (140 U-J) Eaton (NZM2, NZM2 UL, BZM B2) GE (FE 250) Mitsubishi (NF125-SGW/HGW, NF160-SGW/HGW) OEZ (BD250N, BD250S) Schneider Electric (NS(X)100, NS(X)160, NS(X)250, NSF150, NSF250, GV7) Siemens (VL150 UL, VL150X UL, VL160, VL160X, VL250, VL250 UL, 3RV10 63, 3RV13 63, 3RV13 64, 3VT2) Terasaki (L125, H125, S160, H160, L160, E250, L250, H250)	ABB (S3, T3, T4, T3 UL, T4 UL) Allen Bradley (140U-J) Eaton (NZM2, NZM2 UL, BZM B2) GE (FE 250) Mitsubishi (NF125-SGW/HGW, NF160-SGW/HGW) OEZ (BD250N, BD250S) Schneider Electric (NS(X)100, NS(X)160, NS(X)250, NSF150, NSF250, GV7) Siemens (VL150 UL, VL150X UL, VL160, VL160X, VL250, VL250 UL, 3RV10 63, 3RV13 63, 3RV13 64, 3VT2) Terasaki (L125, H125, S160, H160, L160, E250, L250, H250)	
Width mm		90	90	105	105	
Height mm		215	215	240	240	
Approvals		–	–	–	–	
For bar systems with centre-to-centre spacing mm		60	60	60	60	
For bar thickness mm		5/10	5/10	5/10	5/10	
Model No.	1 pc(s).	9342.500	9342.510	9345.600	9345.610	
Product-specific supply scope						
Terminal cover		■	■	–	–	
Sliding blocks		■	■	■	■	
Connection straps		–	–	■	■	
Accessories						
Support rails 35 x 15 mm		–	–	–	–	
Sliding blocks	6 pc(s).	9342.560	9342.560	9342.640	9342.640	261
Connection bracket	3 pc(s).	9342.570	9342.570	–	–	261
Insert strip		–	–	–	–	

Circuit-breaker component adaptors

Rated current max. 400 – 630 A, 3-pole

						
Rated current max. A	Packs of	400	400	630	630	Page
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	3-pole	
Cable outlet		Top	Bottom	Top	Bottom	
Type of connection		–	–	–	–	
Connection of round conductors		–	–	–	–	
Clamping area for laminated copper bars, W x H		–	–	–	–	
For switchgear make (model)		Eaton (NZM3, NZM3 UL/400 A) Mitsubishi (NF400-SEW/HEW/REW) Schneider Electric (NS(X)400, NSJ400) Siemens (VL400, VL400X UL, VL400 UL) Terasaki (E400, S400, H400, L400)	Eaton (NZM3, NZM3 UL/400 A) Mitsubishi (NF400-SEW/HEW/REW) Schneider Electric (NS(X)400, NSJ400) Siemens (VL400, VL400X UL, VL400 UL) Terasaki (E400, S400, H400, L400)	ABB (S5, T5, T5 UL) Allen Bradley (140U-L) Eaton (NZM3, NZM3 UL/630 A) Mitsubishi (NF630-SEW/HEW/REW) OEZ (BH630N, BH630S) Schneider Electric (NS(X)630, NSJ600) Siemens (VL630, 3VT3, 3V10 73, 3RV13 73, 3RV13 74) Terasaki (E630, S630)	ABB (S5, T5, T5 UL) Allen Bradley (140U-L) Eaton (NZM3, NZM3 UL/630 A) Mitsubishi (NF630-SEW/HEW/REW) OEZ (BH630N, BH630S) Schneider Electric (NS(X)630, NSJ600) Siemens (VL630, 3VT3, 3V10 73, 3RV13 73, 3RV13 74) Terasaki (E630, S630)	
Width mm		140	140	140	140	
Height mm		345	345	345	345	
Approvals		UL	UL	UL	UL	
For bar systems with centre-to-centre spacing mm		60	60	60	60	
For bar thickness mm		5/10	5/10	5/10	5/10	
Model No.	1 pc(s).	9345.720	9345.730	9345.700	9345.710	
Product-specific supply scope						
Connection straps		■	■	■	■	
Sliding blocks		■	■	■	■	
Accessories						
Support rails 35 x 15 mm		–	–	–	–	
Sliding blocks		–	–	–	–	
Connection bracket		–	–	–	–	
Insert strip	4 pc(s).	9342.720	9342.720	9342.720	9342.720	261

Circuit-breaker component adaptors



Busbar system Page 212 Connection adaptors Page 216

Material:

- Polyamide (PA 6.6)
- Fire protection corresponding to UL 94-V0

Colour:

- RAL 7035

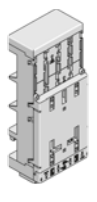
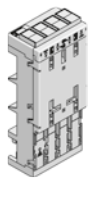
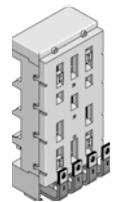
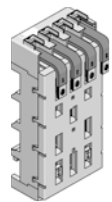
Note:

- The technical data may vary for UL applications
- Cable outlet: Switch outlet or as outgoing cable from the switchgear

Technical details:

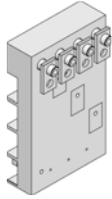
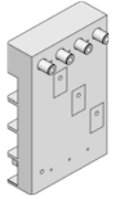
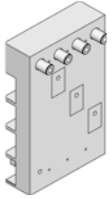
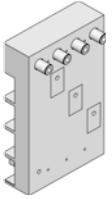
Available on the Internet

Rated current max. 160 – 250 A, 4-pole

						
Rated current max. A	Packs of	160	160	250	250	Page
Rated operating voltage V, ~		690, 4~	690, 4~	690, 4~	690, 4~	
Number of poles		4-pole	4-pole	4-pole	4-pole	
Cable outlet		Top	Bottom	Top	Bottom	
Type of connection		Box terminal	Box terminal	-	-	
Connection of round conductors mm ²		35 - 120	35 - 120	-	-	
Clamping area for laminated copper bars, W x H mm		18.5 x 15.5	18.5 x 15.5	-	-	
For switchgear make (model)		ABB (T1/160 A, T2/160 A) Eaton (NzM1-4/125 A, BZM E1-4/100 A) Schneider Electric (NSC100)	ABB (T1/160 A, T2/160 A) Eaton (NzM1-4/125 A, BZM E1-4/100 A) Schneider Electric (NSC100)	ABB (T3S/250 A, T4V/315 A) Eaton (NzM2-4/250 A) Schneider Electric (NS(X)100, NS(X)160, NS(X)250) Siemens (VL160X, VL160, VL250)	ABB (T3S/250 A, T4V/315 A) Eaton (NzM2-4/250 A) Schneider Electric (NS(X)100, NS(X)160, NS(X)250) Siemens (VL160X, VL160, VL250)	
Width mm		120	120	140	140	
Height mm		277	277	310	310	
Approvals		UL	UL	-	-	
For bar systems with centre-to-centre spacing mm		60	60	60	60	
For bar thickness mm		5/10	5/10	5/10	5/10	
Model No.	1 pc(s).	9342.504	9342.514	9345.604	9345.614	
Product-specific supply scope						
Terminal cover		■	■	-	-	
Sliding blocks		■	■	■	■	
Connection straps		-	-	■	■	
Accessories						
Sliding blocks	6 pc(s).	9342.560	9342.560	9342.640	9342.640	261

Circuit-breaker component adaptors

Rated current max. 500 A, 4-pole

						
Rated current max. A	Packs of	500	500	500	500	Page
Rated operating voltage V, ~		690, 4~	690, 4~	690, 4~	690, 4~	
Number of poles		4-pole	4-pole	4-pole	4-pole	
Cable outlet		Bottom	Bottom	Bottom	Bottom	
Type of connection		-	-	-	-	
Connection of round conductors		-	-	-	-	
Clamping area for laminated copper bars, W x H		-	-	-	-	
For switchgear make (model)		ABB (Tmax T5)	Schneider Electric (NS(X)400, NS(X)630)	Eaton (NZM3-4-XKR130)	Siemens (3VL400)	
Width mm		185	185	185	185	
Height mm		300	300	300	300	
Approvals		-	-	-	-	
For bar systems with centre-to-centre spacing mm		60	60	60	60	
For bar thickness mm		5/10	5/10	5/10	5/10	
Model No.	1 pc(s).	9345.704	9345.714	9345.724	9345.734	
Product-specific supply scope						
Spacer rolls		■	■	■	■	
Connection screws		■	■	■	■	
Contact plates		■	-	-	-	
Accessories						
Sliding blocks		-	-	-	-	

New



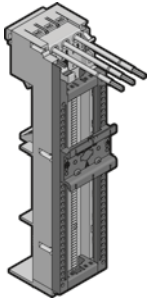


Perforex

see page 488

OM adaptor with connection cables

Allocation of switchgear

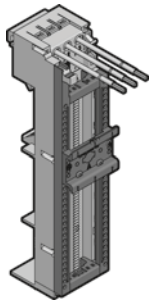


For make/model

		ABB										Eaton																			
		MCB		Starter		Reversing starter		Soft starter		MCB		Starter		Reversing starter		Soft starter															
		MS 116/132	MS 325	MS 450/451	MS 495/496/497	MS 116 + AF09, AF12, AF16	MS 132 + AF09, AF12, AF16, AF26, AF30, AF38	MS 450 + A40, A50	MS 116 + AF09, AF12, AF16	MS 132 + AF09, AF12, AF16, AF26, AF30, AF38	MS 450 + A40, A50	MS 116 + PSR3, PSR6, PSR9, PSR12, PSR16, PSR25	MS 325 + PSR25	MS 450 + PSR30	PKZM0	PKZM01	PKZM4	PKE12	PKE32	PKE65	MSC-D + M7 - M15	MSC-D + M17 - M32	PKZM4 + DILM 17-65	MSC - DE ... M7 - M12	MSC - DE ... M17 - M32	PKE 65 + DILM 65	MSC - DE ... M7 - M12	MSC - DE ... M17 - M32	PKE 65 + DILM 65	PKE 12, PKE 32 + DST-340	PKZ0 + DST-340
		Construction width										Construction width																			
		45	54	55	70	45	45	70	90	90	140	45	45	55	45	45	55	45	45	55	45	45	55	45	45	55	90	90	110	45	45
Model No.	Version	Required quantity (pieces)										Required quantity (pieces)																			
9340.340	OM adaptor 25 A, AWG 12, W = 45 mm	1													1		1	1													
9340.350	OM adaptor 32 A, AWG 10, W = 45 mm					1									1																
9340.370	OM adaptor 25 A, AWG 12, W = 45 mm								1												1						1				
9340.380	OM adaptor 32 A, AWG 10, W = 45 mm																				1							1			
9340.390	OM adaptor 32 A, AWG 10, W = 45 mm					1			1		1	1											1	1						1	1
9340.430	OM adaptor 65 A, AWG 6, W = 55 mm			1	1										1						1										
9340.450	OM adaptor 65 A, AWG 6, W = 55 mm							1			1			1									1			1					
9340.460	OM adaptor 32 A, AWG 10, W = 55 mm		1																												
9340.260	OM support, 45 x 208 mm								1	1																	1	1			
9340.270	OM support, 55 x 272 mm										1																				
9342.860	Support rail TS45D, 35 x 10 mm	1								1																					
9342.870	Support rail TS45D-V, 35 x 10 mm					1																						1			
9340.290	Insert strip, 10 x 208 mm				2			2			3																				
9340.280	Connection pin								3	3	3																3	3			

OM adaptor with connection cables

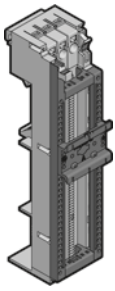
Allocation of switchgear



For make/model	Siemens											Schneider Electric																													
	MCB			Starter					Reversing starter			MCB	Starter					Reversing starter	Soft starter																						
	3RV10 11... (S00)	3RV10 21... (S0)	3RV10 31... (S2)	3RV20 11... (S00) Screw terminal	3RV20 21... (S0) screw terminal up to 40 A	3RA11 10... (S00)	3RA11 20... (S0)	3RA11 30... (S2)	3RA21 10... (S00) Screw terminal	3RV20 11... (S00 + S0) Tension spring clamp	3RA21 20... (S00/S0) Screw terminal	3RA21 20... (S0) Screw terminal	3RA61 20...	3RA12 10... (S00 + S00)	3RA11 20... (S0 + S0)	3RV10 31... + 3RT103... (S2 + S2)	3RA22 10... (S00) Screw terminal	3RA22 20... (S0) Screw terminal	GV2 - ME (screw terminal and tension spring clamp)	GV2 - P	GV2 - RT, LE10, L10	GV3 BIS 65A	GV2 P + LC1D	GV2 ME + LC1D	GV2 - DM102 + LC1D/LC1K	GV2 - DP + LC1D/LC1K	GV3 + LC1D65	LUB 12	LUB 32	GV2 P + LC2D (AC)	GV2 ME + LC2D/LC2K (AC)	GV2 DM + LC2D/LC2K	GV2 DP + LC2D/LC2K	GV2 DP + LC2D/LC2K	GV2 ME + ATS						
	Construction width											Construction width																													
	45	45	55	45	45	45	55	45	45	45	45	45	45	90	100	120	90	90	45	55	45	55	45	45	45	45	45	55	45	45	90	90	90	90	90	90	45				
ModelNo.	Required quantity (pieces)											Required quantity (pieces)																													
9340.760										1																															
9340.340	1	1	1																1		1							1													
9340.350											1	1						1				1	1	1	1			1	1	1	1	1	1	1							
9340.770										1			1																												
9340.370						1	1							1	1		1																								
9340.390																																						1			
9340.430			1																	1		1																			
9340.450								1								1												1													
9340.720					1																																				
9340.260															1	1		1												1	1	1	1	1	1						
9340.270																	1																								
9340.290																1	1																								
9340.280															3	3	3	3	3																	3	3	3	3	3	
9342.800											1	1																									2	2	2	2	2
9342.820												1																													

OM adaptor with tension spring clamps

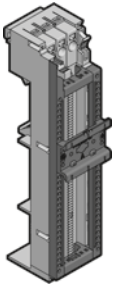
Allocation of switchgear



For make/model		ABB											Eaton																			
		MCB			Starter			Reversing starter			Soft starter		MCB			Starter			Reversing starter		Soft starter											
		MS 116/132	MS 325	MS 450/451	MS 495/496/497	MS 116 + AF09, AF12, AF16	MS 132 + AF09, AF12, AF16, AF26, AF30, AF38	MS 450 + A40, A50	MS 116 + AF09, AF12, AF16	MS 132 + AF09, AF12, AF16, AF26, AF30, AF38	MS 450 + A40, A50	MS 116 + PSR3, PSR6, PSR9, PSR12, PSR16, PSR25	MS 325 + PSR25	MS 450 + PSR30	PKZM0	PKZM01	PKZM4	PKE12	PKE32	PKE65	MSC-D + M7 - M15	MSC-D + M17 - M32	PKZM4 + DILM 17-65	MSC - DE ... M7 - M12	MSC - DE ... M17 - M32	PKE 65 + DILM 65	MSC - DE ... M7 - M12	MSC - DE ... M17 - M32	PKE 65 + DILM 65	PKE 12 + DS7-340	PKE 32 + DS7-340	PKZ0 + DS7-340
		Construction width											Construction width																			
45	54	55	70	45	45	70	90	90	140	45	45	55	45	45	55	45	45	55	45	45	55	45	45	55	90	90	110	45	45	45		
Model No.	Version	Required quantity (pieces)											Required quantity (pieces)																			
9340.530	OM adaptor 32 A, 1.5 – 6 mm ² , W = 45 mm	1			1									1	1	1	1															
9340.550	OM adaptor 32 A, 1.5 – 6 mm ² , W = 45 mm							1												1	1					1	1					
9340.560	OM adaptor 32 A, 1.5 – 6 mm ² , W = 45 mm					1			1	1	1											1	1					1	1	1		
9340.660	OM adaptor 32 A, 1.5 – 6 mm ² , W = 55 mm	1																														
9340.630	OM adaptor 65 A, 2.5 – 16 mm ² , W = 55 mm		1	1											1																	
9340.650	OM adaptor 65 A, 2.5 – 16 mm ² , W = 55 mm						1		1			1									1				1		1					
9340.260	OM support 45 x 208 mm							1	1																1	1						
9340.270	OM support 55 x 272 mm								1																	1						
9340.290	Insert strip 10 x 208 mm				2			2		3																						
9340.280	Connection pin							3	3	3															3	3	3					
9340.860	Cable set AWG 12	3			3		3		3	3					3		3		3		3		3		3		3		3			
9340.870	Cable set AWG 10		3		3		3		3				3	3		3		3		3		3		3		3		3	3			
9340.890	Cable set AWG 6			3	3		3		3		3				3		3		3		3		3		3		3					
9342.860	Support rail TS45D, 35 x 10 mm	1																														
9342.930	Support rail TS55D, 35 x 10 mm						1																									

OM adaptor with tension spring clamps

Allocation of switchgear



For make/model		Siemens													Schneider Electric																					
		MCB				Starter					Reversing starter				MCB				Starter					Reversing starter	Soft starter											
		3RV10 11... (S00)	3RV10 21... (S0)	3RV10 31... (S2)	3RV20 11... (S00) Screw terminal	3RV20 21... (S0) screw terminal up to 40 A	3RA11 10... (S00)	3RA11 20... (S0)	3RA11 30... (S2)	3RA21 10... (S00) Screw terminal	3RA21 20... (S00/S0) Screw terminal	3RA21 20... (S0) Screw terminal	3RA12 10... (S00 + S00)	3RA11 20... (S0 + S0)	3RV10 31... + 3RT103... (S2 + S2)	3RA22 10... (S00) Screw terminal	3RA22 20... (S0) Screw terminal	GV2 - ME (screw terminal and tension spring clamp)	GV2 - P	GV2 - RT, LE10, L10	GV3 BIS 65A	GV2 P + LC1D	GV2 ME + LC1D	GV2 - DM102 + LC1D/LC1K	GV2 - DP + LC1D/LC1K	GV3 + LC1D65	LUB 12	LUB 32	GV2 P + LC2D (AC)	GV2 ME + LC2D/LC2K (AC)	GV2 DM + LC2D/LC2K	GV2 DP + LC2D/LC2K	GV2 ME + ATS			
		Construction width													Construction width																					
		45	45	55	45	45	45	45	55	45	45	45	45	90	100	120	90	90	45	55	45	55	45	45	45	45	55	45	45	90	90	90	90	45		
Model No.	Version	Required quantity (pieces)													Required quantity (pieces)																					
9340.530	OM adaptor 32 A, 1.5 – 6 mm ² , W = 45 mm	1	1		1	1												1		1								1	1							
9340.550	OM adaptor 32 A, 1.5 – 6 mm ² , W = 45 mm						1	1		1	1	1	1			1	1						1	1	1	1				1	1	1	1			
9340.560	OM adaptor 32 A, 1.5 – 6 mm ² , W = 45 mm																																		1	
9340.630	OM adaptor 65 A, 2.5 – 16 mm ² , W = 55 mm			1															1		1															
9340.650	OM adaptor 65 A, 2.5 – 16 mm ² , W = 55 mm								1							1										1										
9340.260	OM support 45 x 208 mm													1	1																1					
9340.270	OM support 55 x 272 mm															1																				
9340.290	Insert strip 10 x 208 mm														1																					
9340.280	Connection pin														3	3	3													3	3	3	3			
9340.860	Cable set AWG 12	3			3		3			3	3	3	3			3												3								
9340.870	Cable set AWG 10		3						3						3			3		3		3	3	3	3			3	3	3	3	3	3		3	
9340.880	Cable set AWG 8					3																														
9340.890	Cable set AWG 6			3					3							3				3		3				3										
9342.820	PinBlock PLUS																					1			1					1	1	1	1			

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Bus-mounting fuse bases



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Bus-mounting fuse bases



Busbar system Page 212 **Connection adaptors** Page 216 **OM adaptors** Page 219 **Circuit-breaker component adaptors** Page 226

Material:

- Bus-mounting fuse base: Fibreglass-reinforced, thermoplastic polyester (PBT)
- Contact hazard protection: Polyamide (PA 6.6)
- Fire protection corresponding to UL 94-V0

Colour:

- RAL 7035

Note:

- For the use of fuse inserts to EN 60 269-3 (DIN VDE 0636-301)

Technical details:

- Available on the Internet

Fuse inserts		D 02-E 18 (adaptor sleeve)	D 02-E 18 (adaptor sleeve)	D II-E 27 (adaptor screw)	D II-E 27 (adaptor screw)	D III-E 33 (adaptor screw)	D III-E 33 (adaptor screw)	Page
Rated current max. A		63	63	25	25	63	63	
Rated operating voltage V, ~		400, 3~ 400 (DC)	400, 3~ 400 (DC)	500, 3~ 500 (DC)	500, 3~ 500 (DC)	690, 3~ 690 (DC)	690, 3~ 690 (DC)	
Number of poles		3-pole	3-pole	3-pole	3-pole	3-pole	3-pole	
Type of connection		Box terminal	Box terminal	Box terminal	Box terminal	Box terminal	Box terminal	
Connection of round conductors mm ²		1.5 - 25	1.5 - 16	1.5 - 16	1.5 - 16	1.5 - 25	1.5 - 16	
Width mm		27	41	42	56	57	71	
Height mm		209	251	209	251	209	251	
For bar systems with centre-to-centre spacing mm		60	60	60	60	60	60	
For bar thickness mm		5/10	5/10	5/10	5/10	5/10	5/10	
Model No.		3418.010	3418.040	3427.010	3427.040	3433.010	3433.040	
	Packs of	10 pc(s).	5 pc(s).	10 pc(s).	5 pc(s).	10 pc(s).	5 pc(s).	
Pre-configured element ready for connection including cover plate, contact hazard protection and exterior connection clamps		–	■	–	■	–	■	
Also required								
Contact hazard protection cover plate	10 pc(s).	3418.020	–	3427.020	–	3433.020	–	262
Accessories								
Connection space extender	10 pc(s).	3418.030	–	3427.030	–	3433.030	–	262
Side covers	10 pc(s).	3093.010	–	3093.020	–	3093.020	–	262

Bus-mounting fuse base D-Switch



Busbar system Page 212 **Connection adaptors** Page 216 **OM adaptors** Page 219 **Circuit-breaker component adaptors** Page 226

Material:

- Polyamide (PA 6)
- Fire protection corresponding to UL 94-V0

Colour:

- Chassis: RAL 7035
- Fuse holder: RAL 7001

Supply includes:

- Reducing retaining springs for D 01 and 10 x 38 mm fuses

Basis of test:

- IEC/DIN EN 60 947-3

Note:

- For the use of fuse inserts to EN 60 269-3 (DIN VDE 0636-301)
- With integral visual fuse monitoring via flashing indicator and operating status display as well as cable routing for conductors up to 6 mm²

Technical details:

Available on the Internet

Fuse inserts	Packs of	D 01 (with retaining spring) D 02 (with Neozed adaptor sleeve) 10 x 38 (with retaining spring)	Page
Rated operating current max. A		63	
Rated operating voltage V, ~		400, 3~	
Number of poles		3-pole	
Voltage, indicator light V		100 - 400	
Type of connection		Box terminal	
Connection of round conductors mm ²		1.5 - 25	
Width mm		27	
Height mm		226	
For bar systems with centre-to-centre spacing mm		60	
For bar thickness mm		5/10	
Model No.	3 pc(s).	9340.950	

NH fuse-switch disconnectors, size 000



Busbar system Page 212 **Connection adaptors** Page 216 **OM adaptors** Page 219 **Circuit-breaker component adaptors** Page 226

Material:

- Fibreglass-reinforced polyamide
- Fire protection corresponding to UL 94-V0
- Contact tracks: Silver-plated hard copper

Colour:

- Chassis: RAL 9011
- Cover: RAL 7035

Basis of test:

- IEC/DIN EN 60 947-3
- DIN EN 60 269-2 (fuse inserts)

Technical details:

Available on the Internet

Size 000, for mounting plate assembly

Size	Packs of	000	Page
Rated operating current max. A		100	
Rated operating voltage V, ~		690, 3~	
Number of poles		3-pole	
Cable outlet		Top/bottom	
Type of connection		Box terminal	
Connection of round conductors mm ²		1.5 - 50	
Clamping area for laminated copper bars, W x H mm		10 x 10	
Width mm		89	
Height mm		141,5	
For mounting plate assembly		■	
Model No.	1 pc(s).	3431.000	
Accessories			
Micro-switch	5 pc(s).	3071.000	263

NH fuse-switch disconnectors, size 000



Busbar system Page 212 **Connection adaptors** Page 216 **OM adaptors** Page 219 **Circuit-breaker component adaptors** Page 226

Material:

- Fibreglass-reinforced polyamide
- Fire protection corresponding to UL 94-V0
- Contact tracks: Silver-plated hard copper

Colour:

- Chassis: RAL 7035
- Cover: RAL 7001

Basis of test:

- IEC/DIN EN 60 947-3
- DIN EN 60 269-2 (fuse inserts)

Technical details:

Available on the Internet

Size 000

Size	Packs of	000	000	000	Page
Rated operating current max. A		100	100	100	
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	
Cable outlet		Bottom	Top	Bottom	
Type of connection		Box terminal	Box terminal	Box terminal	
Connection of round conductors mm ²		2.5 - 50	2.5 - 50	2.5 - 50	
Width mm		53	53	53	
Height mm		213	213	213	
With electronic fuse monitoring		■	-	-	
For bar systems with centre-to-centre spacing mm		60	60	60	
For bar thickness mm		5/10	5/10	5/10	
Model No.	1 pc(s).	3431.035	3431.020	3431.030	
Accessories					
Micro-switch	5 pc(s).	3071.000	3071.000	3071.000	263

NH fuse-switch disconnectors, size 00 to 3



Busbar system Page 212 **Connection adaptors** Page 216 **OM adaptors** Page 219 **Circuit-breaker component adaptors** Page 226

Material:

- Polyamide (PA 6)
- Fire protection corresponding to UL 94-V0
- Contact tracks: Electrolytic copper, silver-plated

Colour:

- Chassis: RAL 7035
- Cover: RAL 7035/7001

Note:

- The technical data may vary for UL applications.

Technical details:

Available on the Internet

Basis of test:

- IEC/DIN EN 60 947-3
- DIN EN 60 269-2 (fuse inserts)

Size 00

Size	Packs of	00	00	00	00	Page
Rated operating current max. A		160	160	160	160	
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	3-pole	
Cable outlet		Top/bottom	Top/bottom	Top/bottom	Top/bottom	
Type of connection		Box terminal	Screw M8	Box terminal	Screw M8	
Connection of round conductors mm ²		4 - 95	10 - 95	4 - 95	10 - 95	
Connection of sector-shaped conductors		-	-	-	-	
Clamping area for laminated copper bars, W x H mm		13 x 13	20 x 5	13 x 13	20 x 5	
Width mm		106	106	106	106	
Height mm		194	194	194	194	
Approvals		UR	UR	UR	UR	
For mounting plate assembly		-	-	■	■	
For bar systems with centre-to-centre spacing mm		60	60	-	-	
For bar thickness mm		5/10	5/10	-	-	
Model No.	1 pc(s).	9343.000	9343.010	9344.000	9344.010	
Accessories						
Box terminals		-	-	-	-	
Connection space cover	2 pc(s).	9344.520	9344.520	9344.520	9344.520	263
Arc chambers		-	-	-	-	
Micro-switch	5 pc(s).	3071.000	3071.000	3071.000	3071.000	263
Laminated copper bars		see page	see page	see page	see page	255

NH fuse-switch disconnectors, size 00 to 3

Size 1

Size	Packs of	1	1	1	1	Page
Rated operating current max. A		250	250	250	250	
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	3-pole	
Cable outlet		Top/bottom	Top/bottom	Top/bottom	Top/bottom	
Type of connection		Box terminal	Screw M10	Box terminal	Screw M10	
Connection of round conductors mm ²		35 - 150	10 - 150	35 - 150	10 - 150	
Connection of sector-shaped conductors mm ²		50 - 150	–	50 - 150	–	
Clamping area for laminated copper bars, W x H mm		20 x 3 - 14	32 x 10	20 x 3 - 14	32 x 10	
Width mm		184	184	184	184	
Height mm		298	298	298	298	
Approvals		UR	UR	UR	UR	
For mounting plate assembly		–	–	■	■	
For bar systems with centre-to-centre spacing mm		60	60	–	–	
For bar thickness mm		5/10	5/10	–	–	
Model No.	1 pc(s).	9343.100	9343.110	9344.100	9344.110	
Accessories						
Box terminals	3 pc(s).	–	9344.610	–	9344.610	263
Connection space cover	2 pc(s).	9344.530	9344.530	9344.530	9344.530	263
Arc chambers	3 pc(s).	9344.680	9344.680	9344.680	9344.680	263
Micro-switch	2 pc(s).	9344.510	9344.510	9344.510	9344.510	263
Laminated copper bars		see page	see page	see page	see page	255

Size 2 – 3

Size	Packs of	2	2	2	3	3	3	Page
Rated operating current max. A		400	400	400	630	630	630	
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	3-pole	3-pole	3-pole	
Cable outlet		Top/bottom	Top/bottom	Top/bottom	Top/bottom	Top/bottom	Top/bottom	
Type of connection		Box terminal	Screw M10	Screw M10	Box terminal	Screw M10	Screw M10	
Connection of round conductors mm ²		95 - 300	10 - 240	10 - 240	95 - 300	10 - 300	10 - 300	
Connection of sector-shaped conductors mm ²		120 - 300	–	–	120 - 300	–	–	
Clamping area for laminated copper bars, W x H mm		32 x 10 - 20	50 x 10	50 x 10	32 x 10 - 20	50 x 10	50 x 10	
Width mm		210	210	210	250	250	250	
Height mm		298	298	298	298	298	298	
Approvals		UR	UR	UR	UR	UR	UR	
For mounting plate assembly		–	–	■	–	–	■	
For bar systems with centre-to-centre spacing mm		60	60	–	60	60	–	
For bar thickness mm		5/10	5/10	–	5/10	5/10	–	
Model No.	1 pc(s).	9343.200	9343.210	9344.210	9343.300	9343.310	9344.310	
Accessories								
Box terminals	3 pc(s).	–	9344.620	9344.620	–	9344.620	9344.620	263
Connection space cover	2 pc(s).	9344.540	9344.540	9344.540	9344.550	9344.550	9344.550	263
Arc chambers	3 pc(s).	9344.680	9344.680	9344.680	9344.680	9344.680	9344.680	263
Micro-switch	2 pc(s).	9344.510	9344.510	9344.510	9344.510	9344.510	9344.510	263
Laminated copper bars		see page	see page	see page	see page	see page	see page	255

NH fuse-switch disconnectors, size 00 to 3



Busbar system Page 212 **Connection adaptors** Page 216 **OM adaptors** Page 219 **Circuit-breaker component adaptors** Page 226

Material:

- Polyamide (PA 6)
- Fire protection corresponding to UL 94-V0
- Contact tracks: Electrolytic copper, silver-plated

Colour:

- Chassis: RAL 7035
- Cover: RAL 7035/7001

Basis of test:

- IEC/DIN EN 60 947-3
- DIN EN 60 269-2 (fuse inserts)

Technical details:

Available on the Internet

Size 00, with electronic fuse monitoring

Size	Packs of	00	00	00	00	Page
Rated operating current max. A		160	160	160	160	
Rated operating voltage V, ~		400 - 690, 3~	400 - 690, 3~	400 - 690, 3~	400 - 690, 3~	
Number of poles		3-pole	3-pole	3-pole	3-pole	
Cable outlet		Top/bottom	Top/bottom	Top/bottom	Top/bottom	
Type of connection		Box terminal	Screw M8	Box terminal	Screw M8	
Connection of round conductors mm ²		4 - 95	10 - 95	4 - 95	10 - 95	
Connection of sector-shaped conductors		-	-	-	-	
Clamping area for laminated copper bars, W x H mm		13 x 13	20 x 5	13 x 13	20 x 5	
Width mm		106	106	106	106	
Height mm		194	194	194	194	
For mounting plate assembly		-	-	■	■	
For bar systems with centre-to-centre spacing mm		60	60	-	-	
For bar thickness mm		5/10	5/10	-	-	
Model No.	1 pc(s).	9343.020	9343.030	9344.020	9344.030	
Accessories						
Box terminals		-	-	-	-	
Connection space cover	2 pc(s).	9344.520	9344.520	9344.520	9344.520	263
Arc chambers		-	-	-	-	
Micro-switch	5 pc(s).	3071.000	3071.000	3071.000	3071.000	263
Laminated copper bars		see page	see page	see page	see page	255

NH fuse-switch disconnectors, size 00 to 3

Size 1, with electronic fuse monitoring

Size	Packs of	1	1	1	Page
Rated operating current max. A		250	250	250	
Rated operating voltage V, ~		400 - 690, 3~	400 - 690, 3~	400 - 690, 3~	
Number of poles		3-pole	3-pole	3-pole	
Cable outlet		Top/bottom	Top/bottom	Top/bottom	
Type of connection		Box terminal	Screw M10	Screw M10	
Connection of round conductors mm ²		35 - 150	10 - 150	10 - 150	
Connection of sector-shaped conductors mm ²		50 - 150	-	-	
Clamping area for laminated copper bars, W x H mm		20 x 3 - 14	32 x 10	32 x 10	
Width mm		184	184	184	
Height mm		298	298	298	
For mounting plate assembly		-	-	■	
For bar systems with centre-to-centre spacing mm		60	60	-	
For bar thickness mm		5/10	5/10	-	
Model No.	1 pc(s).	9343.120	9343.130	9344.130	

Accessories

Box terminals	3 pc(s).	-	9344.610	9344.610	263
Connection space cover	2 pc(s).	9344.530	9344.530	9344.530	263
Arc chambers	3 pc(s).	9344.680	9344.680	9344.680	263
Micro-switch	2 pc(s).	9344.510	9344.510	9344.510	263
Laminated copper bars		see page	see page	see page	255

Size 2 – 3, with electronic fuse monitoring

Size	Packs of	2	2	3	3	Page
Rated operating current max. A		400	400	630	630	
Rated operating voltage V, ~		400 - 690, 3~	400 - 690, 3~	400 - 690, 3~	400 - 690, 3~	
Number of poles		3-pole	3-pole	3-pole	3-pole	
Cable outlet		Top/bottom	Top/bottom	Top/bottom	Top/bottom	
Type of connection		Screw M10	Screw M10	Screw M10	Screw M10	
Connection of round conductors mm ²		10 - 240	10 - 240	10 - 300	10 - 300	
Connection of sector-shaped conductors		-	-	-	-	
Clamping area for laminated copper bars, W x H mm		50 x 10	50 x 10	50 x 10	50 x 10	
Width mm		210	210	250	250	
Height mm		298	298	298	298	
For mounting plate assembly		-	■	-	■	
For bar systems with centre-to-centre spacing mm		60	-	60	-	
For bar thickness mm		5/10	-	5/10	-	
Model No.	1 pc(s).	9343.230	9344.230	9343.330	9344.330	

Accessories

Box terminals	3 pc(s).	-	-	9344.620	9344.620	263
Connection space cover	2 pc(s).	9344.540	9344.540	9344.550	9344.550	263
Arc chambers	3 pc(s).	9344.680	9344.680	9344.680	9344.680	263
Micro-switch	2 pc(s).	9344.510	9344.510	9344.510	9344.510	263
Laminated copper bars		see page	see page	see page	see page	255

NH fuse-switch disconnectors, size 00 to 3



Busbar system Page 212 **Connection adaptors** Page 216 **OM adaptors** Page 219 **Circuit-breaker component adaptors** Page 226

Material:

- Polyamide (PA 6)
- Fire protection corresponding to UL 94-V0
- Contact tracks: Electrolytic copper, silver-plated

Colour:

- Chassis: RAL 7035
- Cover: RAL 7035/7001

Basis of test:

- IEC/DIN EN 60 947-3
- DIN EN 60 269-2 (fuse inserts)

Technical details:

Available on the Internet

Size 00, with electromechanical fuse monitoring

Size	Packs of	00	00	00	00	Page
Rated operating current max. A		160	160	160	160	
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	3-pole	
Cable outlet		Top/bottom	Top/bottom	Top/bottom	Top/bottom	
Type of connection		Box terminal	Screw M8	Box terminal	Screw M8	
Connection of round conductors mm ²		4 - 95	10 - 95	4 - 95	10 - 95	
Connection of sector-shaped conductors		-	-	-	-	
Clamping area for laminated copper bars, W x H mm		13 x 13	20 x 5	13 x 13	20 x 5	
Width mm		106	106	106	106	
Height mm		194	194	194	194	
For mounting plate assembly		-	-	■	■	
For bar systems with centre-to-centre spacing mm		60	60	-	-	
For bar thickness mm		5/10	5/10	-	-	
Model No.	1 pc(s).	9343.040	9343.050	9344.040	9344.050	
Accessories						
Box terminals		-	-	-	-	
Connection space cover	2 pc(s).	9344.520	9344.520	9344.520	9344.520	263
Arc chambers		-	-	-	-	
Micro-switch	5 pc(s).	3071.000	3071.000	3071.000	3071.000	263
Laminated copper bars		see page	see page	see page	see page	255

NH fuse-switch disconnectors, size 00 to 3

Size 1, with electromechanical fuse monitoring

Size	Packs of	1	1	1	Page
Rated operating current max. A		250	250	250	
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	
Cable outlet		Top/bottom	Top/bottom	Top/bottom	
Type of connection		Box terminal	Screw M10	Screw M10	
Connection of round conductors mm ²		35 - 150	10 - 150	10 - 150	
Connection of sector-shaped conductors mm ²		50 - 150	–	–	
Clamping area for laminated copper bars, W x H mm		20 x 3 - 14	32 x 10	32 x 10	
Width mm		184	184	184	
Height mm		298	298	298	
For mounting plate assembly		–	–	■	
For bar systems with centre-to-centre spacing mm		60	60	–	
For bar thickness mm		5/10	5/10	–	
Model No.	1 pc(s).	9343.140	9343.150	9344.150	

Accessories

Box terminals	3 pc(s).	–	9344.610	9344.610	263
Connection space cover	2 pc(s).	9344.530	9344.530	9344.530	263
Arc chambers	3 pc(s).	9344.680	9344.680	9344.680	263
Micro-switch	2 pc(s).	9344.510	9344.510	9344.510	263
Laminated copper bars		see page	see page	see page	255

Size 2 – 3, with electromechanical fuse monitoring

Size	Packs of	2	2	3	3	Page
Rated operating current max. A		400	400	630	630	
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	3-pole	
Cable outlet		Top/bottom	Top/bottom	Top/bottom	Top/bottom	
Type of connection		Screw M10	Screw M10	Screw M10	Screw M10	
Connection of round conductors mm ²		10 - 240	10 - 240	10 - 300	10 - 300	
Connection of sector-shaped conductors		–	–	–	–	
Clamping area for laminated copper bars, W x H mm		50 x 10	50 x 10	50 x 10	50 x 10	
Width mm		210	210	250	250	
Height mm		298	298	298	298	
For mounting plate assembly		–	■	–	■	
For bar systems with centre-to-centre spacing mm		60	–	60	–	
For bar thickness mm		5/10	–	5/10	–	
Model No.	1 pc(s).	9343.250	9344.250	9343.350	9344.350	

Accessories

Box terminals	3 pc(s).	9344.620	9344.620	9344.620	9344.620	263
Connection space cover	2 pc(s).	9344.540	9344.540	9344.550	9344.550	263
Arc chambers	3 pc(s).	9344.680	9344.680	9344.680	9344.680	263
Micro-switch	2 pc(s).	9344.510	9344.510	9344.510	9344.510	263
Laminated copper bars		see page	see page	see page	see page	255

NH slimline fuse-switch disconnectors, size 00 to 3



Busbar system Page 212 **Connection adaptors** Page 216 **OM adaptors** Page 219 **Circuit-breaker component adaptors** Page 226

Material:

- Fibreglass-reinforced polyamide
- Fire protection corresponding to UL 94-V0
- Contact tracks: Silver-plated hard copper

Colour:

- Chassis: RAL 7035
- Cover: RAL 7001
- Handle: RAL 7016

Basis of test:

- IEC/DIN EN 60 947-3
- DIN EN 60 269-2 (fuse inserts)

Technical details:

Available on the Internet

Size 00

Size	Packs of	00	00	00	00	00	Page
Rated operating current max. A		160	160	160	160	160	
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	3-pole	3-pole	
Cable outlet		Top/bottom	Top/bottom	Top/bottom	Top/bottom	Top/bottom	
Type of connection		Box terminal	Screw M8	Box terminal	Screw M8	Screw M8	
Connection of round conductors mm ²		2.5 - 95	2.5 - 95	2.5 - 95	2.5 - 95	2.5 - 95	
Width mm		50	50	50	50	50	
Height mm		400	400	400	400	400	
For converter installation		-	-	-	-	■	
For bar systems with centre-to-centre spacing mm		60	60	100	100	100	
For bar thickness mm		5/10	5/10	5/10	5/10	5/10	
Model No.	1 pc(s).	9346.000	9346.010	9346.020	9346.030	9346.060	
Product-specific supply scope							
3 mounting hooks		■	■	■	■	-	
Accessories							
Connection space cover	1 pc(s).	9346.460	9346.460	9346.460	9346.460	9346.460	264
Clamp-type terminal connection	1 set(s)	-	3592.010	-	3592.010	3592.010	264
Box terminals		-	-	-	-	-	
Busbar terminal		-	-	-	-	-	
Micro-switch	5 pc(s).	9346.400	9346.400	9346.400	9346.400	9346.400	263
Current converter		-	-	-	-	-	
Cable ties		-	-	-	-	-	
Inserted screw nuts M12		-	-	-	-	-	

NH slimline fuse-switch disconnectors, size 00 to 3

Size 00 – 3

Size	Packs of	00	00	1	2	3	Page
Rated operating current max. A		160	160	250	400	630	
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	3-pole	3-pole	
Cable outlet		Top/bottom	Top/bottom	Top/bottom	Top/bottom	Top/bottom	
Type of connection		Screw M8	Screw M8	Bolt M12	Bolt M12	Bolt M12	
Connection of round conductors mm ²		2.5 - 95	2.5 - 95	6 - 240	6 - 240	6 - 240	
Width mm		50	50	100	100	100	
Height mm		740	740	740	740	740	
For converter installation		–	■	■	■	■	
For bar systems with centre-to-centre spacing mm		185	185	185	185	185	
For bar thickness mm		5/10	5/10	5/10	5/10	5/10	
Model No.	1 pc(s).	9346.040	9346.050	9346.110	9346.210	9346.310	
Product-specific supply scope							
3 screws M12 x 30 for equipment attachment		–	–	■	■	■	
3 inserted screw nuts M12		–	–	■	■	■	
3 hex nuts for conductor connection		–	–	■	■	■	
Accessories							
Connection space cover		–	–	–	–	–	
Clamp-type terminal connection	1 set(s)	3592.010	3592.010	–	–	–	264
Box terminals	3 pc(s).	–	–	9346.450	9346.450	9346.450	264
Busbar terminal	3 pc(s).	9346.470	9346.470	9346.440	9346.440	9346.440	264
Micro-switch	5 pc(s).	9346.400	9346.400	3071.000	3071.000	3071.000	263
Current converter		–	see page	see page	see page	see page	265
Cable ties	1 pc(s).	–	–	9346.480	9346.480	9346.480	265
Inserted screw nuts M12	30 pc(s).	–	–	3591.060	3591.060	3591.060	253

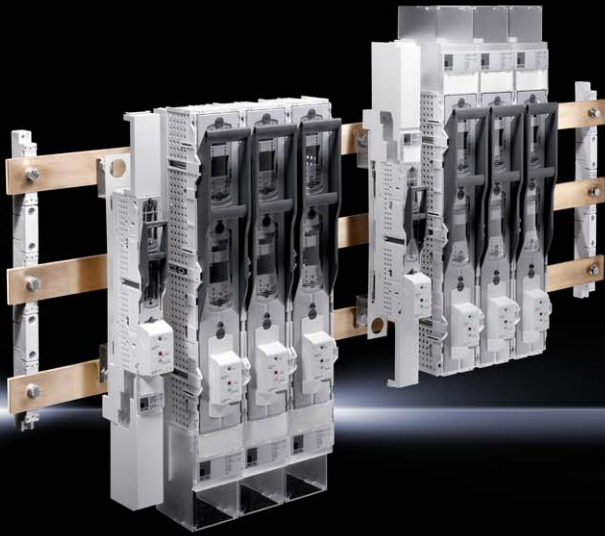
New



Ri4Power ISV distribution enclosures

see page 297

NH slimline fuse-switch disconnectors, size 00 to 3



Busbar system Page 212 **Connection adaptors** Page 216 **OM adaptors** Page 219 **Circuit-breaker component adaptors** Page 226

Material:

- Fibreglass-reinforced polyamide
- Fire protection corresponding to UL 94-V0
- Contact tracks: Silver-plated hard copper

Colour:

- Chassis: RAL 7035
- Cover: RAL 7001
- Handle: RAL 7016

Basis of test:

- IEC/DIN EN 60 947-3
- DIN EN 60 269-2 (fuse inserts)

Technical details:

Available on the Internet

Size 00 – 3, with electronic fuse monitoring

Size	Packs of	00	1	2	3	Page
Rated operating current max. A		160	250	400	630	
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	3-pole	
Cable outlet		Top/bottom	Top/bottom	Top/bottom	Top/bottom	
Type of connection		Screw M8	Bolt M12	Bolt M12	Bolt M12	
Connection of round conductors mm ²		2.5 - 95	6 - 240	6 - 240	6 - 240	
Width mm		50	100	100	100	
Height mm		400	740	740	740	
For converter installation		-	■	■	■	
For bar systems with centre-to-centre spacing mm		60	185	185	185	
For bar thickness mm		5/10	5/10	5/10	5/10	
Model No.	1 pc(s).	9346.015	9346.115	9346.215	9346.315	
Product-specific supply scope						
3 mounting hooks		■	-	-	-	
3 screws M12 x 30 for equipment attachment		-	■	■	■	
3 inserted screw nuts M12		-	■	■	■	
3 hex nuts for conductor connection		-	■	■	■	
Accessories						
Connection space cover	1 pc(s).	9346.460	-	-	-	264
Clamp-type terminal connection	1 set(s)	3592.010	-	-	-	264
Box terminals	3 pc(s).	-	9346.450	9346.450	9346.450	264
Busbar terminal	3 pc(s).	-	9346.440	9346.440	9346.440	264
Micro-switch	5 pc(s).	9346.400	3071.000	3071.000	3071.000	263
Current converter		-	see page	see page	see page	265
Cable ties	1 pc(s).	-	9346.480	9346.480	9346.480	265
Inserted screw nuts M12	30 pc(s).	-	3591.060	3591.060	3591.060	253



Busbar system Page 212 **Connection adaptors** Page 216 **OM adaptors** Page 219 **Circuit-breaker component adaptors** Page 226

Material:

- Polyamide (PA 6)
- Fire protection corresponding to UL 94-V0

Colour:

- RAL 7035

Note:

- For snap-on mounting on 35 mm (7.5 mm/15 mm high) support rails to DIN EN 60 715 or RiLine component adaptor combinations (OM adaptors/ supports)

Approvals:

- UL 512, CSA C22.2 No.39

Technical details:

Available on the Internet

Rated operating current max. 30 – 60 A

Fuse type (class)		CC	J	J	Page
Rated operating current max. A		30	30	60	
Rated operating voltage V, ~		600, 3~	600, 3~	600, 3~	
Number of poles		3-pole	3-pole	3-pole	
Fuse standard		UL 4248-4	UL 4248-8	UL 4248-8	
Fuse size mm		10 x 38	21 x 57	27 x 60	
Connection of round conductors mm ²		2.5 - 10	2.5 - 25	2.5 - 25	
Connection of round conductors		AWG 6 – AWG 14	AWG 2 – AWG 14	AWG 2 – AWG 14	
Width mm		52.5	97.5	120	
Height mm		78	114	122	
Depth mm		59	80	89	
Approvals		UL	UL	UL	
Model No.		9345.000	9345.010	9345.030	
	Packs of	4 pc(s).	2 pc(s).	2 pc(s).	

Fuse holder



Busbar system Page 212 **Connection adaptors** Page 216 **OM adaptors** Page 219 **Circuit-breaker component adaptors** Page 226

Material:

- Polyamide (PA 6)
- Fire protection corresponding to UL 94-V0
- Contact tracks: Electrolytic copper, silver-plated

Colour:

- Chassis: RAL 7035
- Cover: RAL 7035/7001

Approvals:

- UL 4248-1
- UL 4248-8
- CSA C22.2 No. 4248.1-07
- CSA C22.2 No. 4248.8-07

Technical details:

Available on the Internet

Rated operating current max. 100 – 400 A

Fuse type (class)	Packs of	J	J	J	Page
Rated operating current min. A		61	101	201	
Rated operating current max. A		100	200	400	
Rated operating voltage V, ~		600, 3~	600, 3~	600, 3~	
Number of poles		3-pole	3-pole	3-pole	
Fuse standard		UL 4248-8	UL 4248-8	UL 4248-8	
Fuse size mm		29 x 118	41 x 146	54 x 181	
Cable outlet		Top/bottom	Top/bottom	Top/bottom	
Type of connection		Box terminal	Box terminal	Box terminal	
Connection of round conductors		AWG 2 – MCM 300	AWG 3/0 – MCM 600	AWG 3/0 – MCM 600	
Width mm		184	210	250	
Height mm		288	288	328	
Approvals		UR	UR	UR	
For bar systems with centre-to-centre spacing mm		60	60	60	
For bar thickness mm		5/10	5/10	5/10	
Model No.	1 pc(s).	9345.100	9345.200	9345.400	

RiLine accessories

Busbar supports/base isolators

Busbar support

1 and 2-pole

Material:

- Polyamide (PA 6.6)
- Fire protection corresponding to UL 94-V0

Colour:

- RAL 7035

Supply includes:

9342.030

- Raised section for stepped configuration of the PLS busbars

Note:

9340.030/9342.030

- The busbar supports may be bayed with 60 mm bar centre distance for the configuration of multi-pole systems

Technical details:

Available on the Internet



Version	Packs of	1	2	2	Page
Number of poles		1-pole	1-pole	2-pole	
Bar centre distance mm		–	–	60	
For busbars E-Cu		PLS 1600	–	–	253
		–	12 x 5/10 ¹⁾ , 15 x 5 – 30 x 10 mm	12 x 5 – 30 x 10 mm	252
Rated operating voltage V, ~		1000, 1~	1000, 1~	1000, 2~	
		1500 (DC)	1500 (DC)	–	
PEN/N/PE support		■	■	■	
N/PE support		–	–	■	
Model No.	4 pc(s).	9342.030	9340.030	9340.040	
Accessories					
Spacers	12 pc(s).	–	9340.090	–	251
Captive nuts M5 ²⁾	50 pc(s).	–	4166.000	4166.000	624

¹⁾ If 12 x 5/10 mm busbars are used, the spacer 9340.090 is additionally required

²⁾ For attaching the busbar support to the TS frame section and punched sections with mounting flanges with rectangular system punchings 12.5 x 10.5 mm

Base isolators

For configuring busbar systems with any given bar centre distances and for assembling insulated PE or PEN busbars.

Material:

- Duroplastic polyester (UP resin)

Technical details:

Available on the Internet

Rated operating voltage kV	1	1
Tensile strength kN	12	13
Torsional strength Nm	75	90
Bending strength kN	6	6
Height mm	40	50
Thread	M10	M10
Packs of	6 pc(s).	6 pc(s).
Model No.	3031.000	3032.000



Spacers

for RiLine busbar supports (flat bar system)

For adapting 12 x 5 and 12 x 10 mm size busbars.

For busbar supports

- 9340.030 (1-pole), see page 251
- 9340.000/.010 (3-pole), see page 212
- 9340.004 (4-pole), see page 212

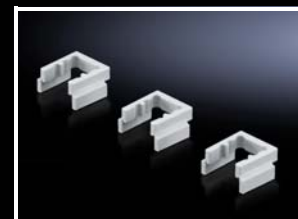
Material:

- Polyamide (PA 6.6)
- Fire protection corresponding to UL 94-V0

Colour:

- RAL 7035

Packs of	Model No.
12 pc(s).	9340.090



RiLine accessories

Busbars



CUPONAL busbars

To DIN EN 13 601

Length: 2400 mm/bar

Copper-coated aluminium busbars, suitable for the configuration of busbar systems with busbar supports 9340.000/9340.050, see page 212.

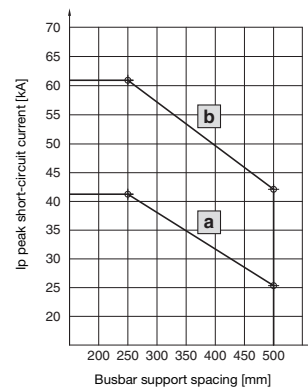
Material:

- Aluminium core with crimped copper coating made from E-Cu

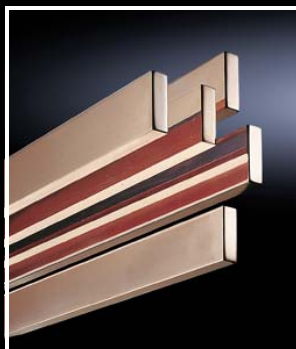
Dimensions mm	Rated current ¹⁾ A	Packs of	Model No.
20 x 5	235	6 pc(s).	3582.020
20 x 10	363	3 pc(s).	3585.020
30 x 5	328	6 pc(s).	3584.020
30 x 10	493	3 pc(s).	3586.020

¹⁾ Current carrying capacity at 65°C bar temperature and 35°C ambient temperature
Correction factor diagram to DIN 43 671

Short-circuit resistance diagrams



CUPONAL busbars mm	Busbar support	Curve
20 x 5/10	9340.000/050	a
30 x 5/10	9340.000/050	b



Busbars E-Cu

To DIN EN 13 601

Length: 2400 mm/bar

Material:

E-Cu F30

Technical details:

Available on the Internet

Dimensions mm	Approvals	Packs of	Model No.	Page
12 x 5	UL	6 pc(s).	3580.000	
15 x 5	UL	6 pc(s).	3581.000	
20 x 5	UL	6 pc(s).	3582.000	
25 x 5	UL	6 pc(s).	3583.000	
30 x 5	UL	6 pc(s).	3584.000	
12 x 10	UL	6 pc(s).	3580.100	
15 x 10	UL	6 pc(s).	3581.100	
20 x 10	UL	3 pc(s).	3585.005	
30 x 10	UL	3 pc(s).	3586.005	
40 x 10	–	3 pc(s).	3587.000	
50 x 10	–	2 pc(s).	3588.005	
60 x 10	–	2 pc(s).	3589.005	
80 x 10	–	1 pc(s).	3590.005	
100 x 10	–	1 pc(s).	3590.015	

Accessories

Busbar connectors for busbars mm	12 x 5 – 15 x 10 (single connection)	3 pc(s).	9350.075	254
	20 x 5 – 30 x 10 (single connection)	3 pc(s).	9320.020	254
	20 x 5 – 30 x 10 (bayed connection)	3 pc(s).	9320.030	254
Busbar cover sections for busbars mm	12/15 x 5	4 pc(s).	9350.010	253
	12/15 x 10	4 pc(s).	9350.060	253
	12 x 5 – 30 x 10	10 pc(s).	3092.000	253
	40 – 60 x 10	10 pc(s).	3085.000	253

RiLine accessories

Busbars

Busbar cover sections

Contact hazard protection via covering of the busbars. May be cut to required length.

Length: 1000 mm/section

Material:

- Thermally modified hard PVC
- Fire protection corresponding to UL 94-V0

Colour:

- RAL 7035

Note:

- Contact hazard protection, alternative solutions, see page 256

Technical details:

Available on the Internet



For busbars mm	Approvals	Packs of	Model No.
12/15 x 5	–	4 pc(s).	9350.010
12/15 x 10	–	4 pc(s).	9350.060
12 x 5 – 30 x 10	UL	10 pc(s).	3092.000
40 – 60 x 10	UL	10 pc(s).	3085.000

Inserted screw nuts M12

Self-holding nuts with knurled ring for busbars E-Cu.

Hole diameter: 14.5 mm

Packs of	Model No.
30 pc(s).	3591.060



PLS special busbars E-Cu

Technical details:

Available on the Internet

For system PLS 800, bar thickness 5 mm, bar cross-section 300 mm²

For enclosure width mm	Length mm	Approvals	Packs of	Model No.	Page
600	495	UL	3 pc(s).	3524.000	
800	695	UL	3 pc(s).	3525.000	
1000	895	UL	3 pc(s).	3525.010	
1200	1095	UL	3 pc(s).	3526.000	
variable	2400	UL	1 pc(s).	3509.000	

Accessories

PLS busbar connector (single connection)	3 pc(s).	3504.000	254
PLS busbar connector (bayed connection)	3 pc(s).	3505.000	254
PLS expansion connector	3 pc(s).	9320.060	254

For system PLS 1600, bar thickness 10 mm, bar cross-section 900 mm²

For enclosure width mm	Length mm	Approvals	Packs of	Model No.	Page
600	495	UL	3 pc(s).	3527.000	
800	695	UL	3 pc(s).	3528.000	
1000	895	UL	3 pc(s).	3528.010	
1200	1095	UL	3 pc(s).	3529.000	
variable	2400	UL	1 pc(s).	3516.000	

Accessories

PLS busbar connector (single connection)	3 pc(s).	3514.000	254
PLS busbar connector (bayed connection)	3 pc(s).	3515.000	254
PLS expansion connector	3 pc(s).	9320.070	254



RiLine accessories

Busbars



Busbar connectors

For connecting square busbars, no drilling required.

Technical details:

Available on the Internet

Material:

- Top piece: St 37, nickel-plated surface finish
- Contact plate: E-Cu, nickel-plated surface finish

9320.020/9320.030

- Top piece: Sheet steel, zinc-plated, passivated
- Contact plate: E-Cu, silver-plated

For busbars mm	Application		Approvals	Packs of	Model No.
	Single connection	Bayed connection ¹⁾			
12 x 5 – 15 x 10	■	–	Ⓛ	3 pc(s).	9350.075
20 x 5 – 30 x 10	■	–	Ⓛ	3 pc(s).	9320.020
	–	■	Ⓛ	3 pc(s).	9320.030

¹⁾ Connection from enclosure to enclosure

PLS busbar connectors

For connecting the PLS special busbars; no drilling required.

Technical details:

Available on the Internet

Material:

- E-Cu

Surface finish:

- Nickel-plated

Application	For system	Approvals	Packs of	Model No.
Single connection	PLS 800	Ⓛ	3 pc(s).	3504.000
	PLS 1600	Ⓛ	3 pc(s).	3514.000
Bayed connection ¹⁾	PLS 800	Ⓛ	3 pc(s).	3505.000
	PLS 1600	Ⓛ	3 pc(s).	3515.000

¹⁾ Connection from enclosure to enclosure

PLS expansion connector

For thermal and mechanical compensation during connection of PLS special busbars from enclosure to enclosure.

Note:

- At a temperature increase of 30 K, there is an expansion in the length of the busbars by approximately 0.5 mm/m. For this reason, it is advisable to use an expansion connector for thermal compensation in busbar systems with busbar sections > 3600 mm.

Material:

- E-Cu

Technical details:

Available on the Internet

Expansion connector	For system	Approvals	Packs of	Model No.	Page
	PLS 800	Ⓛ	3 pc(s).	9320.060	
	PLS 1600	Ⓛ	3 pc(s).	9320.070	

Also required

PLS busbar connectors ¹⁾	PLS 800	Ⓛ	3 pc(s).	3504.000	254
		PLS 1600	Ⓛ	3 pc(s).	3514.000

¹⁾ Two busbar connectors are needed to fit one expansion connector

Laminated copper bars

Length: 2000 mm/bar

Material:

Cu lamina

- High-purity electrolyte copper F20

Insulation

- High-strength vinyl compound
- Expansion 370%
- Temperature range: -30°C...+105°C
- Fire protection corresponding to UL 94-V0
- Dielectric strength: 20 kV/mm

Technical details:

Available on the Internet

Configuration ¹⁾ mm	I _n at 70 K ²⁾ A	I _n at 50 K ²⁾ A	I _n at 30 K ²⁾ A	Packs of	Model No.
6 x 9 x 0.8	285	240	180	1 pc(s).	3565.005
6 x 15.5 x 0.8	415	350	265	1 pc(s).	3568.005
10 x 15.5 x 0.8	575	480	365	1 pc(s).	3569.005
5 x 20 x 1	525	435	330	1 pc(s).	3570.005
5 x 24 x 1	605	510	385	1 pc(s).	3571.005
10 x 24 x 1	920	770	585	1 pc(s).	3572.005
5 x 32 x 1	770	645	485	1 pc(s).	3573.005
10 x 32 x 1	1155	965	730	1 pc(s).	3574.005
5 x 40 x 1	930	780	590	1 pc(s).	3575.005
10 x 40 x 1	1370	1145	865	1 pc(s).	3576.005
5 x 50 x 1	1125	940	710	1 pc(s).	3577.005
10 x 50 x 1	1635	1365	1030	1 pc(s).	3578.005
10 x 63 x 1	1950	1610	1230	1 pc(s).	3579.005

¹⁾ Number of lamina x lamina width x lamina thickness

²⁾ The conductor temperature of the laminated copper bar is derived by adding the ambient temperature and the temperature increase together

Example:

3565.005 carrying 180 A, i.e. the temperature increases by 30 K. At an ambient temperature of 35°C this produces a resultant conductor temperature of 35°C + 30 K = 65°C

Universal support

For the attachment of laminated copper bars from 5 x 20 x 1 to 10 x 63 x 1 mm.

Material:

- Fibreglass-reinforced, thermoplastic polyester (PBT)
- Fire protection corresponding to UL 94-V0

Colour:

- RAL 7035

Supply includes:

- Screws and sliding nuts for mounting on PS punched rails

Packs of	Model No.
3 pc(s).	3079.000



Accessories:

- PS punched rails, see page 610

Technical details:

Available on the Internet

Universal support

For the attachment of multi-stacked laminated copper bars from 5 x 40 x 1 to 10 x 100 x 1 mm.

Material:

- Fibreglass-reinforced, thermoplastic polyester (PBT)
- Fire protection corresponding to UL 94-V0

Colour:

- RAL 7035

Supply includes:

- Screws and sliding nuts for mounting on C rails

Packs of	Model No.
3 set(s)	3079.010

Note:

- 3 sets of universal supports correspond to the supply scope shown in the photograph



Accessories:

- C rails 30/15, see page 612



RiLine accessories

Contact hazard protection



System components

Technical details:
Available on the Internet

- Material:**
- Thermally modified hard PVC
 - Fire protection corresponding to UL 94-V0
- Colour:**
- RAL 7035

For RiLine busbar systems	3-pole			4-pole	
	Flat bars	PLS 800	PLS 1600	Flat bars	PLS 1600 PLUS

1 Base trays							
Length (L) mm	Packs of	Approvals	Model No.			Model No.	
500	2 pc(s).	UL	9340.100	9341.100	9342.100	–	–
700	2 pc(s).	UL	9340.110	9341.110	9342.110	–	–
900	2 pc(s).	UL	9340.120	9341.120	9342.120	–	–
1100	2 pc(s).	UL	9340.130	9341.130	9342.130	9340.134	9342.134
2400	1 pc(s).	UL	9340.170	9341.170	9342.170	–	–

1 Base tray infills							
100	2 pc(s).	UL	9340.140	9341.140	9342.140	–	–

2 Cover sections							
700	2 pc(s).	UL	9340.200	9340.200	9340.200	–	–
1100	2 pc(s).	UL	9340.210	9340.210	9340.210	9340.214	9340.214

1 Base tray	1 Base tray infill	2 Cover section
For rear contact hazard protection of the flat bar assembly.	For rear contact hazard protection when connecting the busbars from enclosure to enclosure. Supply includes: Assembly parts	May be cut to length as required; for clip-on mounting to the base tray. Note: If the cover section is loaded from the front, the support panel is needed for stability.



Support panels

for cover section
To prevent side access to the cover section. The support panel also provides additional stability.

Recommended mounting distance: ≤ 500 mm

- Material:**
- Polyamide (PA 6.6)
 - Fire protection corresponding to UL 94-V0
- Colour:**
- RAL 7035

For system configuration	Approvals	Packs of	Model No.
3-pole	UL	5 pc(s).	9340.220
4-pole	UL	5 pc(s).	9340.224

Technical details:
Available on the Internet



Cross members

for RiLine busbar connections
3-pole
To comply with the clearances required for “feeder circuits” under UL 508. For flat bar systems with 60 mm bar centre distance and PLS 800/1600.

- Material:**
- Polyamide (PA 6.6)
 - Fire protection corresponding to UL 94-V0
- Colour:**
- RAL 7035

Note:

- Two cross members are required for one busbar connection

Length mm	Approvals	Packs of	Model No.
160	UL	2 pc(s).	9340.230

! Also required:

- Support panel 9340.220, see page 256

Technical details:
Available on the Internet

RiLine accessories

Connection system

Conductor connection clamps

Material:

3450.500 – 3459.500

– Sheet steel, zinc-plated, passivated

3550.000/3555.000

– Brass



Accessories:

– Laminated copper bars, see page 255

Technical details:

Available on the Internet



For bar thickness mm	Connection of round conductors mm ²	Clamping area for laminated copper bars, W x H mm	Approvals	Packs of	Model No.
3 – 5	1 – 4	–		15 pc(s).	3550.000
5	1 – 4	–		15 pc(s).	3450.500
5	2.5 – 16	8 x 8		15 pc(s).	3451.500
5	16 – 50	10.5 x 11		15 pc(s).	3452.500
5	35 – 70	16.5 x 15		15 pc(s).	3453.500
5	70 – 185	22.5 x 20		15 pc(s).	3454.500
6 – 10	1 – 4	–		15 pc(s).	3555.000
10	1 – 4	–		15 pc(s).	3455.500
10	2.5 – 16	8 x 8		15 pc(s).	3456.500
10	16 – 50	10.5 x 11		15 pc(s).	3457.500
10	35 – 70	16.5 x 15		15 pc(s).	3458.500
10	70 – 185	22.5 x 20		15 pc(s).	3459.500

Plate clamps

For connecting laminated copper bars; no drilling required.

Material:

– Sheet steel

Surface finish:

– Zinc-plated, passivated



Accessories:

– Laminated copper bars, see page 255

Technical details:

Available on the Internet

For busbars mm	Clamping area for laminated copper bars, W x H mm	Packs of	Model No.
12 x 5 – 30 x 10	34 x 10	3 pc(s).	3554.000
40 x 10	34 x 10	3 pc(s).	3559.000
50 x 10	34 x 10	3 pc(s).	3560.000
50 x 10	54 x 10	3 pc(s).	3562.000
60 x 10	34 x 10	3 pc(s).	3561.000
60 x 10	54 x 10	3 pc(s).	3563.000
80 x 10	65 x 10	3 pc(s).	3460.500



System covers

For conductor connection clamps and plate clamps.

Material:

– ABS

– Fire protection corresponding to UL 94-V0

Colour:

– RAL 7035

Note:

– For 3-pole systems with 60/100 mm bar centre distance

– Only suitable for use with systems without a base tray

– For systems with a base tray, the system covers must be mechanically shortened

Technical details:

Available on the Internet



Width mm	Depth mm	Height mm		Approvals	Packs of	Model No.
		For mounting on bar systems 60 mm	100 mm			
50	80	230	325		4 pc(s).	3086.000
100	80	230	325		4 pc(s).	3087.000
100	110	230	325		4 pc(s).	3090.000
200	80	230	325		4 pc(s).	3088.000
200	110	230	325		4 pc(s).	3091.000

RiLine accessories

Connection system/Mini-PLS component adaptors



Connection block

Material:

Chassis

- Polyamide (PA 6.6)
- Fire protection corresponding to UL 94-V0

Cover

- ABS
- Fire protection corresponding to UL 94-V0

Colour:

- RAL 7035

Supply includes:

- 3 terminals including cover

Note:

- When using the terminal on 2-pole busbar systems, the terminal must be rotated through 180° for connection to the PE busbar

Technical details:

Available on the Internet

Rated current max. A	Packs of	800	1600	Page
Rated operating voltage V, ~		690, 1~	690, 1~	
Rated operating voltage (L1 + L2) V		1000 (DC)	1000 (DC)	
Rated operating voltage (L1 + L3) V		1500 (DC)	1500 (DC)	
Cable outlet		Top/bottom	Top/bottom	
Connection of round conductors, fine wire with wire end ferrule mm ²		95 – 185	-	
Connection of round conductors, multi-wire mm ²		90 – 300	-	
Clamping area for laminated copper bars (with 5 mm bar thickness) W x H mm		33 x 26	65 x 27	
Clamping area for laminated copper bars (with 10 mm bar thickness) W x H mm		33 x 21	65 x 22	
Width mm		50	85	
Height mm		88	88	
For bar thickness mm		5/10	5/10	
Model No.	3 pc(s).	9342.311	9342.321	
Accessories				
Laminated copper bars		■	■	255

Insert strips

for Mini-PLS component adaptors

To extend the construction width.

Material:

- ABS

Colour:

- RAL 7035

Width mm	Packs of	Model No.
9	2 pc(s).	9623.000



Support rails 35 x 7.5 mm

for Mini-PLS component adaptors

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly screws and side anti-slip guard

Width mm	Packs of	Model No.
45	10 pc(s).	9320.150
54	10 pc(s).	3548.000
72	10 pc(s).	3549.000



RiLine accessories

for OM adaptor/support

Support rails 35 x 10 mm

for OM adaptor/support

For attaching to the adaptor section and support frame.

Material:

- Polyamide (PA 6.6)

Colour:

- RAL 9005

Supply includes:

- Assembly screws

Note:

- UL approval in conjunction with OM adaptor/support

Version	Width mm	With anti-slip guard ¹⁾	Packs of	Model No.
TS 45C	45	■	5 pc(s).	9342.850
TS 45D	45	–	5 pc(s).	9342.860
TS 45D-V ²⁾	45	–	5 pc(s).	9342.870
TS 55C	55	■	5 pc(s).	9342.920
TS 55D	55	–	5 pc(s).	9342.930
TS 55D-V ²⁾	55	–	5 pc(s).	9342.940

¹⁾ Anti-slip guard for motor circuit-breaker

²⁾ Support rail only suitable for non-pitch pattern-dependent mounting on support frame



Support rails 35 x 15 mm

for OM adaptor/support

For attaching to the adaptor section

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly screws and side anti-slip guard

Width mm	Packs of	Model No.
45	5 pc(s).	9342.880
55	5 pc(s).	9342.950



Support rails 35 x 7.5 mm

for OM adaptor/support

For assembly on 55 mm wide OM adaptors/supports with 10 mm wide insert strips mounted on the right and left.

Arrangement of the mounting hole for central configuration on 55 mm wide adaptor section or support frame.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly screws and side anti-slip guard

Width mm	Packs of	Model No.
72	5 pc(s).	9342.980



Insert strips

for OM adaptor/support

To extend the construction width in a 10 mm pitch pattern. May be bayed as often as required on both sides. With integral cable duct.

Material:

- Polyamide (PA 6.6)

Colour:

- RAL 7035

Supply includes:

- 6 connection pins

Width mm	Approvals	Packs of	Model No.
10	UL	2 pc(s).	9340.290



RiLine accessories

for OM adaptor/support



Connection pin

For any required mechanical connection of OM adaptor/support and insert strip 9340.290.

Material:
– Polyamide (PA 6)

Colour:
– RAL 5010

Approvals	Packs of	Model No.
UL	20 pc(s).	9340.280



PinBlock

for support frames

For secure attachment and positioning of the contactor on motor starter combinations, for simple clip-on mounting onto the support frame. Individual vertical positioning is achieved by relocating the Pin-Block.

Material:
– Polyamide (PA 6.6)

Colour:
– RAL 9005

For support frame width mm	Packs of	Model No.
45	5 pc(s).	9342.800
55	5 pc(s).	9342.810

Note:
– UL approval in conjunction with OM adaptor/support

Accessories:

– PinBlock Plus, see page 260



PinBlock Plus

for starters with increased contactor attachment

Mounted by simply clipping onto the PinBlock 9342.800/.810.

Material:
– Polyamide (PA 6.6)

Colour:
– RAL 9005

Packs of	Model No.
5 pc(s).	9342.820

Note:
– UL approval in conjunction with OM adaptor/support



Cable set

Pre-assembled connection cables for individual connection of switchgear, top-mounted on OM adaptors with tension spring clamps, or for wiring between the individual switchgear units.

Length: 130 mm

Material:
– PVC insulation
– Temperature resistant to 105°C
– Wire ends with ultrasonic wire-end compression at both ends

Technical details:
Available on the Internet

Version	Packs of	Model No.
AWG 14 = 2.08 mm ² ± 2.5 mm ²	15 pc(s).	9340.850
AWG 12 = 3.31 mm ² ± 4 mm ²	15 pc(s).	9340.860
AWG 10 = 5.26 mm ² ± 6 mm ²	15 pc(s).	9340.870
AWG 8 = 8.37 mm ² ± 10 mm ²	6 pc(s).	9340.880
AWG 6 = 13.3 mm ² ± 16 mm ²	6 pc(s).	9340.890

AWG = American Wire Gauges



Twin cords

for OM adaptors with tension spring clamp 2.5 – 16 mm²

Pre-assembled connection cables for individual connection of up to two switchgear units per adaptor.

Cable length:
L1 = 140 mm
L2 = 250 mm

Material:
– PVC insulation
– Temperature resistant to 105°C
– Wire ends with ultrasonic wire-end compression at both ends

Version	Packs of	Model No.
AWG 10 = 5.26 mm ² ± 6 mm ²	6 pc(s).	9340.820
AWG 8 = 8.37 mm ² ± 10 mm ²	6 pc(s).	9340.830

AWG = American Wire Gauges

Technical details:
Available on the Internet

RiLine accessories

for circuit-breaker component adaptors

Insert strips

for circuit-breaker component adaptors

To extend the construction width from 140 mm to 190 mm.

Material:

– ABS

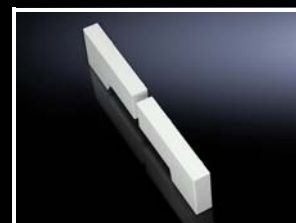
Colour:

– RAL 7035

To fit Model No.	Width mm	Approvals	Packs of	Model No.
9345.700/.710 9345.720/.730	25	UL	4 pc(s).	9342.720

Note:

– 4 pieces are needed to widen a component adaptor



Sliding blocks

for circuit-breaker component adaptors

For additional locking of circuit-breakers with more than two attachment points.

Colour:

– RAL 7035

Note:

– UL approval in conjunction with circuit-breaker component adaptor

To fit Model No.	With threaded insert	Packs of	Model No.
9342.500/.510 9342.504/.514 9342.540/.550	M3/M4	6 pc(s).	9342.560
9345.600/.610 9345.604/.614	M4/M5	6 pc(s).	9342.640



Connection bracket

for circuit-breaker component adaptors

Pre-assembled, laminated flat copper for connecting standard, commercially available moulded case circuit-breakers (MCCB).

Material:

– Electrolytic copper F20

Insulation:

- Vinyl compound
- Temperature resistant to 105°C
- Fire protection corresponding to UL 94-V0

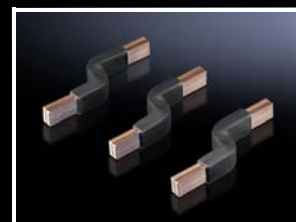
Technical details:

Available on the Internet

To fit Model No.	Dimensions ¹⁾ mm	For connecting moulded case circuit-breakers (MCCB), make (model)	Packs of	Model No.
9342.500/.510 9342.540/.550	6 x 9 x 0.8	ABB (T1, T1 UL, T2, T2 UL), Eaton (NZM1, NZM1 UL, BZM B1), OZ (BC160N), Schneider Electric (NSC100, NSE75, NSE100) Siemens (3RV13 53, 3VT 1)	3 pc(s).	9342.570²⁾

¹⁾ Number of lamina x lamina width x lamina thickness

²⁾ Universal application for switchgear with a dimensional difference between the mounting level and the upper edge of the contact level of 20 ± 5 mm



Support rails 35 x 15 mm

for

- Circuit-breaker component adaptor
- Mini-PLS component adaptor

Material:

– Sheet steel

Surface finish:

– Zinc-plated

Supply includes:

– Assembly screws and side anti-slip guard

To fit Model No.	Width mm	Approvals	Packs of	Model No.
9342.400 9342.410 9629.000	72	RA	5 pc(s).	9320.120



RiLine accessories

for bus-mounting fuse bases



Contact hazard protection covers

for bus-mounting fuse bases

The cover ensures contact hazard protection from the front, top and below. All-round contact hazard protection (up to IP 2X) in conjunction with the side cover 3093.010/.020.

Material:

- Polyamide (PA 6.6)
- Fire protection corresponding to UL 94-V0

To fit Model No.	Packs of	Model No.
3418.010 (D 02-E 18)	10 pc(s).	3418.020
3427.010 (D II-E 27)	10 pc(s).	3427.020
3433.010 (D III-E 33)	10 pc(s).	3433.020



Covers, side

for bus-mounting fuse bases

For clip-on mounting onto the contact hazard protection cover.

Material:

- Polyamide (PA 6.6)
- Fire protection corresponding to UL 94-V0

To fit Model No.	Packs of	Model No.
3418.010 (D 02-E 18)	10 pc(s).	3093.010
3427.010 (D II-E 27)	10 pc(s).	3093.020
3433.010 (D III-E 33)	10 pc(s).	



Connection space extenders, side

for bus-mounting fuse bases

All-round contact hazard protection cover including cable duct for side extension of the connection space by 14 mm.

Material:

- Polyamide (PA 6.6)
- Fire protection corresponding to UL 94-V0

To fit Model No.	Packs of	Model No.
3418.010 (D 02-E 18)	10 pc(s).	3418.030
3427.010 (D II-E 27)	10 pc(s).	3427.030
3433.010 (D III-E 33)	10 pc(s).	3433.030

RiLine accessories

for NH fuse-switch disconn./NH slimline fuse-switch disconn.

Box terminals

for NH disconnectors, sizes 1 to 3 with screw terminal

For direct connection of round and sector-shaped conductors and laminated copper bars.

Material:

– Cast brass

Surface finish:

– Nickel-plated

Technical details:

Available on the Internet



To fit NH disconnectors	Clamping area for laminated copper bars, W x H mm	Connection		Packs of	Model No.
		Round conductor mm ²	Sector-shaped conductor mm ²		
Size 1	20 x 14	35 – 150	50 – 150	3 pc(s).	9344.610
Size 2/3	32 x 20	95 – 300	120 – 300	3 pc(s).	9344.620

Connection space covers

for NH disconnectors

For extending the contact hazard protection cover, e.g. when using ring terminals with a long collar. Bayable as required at the top and bottom.

Material:

– Polyamide (PA 6)

Colour:

– RAL 7035

To fit NH disconnectors	Packs of	Model No.
Size 00	2 pc(s).	9344.520
Size 1	2 pc(s).	9344.530
Size 2	2 pc(s).	9344.540
Size 3	2 pc(s).	9344.550



Arc chambers

for NH disconnectors, sizes 1 to 3

To increase switching capacity (utilisation category).

Technical details:

Available on the Internet

Packs of	Model No.
3 pc(s).	9344.680



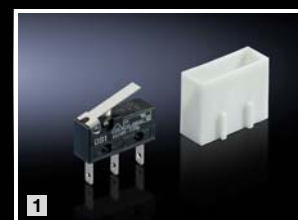
Micro-switch

for NH disconnectors/NH slimline fuse-switch disconnectors

To indicate the switch position of the NH unit (cover).

[1]	[2]	Packs of	Model No.
To fit NH disconnectors	To fit NH slimline fuse-switch disconnectors		
Size 000/00	Sizes 1/2/3	5 pc(s).	3071.000
Sizes 1/2/3	–	2 pc(s).	9344.510¹⁾
–	Size 00	5 pc(s).	9346.400

¹⁾ Including plastic lug for attaching the microswitch to the disconnector chassis



RiLine accessories

for NH slimline fuse-switch disconnectors



Connection space cover

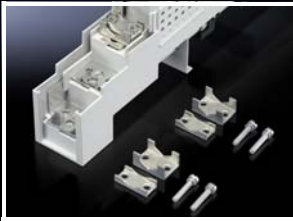
for NH slimline fuse-switch disconnectors, size 00

Extended version for the use of ring terminals with a long collar.

Material:

- Polycarbonate

To fit Model No.	Packs of	Model No.
9346.000/.010/.015 9346.020/.030/.060	1 pc(s).	9346.460



Clamp-type terminal connection

for NH slimline fuse-switch disconnectors, size 00 with screw terminal

For the connection of round conductors 1.5 to 95 mm².

Material:

- Cast brass

Surface finish:

- Nickel-plated

Technical details:

Available on the Internet

Packs of	Model No.
1 set(s)	3592.010



Box terminals

for NH slimline fuse-switch disconnectors, sizes 1 to 3

For converting NH slimline fuse-switch disconnectors to box terminal connection for round conductors up to 300 mm².

Material:

- Cast brass

Surface finish:

- Nickel-plated

Packs of	Model No.
3 pc(s).	9346.450



Busbar terminals

for NH slimline fuse-switch disconnectors

For mounting NH slimline fuse-switch disconnectors on bar systems with 185 mm centre-to-centre spacing, no drilling required.

For size 00

To fit Model No.	Packs of	Model No.
9346.040/.050	3 pc(s).	9346.470

For sizes 1 to 3

To fit Model No.	Packs of	Model No.
9346.110/.210/.310 9346.115/.215/.315	3 pc(s).	9346.440

RiLine accessories

for NH slimline fuse-switch disconnectors

Current converter

for NH slimline fuse-switch disconnectors

- Compact design without altering the installation depth via mechanical integration into the fuse-switch disconnector (sizes 1 to 3); this allows space-saving assembly
- User-friendly cable connection via terminal block

1 For size 00

For NH slimline fuse-switch disconnectors	9346.050 (185 mm bar centre distance)	
Phases	1	1
Primary current I_{1N}	150 A	150 A
Secondary current I_{2N}	1 A	5 A
Accuracy class	1	1
Rated frequency	50 – 60 Hz	50 – 60 Hz
Thermal rated continuous current	$1.2 \times I_{1N}$	$1.2 \times I_{1N}$
Thermal rated short-time withstand current I_{th}	$60 \times I_{1N}$	$60 \times I_{1N}$
Rated surge current I_{dyn}	$2.5 \times I_{th}$, max. 120 kA	$2.5 \times I_{th}$, max. 120 kA
Overcurrent limiting factor (FS)	FS 5	FS 5
Insulation voltage	3 kV	3 kV
Insulating material category	E	E
Material	Fibreglass-reinforced polycarbonate	Fibreglass-reinforced polycarbonate
Connection	Screw terminal M5	Screw terminal M5
Rated output	2.5 VA	2.5 VA
Packs of	3 pc(s).	3 pc(s).
Model No.	9346.560	9346.570

2 For sizes 1 to 3

For NH slimline fuse-switch disconnectors	9346.110/.115/.210/.215/.310/.315 (185 mm bar centre distance)					
Primary current I_{1N}	250 A	250 A	400 A	400 A	600 A	600 A
Secondary current I_{2N}	1 A	5 A	1 A	5 A	1 A	5 A
Accuracy class	1	1	1	1	1	1
Rated frequency	50 – 60 Hz	50 – 60 Hz	50 – 60 Hz	50 – 60 Hz	50 – 60 Hz	50 – 60 Hz
Thermal rated continuous current	$1.2 \times I_{1N}$	$1.2 \times I_{1N}$	$1.2 \times I_{1N}$	$1.2 \times I_{1N}$	$1.2 \times I_{1N}$	$1.2 \times I_{1N}$
Thermal rated short-time withstand current I_{th}	$60 \times I_{1N}$, max. 50 kA	$60 \times I_{1N}$, max. 50 kA	$60 \times I_{1N}$, max. 50 kA	$60 \times I_{1N}$, max. 50 kA	$60 \times I_{1N}$, max. 50 kA	$60 \times I_{1N}$, max. 50 kA
Rated surge current I_{dyn}	$2.5 \times I_{th}$, Max. 120 kA	$2.5 \times I_{th}$, Max. 120 kA	$2.5 \times I_{th}$, Max. 120 kA	$2.5 \times I_{th}$, Max. 120 kA	$2.5 \times I_{th}$, Max. 120 kA	$2.5 \times I_{th}$, Max. 120 kA
Overcurrent limiting factor (FS)	FS 5	FS 5	FS 5	FS 5	FS 5	FS 5
Insulation voltage	3 kV	3 kV	3 kV	3 kV	3 kV	3 kV
Insulating material category	E	E	E	E	E	E
Material	Polyamide PA 6	Polyamide PA 6	Polyamide PA 6	Polyamide PA 6	Polyamide PA 6	Polyamide PA 6
Connection (box terminal)	$1.5 - 4 \text{ mm}^2$	$1.5 - 4 \text{ mm}^2$	$1.5 - 4 \text{ mm}^2$	$1.5 - 4 \text{ mm}^2$	$1.5 - 4 \text{ mm}^2$	$1.5 - 4 \text{ mm}^2$
Rated output	5 VA	5 VA	5 VA	5 VA	5 VA	5 VA
Packs of	1 pc(s).	1 pc(s).	1 pc(s).	1 pc(s).	1 pc(s).	1 pc(s).
Model No.	9346.600	9346.630	9346.610	9346.640	9346.620	9346.650

Cable ties

for NH slimline fuse-switch disconnectors, sizes 1 to 3

For rear routing of the current converter cables.

Material:

– Polyamide (PA 6)

Packs of	Model No.
1 pc(s).	9346.480





Offener Leistungsschalter
Air circuit breaker

Mitsubishi F.T.N. Schneider ABB
TERASAKI SIEMENS

Offener Leistungsschalter
Air circuit breaker

Mitsubishi F.T.N. Schneider ABB
TERASAKI SIEMENS

Ri4Power

Modular system

- For low-voltage switchgear with design verification to IEC 61 439-1/-2 and DIN EN 61 439-1/-2
- For control systems and power distributors
- Structured system solution for switchgear with Form separation 1-4b
- Simple, assembly-friendly system layout

Busbar systems up to 5500 A

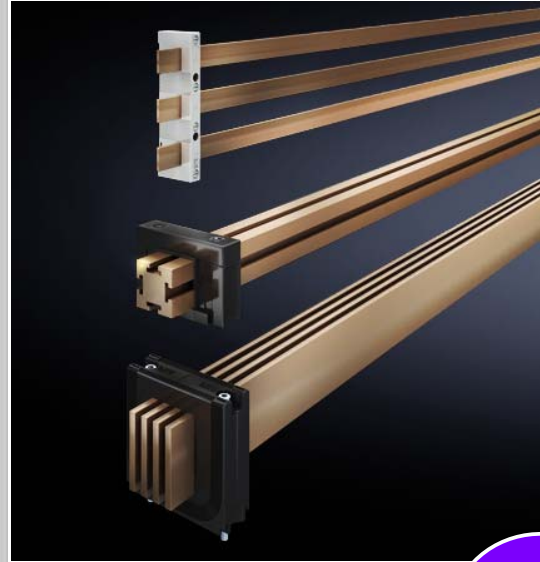
- RiLine – The compact busbar system up to 1600 A, see page 211
- Maxi-PLS – The assembly-friendly system, see page 268
- Flat-PLS – The flat bar system for standard requirements, see page 271
- Tested PE conductor system, see page 648
- High levels of short-circuit withstand (I_{cw}) up to 100 kA for 1 sec./220 kA peak

Modular enclosure system

- Based on enclosure platform TS 8, see page 76
- Flexible, modular front design, see page 552
- Roof plates to suit most requirements, see page 583
- Modular compartment configuration for internal compartmentalisation up to Form 4b, see page 283
- Inner contact hazard protection covers for air circuit-breakers and NH slimline fuse-switch disconnectors, see page 281
- Accessories for Ri4Power, see page 289

Simple planning

- **Rittal Power Engineering with update function**
Model No. 3020.500, see page 295
- Configuration of low-voltage switchgear with design certificate
- Simple, fast assembly with automatically generated assembly plan
- Generation of parts lists with graphical output



Busbar systems Maxi-PLS

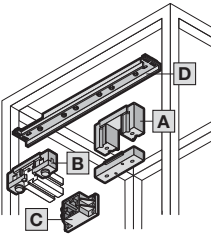
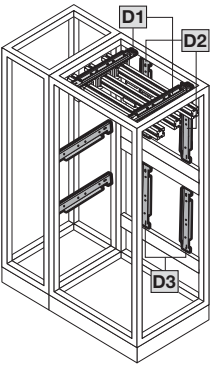
System components

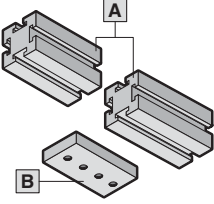
Note:

– Busbars for PE/PEN combinations, see page 648/649

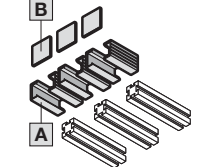
Technical details:

Available on the Internet

Supports and attachment in the TS enclosure				Packs of	Maxi-PLS 1600/2000		Maxi-PLS 3200	
					Model No.		Model No.	
					3-pole	4-pole	3-pole	4-pole
	A Busbar support Material: Polyamide (PA 6.6)			1 pc(s).	9649.000		9659.000	
	B Busbar support, suitable for top mounting Material: Polyamide (PA 6.6)			1 pc(s).	9649.160		9659.160	
	C End supports Material: Polyamide (PA 6.6)			2 pc(s).	9649.010		9659.010	
	D System attachment for installation in the busbar support. Material: Stainless steel							
	For application	For enclosure depth mm	Bar centre distance mm	Packs of	Model No.		Model No.	
	D1 In the roof/base section, directly above/below the coupling switch	600	100	2 pc(s).	9640.080		–	
			150	2 pc(s).	–		9650.100	
		800	150	2 pc(s).	–		9650.080	
D2 Rear section top/bottom	–	150	2 pc(s).	–		9650.098		
D3 Rear section, centre (185 mm)	–	185	2 pc(s).	3-pole	4-pole	3-pole	4-pole	
				9640.150	–	9650.150	–	

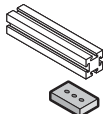
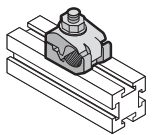
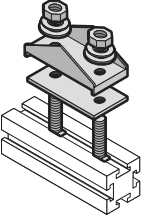
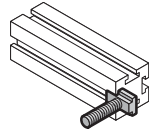



A Maxi-PLS busbars, E-Cu					Maxi-PLS 1600	Maxi-PLS 2000	Maxi-PLS 3200
					Model No.		Model No.
	For enclosure width mm	For application ¹⁾	Length mm	Packs of	Model No.		Model No.
	600	a	491	1 pc(s).	9640.206	9640.201	9650.201
	600	b	525	1 pc(s).	9640.216	9640.211	9650.211
	600	c	599	1 pc(s).	9640.226	9640.221	9650.221
	800	a	691	1 pc(s).	9640.236	9640.231	9650.231
	800	b	725	1 pc(s).	9640.246	9640.241	9650.241
	800	c	799	1 pc(s).	9640.256	9640.251	9650.251
	1000	a	891	1 pc(s).	9640.266	9640.261	9650.261
	1000	b	925	1 pc(s).	9640.276	9640.271	9650.271
	1000	c	999	1 pc(s).	9640.286	9640.281	9650.281
	1200	a	1091	1 pc(s).	9640.296	9640.291	9650.291
	1200	b	1125	1 pc(s).	9640.306	9640.301	9650.301
	1200	c	1199	1 pc(s).	9640.316	9640.311	9650.311
	–	–	2400	3 pc(s).	9640.365	9640.360	9650.360
–	–	2400	4 pc(s).	–	9649.360	9659.360	
B Longitudinal connector E-Cu for simple baying connection of Maxi-PLS busbars. Incl. sliding blocks, bolts, washers and nuts.				1 pc(s).	9640.191	9640.191	9650.191

¹⁾ a = Cable connection system with end support
b = Left-hand or right-hand end enclosure in a switchgear installation
c = Bayed enclosure with sections bayed on the left and right

Contact hazard protection				Packs of	Model No.		Model No.
	A Cover section for clip-on mounting on the Maxi-PLS busbars, length 1000 mm. Material: Hard PVC			5 pc(s).	9640.050		9650.050
	B End cover for clip-on mounting on the end surface of Maxi-PLS busbars. Material: Polyamide (PA 6.6)			2 pc(s).	9649.060		9659.060

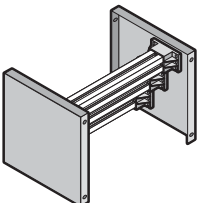
Busbar systems Maxi-PLS

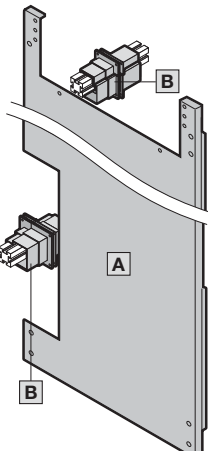
System components

Connection system			Packs of	Maxi-PLS 1600/2000	Maxi-PLS 3200	
				Model No.	Model No.	
	Contact maker E-Cu for contacting the connection brackets to the Maxi-PLS busbars. Incl. sliding blocks.					
	Width mm	60	1 pc(s).	9640.171	9650.171	
100		1 pc(s).	9640.181	9650.181		
	Connection clamp for the connection of round conductors (Cu/Al) 95 to 300 mm ² (single-wire and multi-wire). Incl. assembly parts.					
			1 pc(s).	9640.325	9650.325	
	Connection plates for the connection of laminated flat copper bars. Assembly parts.					
	Maximum clamping area mm	2 x 10 x 32 x 1	3 pc(s).	9640.330	9650.330	
		2 x 10 x 63 x 1	3 pc(s).	9640.340	9650.340	
2 x 10 x 100 x 1		3 pc(s).	9640.350	–		
	Terminal stud for connecting cables with ring terminals, including sliding blocks.			Length 30 mm	Length 32 mm	
	Thread	M12	3 pc(s).	9640.370	9650.370	
		M16	3 pc(s).	9640.380	9650.380	
	Sliding blocks for sliding into the Maxi-PLS busbar section at the sides.					
	Thread	M8	Length 20 mm	15 pc(s).	9640.970	–
		M10	Length 25 mm	15 pc(s).	9640.980	9650.980
M12		Length 35 mm	15 pc(s).	–	9650.990	
	Sliding nuts for retrospective insertion into the Maxi-PLS busbar section.					
	Thread	M6	15 pc(s).	9640.900	9650.900	
		M8	15 pc(s).	9640.910	–	
			3 pc(s).	–	9650.905	
M10		15 pc(s).	9640.920	9650.910		
M12	15 pc(s).	–	9650.920			
	Threaded bolts for individual connection options. Including nuts, plain washers, spring lock washers (M6 and M8 only) or washers (M10 and M12 only). Note: Sliding blocks or sliding nuts are additionally required for attachment.					
	Thread	M6	Length 35 mm	6 pc(s).	9640.930	9640.930
		M8	Length 35 mm	6 pc(s).	9640.940	9640.940
		M10	Length 35 mm	8 pc(s).	9676.971	9676.971
		M10	Length 45 mm	8 pc(s).	9676.972	9676.972
		M10	Length 55 mm	8 pc(s).	9676.973	9676.973
		M10	Length 70 mm	8 pc(s).	9676.976	9676.976
		M10	Length 80 mm	8 pc(s).	9676.977	9676.977
		M12	Length 40 mm	8 pc(s).	–	9676.981
		M12	Length 50 mm	8 pc(s).	–	9676.982
		M12	Length 60 mm	8 pc(s).	–	9676.983
		M12	Length 70 mm	8 pc(s).	–	9676.986
M12		Length 80 mm	8 pc(s).	–	9676.987	

Busbar systems Maxi-PLS

System components

Connection system	Packs of	Model No.
 <p>Compact infeed for Maxi-PLS busbar 1600/2000 For individual use as a 3-pole cable connection bar system. Direct mounting on the mounting plate or on the punched section without mounting flange.</p> <p>Supply includes: 6 end supports, 2 support plates for end supports, 1 PS punched rail, 23 x 23 mm (length 495 mm), mounting accessories</p>	1 set(s)	9660.980

Shielding	Maxi-PLS 1600/2000		Maxi-PLS 3200																																																																			
	Model No.		Model No.																																																																			
 <p>A Divider panel for TS enclosures. For side shielding from neighbouring panels. Assembly parts.</p> <p>Maxi-PLS busbars in the roof section</p> <table border="1"> <thead> <tr> <th>For enclosure depth mm</th> <th>For enclosure height mm</th> <th>Packs of</th> <th>1600/2000</th> <th>3200</th> </tr> </thead> <tbody> <tr> <td>600</td> <td>2000</td> <td>1 pc(s).</td> <td>9660.620</td> <td>9660.620</td> </tr> </tbody> </table> <p>Maxi-PLS busbars in the rear section</p> <table border="1"> <thead> <tr> <th>For enclosure depth mm</th> <th>For enclosure height mm</th> <th>Packs of</th> <th>1600/2000</th> <th>3200</th> </tr> </thead> <tbody> <tr> <td>600</td> <td>2000</td> <td>1 pc(s).</td> <td>9660.610</td> <td>9660.610</td> </tr> </tbody> </table> <p>B Busbar gland The busbar gland may also be used as a cover for the longitudinal connectors. Including assembly parts.</p> <table border="1"> <thead> <tr> <th colspan="2">Use with longitudinal connector</th> <th rowspan="2">Packs required</th> <th rowspan="2">Packs of</th> <th colspan="2">1600/2000</th> <th colspan="2">3200</th> </tr> <tr> <th>no</th> <th>yes</th> <th>3-pole</th> <th>4-pole</th> <th>3-pole</th> <th>4-pole</th> </tr> </thead> <tbody> <tr> <td>■</td> <td>–</td> <td>6</td> <td>1 set(s)</td> <td>9640.600</td> <td>–</td> <td>9650.600</td> <td>–</td> </tr> <tr> <td>■</td> <td>–</td> <td>8</td> <td>1 set(s)</td> <td>–</td> <td>9640.600</td> <td>–</td> <td>9650.600</td> </tr> <tr> <td>–</td> <td>■</td> <td>3 3</td> <td>1 set(s) 1 set(s)</td> <td>9640.610 + 9640.600</td> <td>–</td> <td>9650.610 + 9650.600</td> <td>–</td> </tr> <tr> <td>–</td> <td>■</td> <td>4 4</td> <td>1 set(s) 1 set(s)</td> <td>–</td> <td>9640.610 + 9640.600</td> <td>–</td> <td>9650.610 + 9650.600</td> </tr> </tbody> </table>	For enclosure depth mm	For enclosure height mm	Packs of	1600/2000	3200	600	2000	1 pc(s).	9660.620	9660.620	For enclosure depth mm	For enclosure height mm	Packs of	1600/2000	3200	600	2000	1 pc(s).	9660.610	9660.610	Use with longitudinal connector		Packs required	Packs of	1600/2000		3200		no	yes	3-pole	4-pole	3-pole	4-pole	■	–	6	1 set(s)	9640.600	–	9650.600	–	■	–	8	1 set(s)	–	9640.600	–	9650.600	–	■	3 3	1 set(s) 1 set(s)	9640.610 + 9640.600	–	9650.610 + 9650.600	–	–	■	4 4	1 set(s) 1 set(s)	–	9640.610 + 9640.600	–	9650.610 + 9650.600				
	For enclosure depth mm	For enclosure height mm	Packs of	1600/2000	3200																																																																	
	600	2000	1 pc(s).	9660.620	9660.620																																																																	
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	600	2000	1 pc(s).	9660.610	9660.610																																																																	
	Use with longitudinal connector		Packs required	Packs of	1600/2000		3200																																																															
	no	yes			3-pole	4-pole	3-pole	4-pole																																																														
	■	–	6	1 set(s)	9640.600	–	9650.600	–																																																														
	■	–	8	1 set(s)	–	9640.600	–	9650.600																																																														
	–	■	3 3	1 set(s) 1 set(s)	9640.610 + 9640.600	–	9650.610 + 9650.600	–																																																														
–	■	4 4	1 set(s) 1 set(s)	–	9640.610 + 9640.600	–	9650.610 + 9650.600																																																															

Accessories



Power Engineering

see page 295

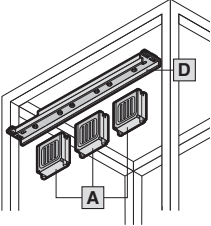
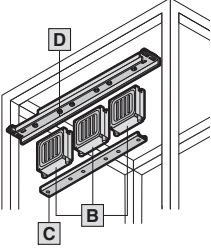
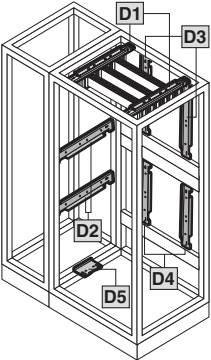
System components

Busbar system Flat-PLS 60/ Flat-PLS 100, for flat copper bars

For the configuration of busbar systems from flat copper bars.
For mounting on a system attachment or directly on the mounting plate.

Max. admissible tolerance of bar width (60/100 mm) ± 0.3 mm, bar thickness (10 mm) ± 0.15 mm

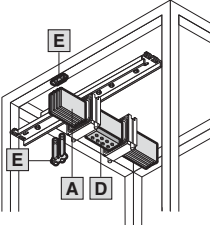
Technical details:
Available on the Internet

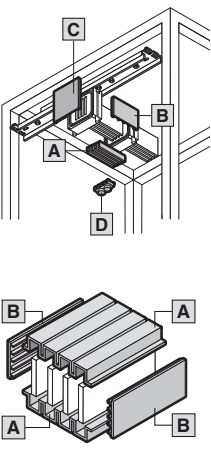
Supports and attachment in the TS enclosure				Flat-PLS 60		Flat-PLS 100			
				Model No.		Model No.			
									
A Busbar support Material: Polyamide (PA 6.6)									
System	For busbars up to mm ¹⁾		Packs of						
Flat-PLS 60	4 x 60 x 10		1 pc(s).	9676.002			-		
Flat-PLS 100	4 x 100 x 10		1 pc(s).	-			9676.004		
									
B Busbar support for stabiliser bar Material: Polyamide (PA 6.6)									
System	For busbars up to mm ¹⁾		Packs of						
Flat-PLS 60	4 x 60 x 10		1 pc(s).	9676.020			-		
Flat-PLS 100	4 x 100 x 10		1 pc(s).	-			9676.021		
									
C Busbar stabiliser bars Material: Stainless steel									
For application	For enclosure depth mm	Bar centre distance mm		Packs of	3-pole	4-pole	3-pole	4-pole	
		120	165	185					
D1 In the roof/base section/directly above/below coupling switch	600	■	-	-	2 pc(s).	9674.162	9674.162	-	-
		-	■	-	2 pc(s).	-	-	9674.164	-
	800	■	-	-	2 pc(s).	9674.182	9674.182	-	-
		-	■	-	2 pc(s).	-	-	9674.184	9674.184
D2 Vertical coupling set	600	■	-	-	2 pc(s).	9674.172	9674.172	-	-
		-	■	-	2 pc(s).	-	-	9674.174	-
	800	■	-	-	2 pc(s).	9674.192	9674.192	-	-
		-	■	-	2 pc(s).	-	-	9674.194	9674.194
D3 Rear section top/bottom		■	-	-	2 pc(s).	9674.122	9674.122	-	-
		-	■	-	2 pc(s).	-	-	9674.124	9674.124
D4 Rear section, centre (185 mm)		-	-	■	2 pc(s).	9674.152	-	-	-
		-	-	■	2 pc(s).	-	-	9674.154	-
D5 Single-pole assembly, for mounting on the TS frame					2 pc(s).	9674.102	9674.102	9674.104	9674.104
D System attachment for installation in the busbar support. Material: Stainless steel									
For busbar support	Bar centre distance mm	System layout		Packs of	3-pole	4-pole	3-pole	4-pole	
9676.020	120	3/4-pole		2 pc(s).	9676.022	9676.023	-	-	
	185	3-pole		2 pc(s).	9676.026	-	-	-	
9676.021	165	3/4-pole		2 pc(s).	-	-	9676.024	9676.025	
	185	3-pole		2 pc(s).	-	-	9676.027	-	

¹⁾ At a bar width of < 60 mm for Flat-PLS 60 or < 100 mm for Flat-PLS 100, the empty gaps in the support should be filled with spacers. When using only 1, 2 or 3 bars, the vacant bar slots should be closed using the filler pieces.

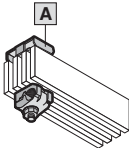
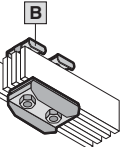
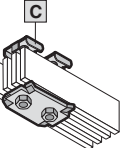
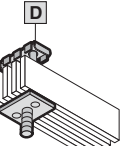
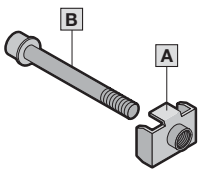

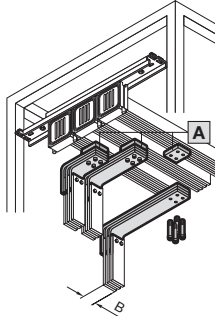
Busbar systems Flat-PLS

System components

Busbars and accessories for supports					Flat-PLS 60	Flat-PLS 100
					Model No.	Model No.
						
A Busbars E-Cu to DIN EN 13 601. Length: 2400 mm/bar						
Dimensions mm		Packs of				
40 x 10		3 pc(s).		3587.000		-
50 x 10		2 pc(s).		3588.005		-
60 x 10		2 pc(s).		3589.005		-
80 x 10		1 pc(s).		-		3590.005
100 x 10		1 pc(s).		-		3590.015
B Spacer – At a bar width of < 60/100 mm the spacer should be used. Material: Polyamide (PA 6.6)						
E-Cu Dimensions mm	Required number of spacers per chamber	Packs of				
40 x 10	2 pc(s).	16 pc(s).		9676.007		9676.007
50 x 10	1 pc(s).					
80 x 10	2 pc(s).					
C Filler piece – When using only 1, 2 or 3 bars, the vacant bar slots should be closed using the filler pieces. Material: Polyamide (PA 6.6)						
		Packs of				
Flat-PLS 60		2 per free bar slot	16 pc(s).	9676.008		9676.008
Flat-PLS 100		3 per free bar slot				
D Longitudinal connector E-Cu for connecting Flat-PLS busbar systems, no drilling required.						
No. of strands per conductor	For busbar width mm	Screw	Packs of			
2	40 – 100	1)	1 pc(s).	9676.621		9676.621
3 or 4	40 – 100	1)	1 pc(s).	9676.641		9676.641
1) Must be ordered additionally according to the busbar width B (length = B + 40 mm, screw connections, see page 273).						
E Busbar claws for Flat-PLS						
For busbar width up to mm		Screw	Packs of			
2 x B x 10		1)	1 pc(s).	9676.017		9676.017
4 x B x 10		1)	1 pc(s).	9676.019		9676.019
1) Must be ordered additionally according to the busbar width B (length = B + 20 mm, screw connections, see page 273)						

Contact hazard protection					Flat-PLS 60	Flat-PLS 100
					Model No.	Model No.
						
Cover sections for Flat-PLS Material: Hard PVC						
For system	No. of bars per conductor	For busbar width mm	Length mm	Packs of		
A Edge cover section for bar systems with no space between the strands	1	-	1000	10 pc(s).	9676.041	9676.041
A Edge cover section for bar systems with 10 mm space between the strands	2	-	1000	10 pc(s).	9676.052	9676.052
	4	-	1000	10 pc(s).	9676.054	9676.054
B Side cover section for bar systems, to match the edge cover sections	-	60	1000	10 pc(s).	9676.056	9676.056
	-	80	1000	10 pc(s).	9676.058	9676.058
	-	100	1000	10 pc(s).	9676.059	9676.059
C End covers for busbar supports Flat-PLS Material: Polyamide (PA 6.6)						
For Flat-PLS 60 and Flat-PLS 100				Packs of		
				2 pc(s).	9676.006	9676.006
D Covers for busbar claws Material: Polyamide (PA 6.6)						
No. of bars per conductor	For busbar claw Model No.		Packs of			
2	9676.017 9676.832		8 pc(s).	9676.046		9676.046
4	9676.019		8 pc(s).	9676.048		9676.048

System components

Connection system	Flat-PLS 60		Flat-PLS 100	
	Model No.		Model No.	
	A Direct connection terminal for Flat-PLS For the direct connection of round conductors.			
	For round conductors	Screw	Packs of	
	95 – 300 mm ² re/rm	¹⁾	1 pc(s).	
				9676.730 9676.730
¹⁾ Must be ordered additionally according to the busbar width B (length = B + 60 mm, screw connections, see page 273)				
	B Connection plates for laminated copper bars , including assembly parts (excluding screws)			
	For busbar width mm	Screw	Packs of	
	2 x 10 x 32 x 1	¹⁾	1 pc(s).	
	2 x 10 x 63 x 1	¹⁾	1 pc(s).	
2 x 10 x 100 x 1	¹⁾	1 pc(s).		
¹⁾ Must be ordered additionally according to the busbar width B (length = B + 50 mm, screw connections, see page 273)				
	C Connection plates with bolts M10 , including assembly parts (excluding screws)			
	Terminal studs	Screw	Packs of	
	M10	¹⁾	1 pc(s).	
				9676.710 9676.710
¹⁾ Must be ordered additionally according to the busbar width B (length = B + 40 mm, screw connections, see page 273)				
	D Connection plates with bolts M12 , including assembly parts (excluding screws)			
	Terminal studs	Screw	Bolt length mm	Packs of
	M12	¹⁾	30	1 pc(s).
				9676.700 9676.700
¹⁾ Must be ordered additionally according to the busbar width B (length = B + 20 mm, screw connections, see page 273)				
	A Claw with threaded insert M10			
	Threaded insert		Packs of	
	M10		8 pc(s).	
				9676.832 9676.832
	B Screw connections			
	Screw design		Packs of	
	M10 x 60		8 pc(s).	
	M10 x 70		8 pc(s).	
	M10 x 80		8 pc(s).	
	M10 x 90		8 pc(s).	
	M10 x 100		8 pc(s).	
	M10 x 110		8 pc(s).	
	M10 x 120		8 pc(s).	
	M10 x 130		8 pc(s).	
	M10 x 140		8 pc(s).	
	M10 x 150		8 pc(s).	
	M10 x 160		8 pc(s).	
M10 x 170		8 pc(s).		
M10 x 190		8 pc(s).		
			9676.819 9676.819	
	A Claw with threaded insert M8 for NH slimline fuse-switch disconnectors, size 00 For mounting NH slimline fuse-switch disconnectors size 00 on Flat-PLS bar systems with 185 mm centre-to-centre spacing. Note: M8 screws (zinc-plated and passivated, strength 8.8, length: busbar width + 20 mm) are additionally required. Screws are not included with the supply.			
	Threaded insert		Packs of	
	M8		3 pc(s).	
			9676.831 9676.831	
	A Contact makers E-Cu for contacting the connection brackets to the Flat-PLS busbars.			
	For busbar width (B) mm	Screw	No. of strands per conductor	Packs of
	60	¹⁾	2	1 pc(s).
	60	¹⁾	3 or 4	1 pc(s).
	80	¹⁾	2	1 pc(s).
	80	¹⁾	3 or 4	1 pc(s).
	100	¹⁾	2	1 pc(s).
100	¹⁾	3 or 4	1 pc(s).	
			9676.526 9676.526 9676.546 9676.546 9676.528 9676.528 9676.548 9676.548 9676.520 9676.520 9676.540 9676.540	

¹⁾ Must be ordered additionally according to the busbar width B (screw connections, see page 273).
 Screw length = (no. of strands x 10 mm) + bar width of main busbar + 40 mm.
 No. of screws per bracket:
 – with 2 strands per conductor of the main busbar system: 2 pc(s).
 – with 3/4 strands per conductor of the main busbar system: 4 pc(s).

Connection components for Maxi-PLS/Flat-PLS

For air circuit-breakers and busbar connections

For connecting air circuit-breakers (ACB) to Maxi-PLS/Flat-PLS busbar systems in TS enclosures. Alternatively, for connecting main and multi-terminal busbar systems and for connecting horizontal and vertical main busbar systems.

Please include the design code of the specification given below in the order text for your connector kit.

We recommend the **Rittal Power Engineering 3020.500 software from Version 6.1** for easier configuration of the connector kits and connection brackets, see page 295.

Material:

- E-Cu

Note:

- Please quote the complete design code on all enquiries and orders
- For configuration with the Rittal Power Engineering software, 2 check numbers are additionally output with a hyphen



Also required:

- Screw connections M10/M12, see page 280
- Terminal studs Maxi-PLS, see page 269
- Screw connections Flat-PLS, see page 273
- Spacer rolls, page 289

Design code

Model No.		Enclosure			Busbar system, bottom		Air circuit-breaker						Busbar system, top		Compartment height, air circuit-breaker	Multi-terminal busbars Type and number of poles	Multi-terminal busbar system, in front of or behind mounting plate	Busbar configuration	Code length	
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q		
9676.910	Connector kit for ACB, top																			14
9676.912	Connector kit for ACB, bottom																			14
9676.200	Connection bracket above ACB																			14
9676.210	Connection bracket below ACB																			14
9675.100	T-connector kit																			9
9675.840	Bracket connector kit																			8
9674.480	Fuse-switch disconnect section connection bracket																			8

Leave grey sections blank

Enclosure

	Width mm							Selection
	a	2	4	6	8	0	1	
	Height mm							<input type="checkbox"/>
	b	0	2					
Depth mm							<input type="checkbox"/>	
c	6	8						

Connection components for Maxi-PLS/Flat-PLS

For air circuit-breakers and busbar connections

Busbar system, bottom

Busbar type					Selection
d	Maxi-PLS	1600	3-pole	A	<input type="checkbox"/>
			4-pole	B	
		2000	3-pole	C	
		4-pole	D		
	3200	3-pole	E		
		4-pole	F		
	Flat-PLS	60	3-pole	I	
			4-pole	J	
		100	3-pole	M	
	4-pole	N			
RiLine (for T-connector kit only)	Cu 30 x 5/10 mm	3-pole	Q		
		4-pole	R		
	PLS 1600	3-pole	S		
	4-pole	T			
No system available					X

Busbar system configuration			Selection
e	in the base section		6
	in the lower rear section		7
	as cable connection system		8
	directly underneath the air circuit-breaker		9
No system available			0

Air circuit-breaker

	f Brand	ABB	A	<input type="checkbox"/>	
		ABB (Emax2)	B		
		Eaton/Moeller	E		
		GE	G		
		Mitsubishi	J		
		Schneider Electric	M		
		Siemens/Moeller	S		
		Terasaki	T		
	Various	V			
	g Size	1/none	1	<input type="checkbox"/>	
		2	2		
		3	3		
4		4			
h Rated current	630 A	A	<input type="checkbox"/>		
	800 A	B			
	1000 A	C			
	1250 A	D			
	1600 A	E			
	2000 A	F			
	2500 A	G			
	3200 A	H			
	4000 A ²⁾	I			
	5000 A ²⁾	J			
i Number of poles/ Version	Static installation	3-pole	3	<input type="checkbox"/>	
		4-pole	4		
		3-pole with non-switched N	5		
		3-pole	6		
	Rack-mounted	4-pole	8		
		3-pole with non-switched N	7		
		Behind the door HT			H
		In front of the door (in door cut-out) VT			V
k Compartment height directly beneath the air circuit-breaker	0 mm	0	<input type="checkbox"/>		
	150 mm	1			
	200 mm	2			
	250 mm	3			
	300 mm	4			
	400 mm	5			
	600 mm ¹⁾	6			
	800 mm	7			
1000 mm	8				
n Compartment height of air circuit-breaker	600 mm ¹⁾	6	<input type="checkbox"/>		
	800 mm	7			
	1000 mm	8			


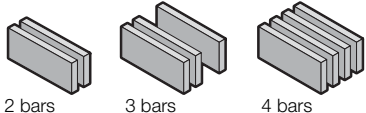

²⁾ Not available for all brands

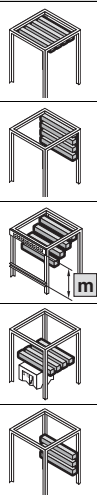
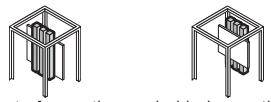
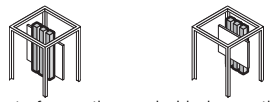
¹⁾ Standard height in version 1
With version 1, a **6** should be selected

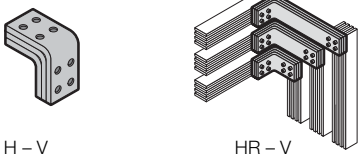
Connection components for Maxi-PLS/Flat-PLS

For air circuit-breakers and busbar connections

Busbar system, top

Busbar type						Selection
I	 <p>Maxi-PLS</p>	1600	3-pole	A	<input type="checkbox"/>	
			4-pole	B		
		2000	3-pole	C		
			4-pole	D		
		3200	3-pole	E		
			4-pole	F		
	 <p>Flat-PLS</p>	60	3-pole	I		
			4-pole	J		
		100	3-pole	M		
			4-pole	N		
 <p>RiLine (for T-connector kit only)</p>	Cu 30 x 5/10 mm	3-pole	Q			
		4-pole	R			
	PLS 1600	3-pole	S			
		4-pole	T			
No system available					X	

Busbar system configuration						Selection	
m		in the roof section			1	<input type="checkbox"/>	
		in the top rear section			2		
		as cable connection system 600 mm			3		
		as cable connection system 800 mm			8		
		as cable connection system 1000 mm			9		
		directly above the air circuit-breaker			4		
in rear centre section, version 1					5		
No system available						0	
o	 <p>Multi-terminal busbar system</p>	Multi-terminal busbar system Type and number of poles	RiLine	Cu 30 x 5/10 mm	3-pole	Q	<input type="checkbox"/>
			RiLine	Cu 30 x 5/10 mm	4-pole	R	
			RiLine	PLS 1600	3-pole	S	
			RiLine	PLS 1600	4-pole	T	
			Multi-terminal busbar fuse-switch disconnecter section		3-pole	E	
			Multi-terminal busbar fuse-switch disconnecter section		4-pole	F	
p	 <p>in front of mounting behind mounting</p>	Multi-terminal busbar system in front of or behind mounting plate	In front of mounting plate (indoor)		1	<input type="checkbox"/>	
			Behind mounting plate		2		

Bar configuration, busbar dimensions up to						Selection
q	 <p>H - V HR - V</p> <p>H = Horizontal V = Vertical HR = Horizontal in the rear section, behind one another</p>	Maxi-PLS 1600/2000		H - V	A	<input type="checkbox"/>
		Maxi-PLS 1600/2000		HR - V	B	
		Maxi-PLS 3200		H - V	C	
		Maxi-PLS 3200		HR - V	D	
		up to 2 x 40 x 10		H - V	E	
		up to 2 x 60 x 10		H - V	F	
		up to 4 x 60 x 10		H - V	G	
		up to 4 x 40 x 10		H - V	H	
		up to 2 x 100 x 10		H - V	I	
		up to 4 x 80 x 10		H - V	J	
		up to 4 x 100 x 10		H - V	K	
		up to 2 x 60 x 10		HR - V	L	
		up to 4 x 60 x 10		HR - V	M	
		up to 2 x 100 x 10		HR - V	N	
		up to 4 x 100 x 10		HR - V	O	

Connection components for Maxi-PLS/Flat-PLS

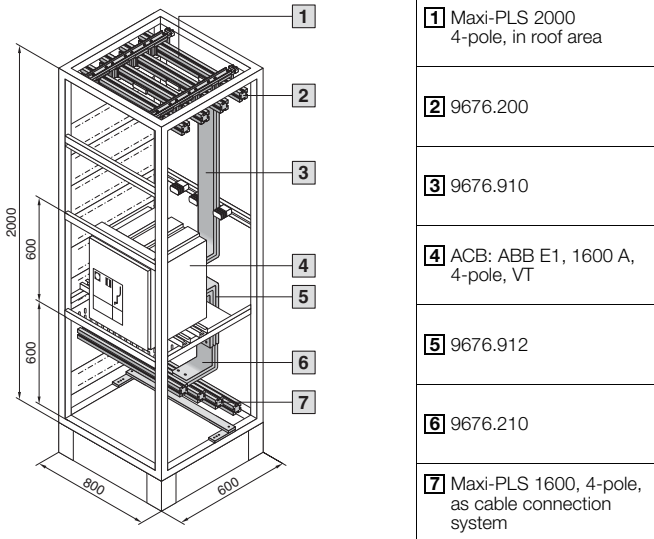
For air circuit-breakers and busbar connections

Sample design code

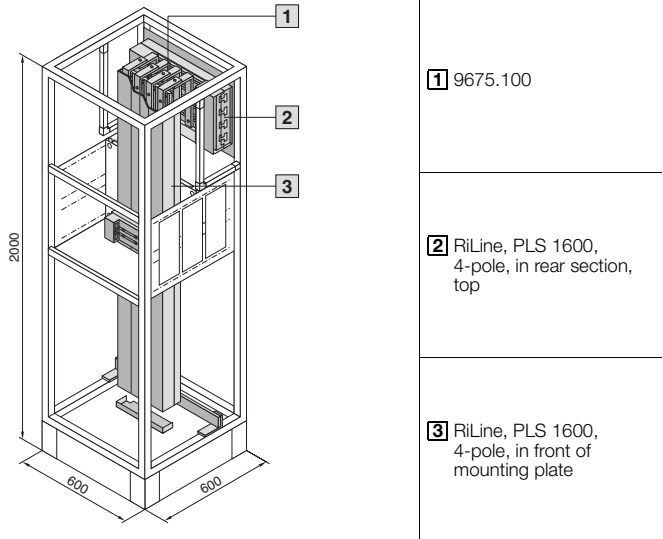
Model No.	Enclosure			Busbar system, bottom		Air circuit-breaker						Busbar system, top		Compartment height, air circuit-breaker	Multi-terminal busbars Type and number of poles	Multi-terminal busbar system, in front of or behind mounting plate	Busbar configuration	Code length	
	a	b	c	d	e	f	g	h	i	j	k	l	m						n
9676.910	Connector kit for ACB, top	8	0	6	B	8	A	1	E	4	V	6	D	1	6				14
9676.912	Connector kit for ACB, bottom	8	0	6	B	8	A	1	E	4	V	6	D	1	6				14
9676.200	Connection bracket above ACB	8	0	6	B	8	A	1	E	4	V	6	D	1	6				14
9676.210	Connection bracket below ACB	8	0	6	B	8	A	1	E	4	V	6	D	1	6				14
9675.100	T-connector kit	6	0	6	X	0							T	2		T	1		9
9675.840	Bracket connector kit	2	0	6	B	9							X	0				A	8
9674.480	Fuse-switch disconnector section connection bracket	1	0	6	X	0							J	1		F			8

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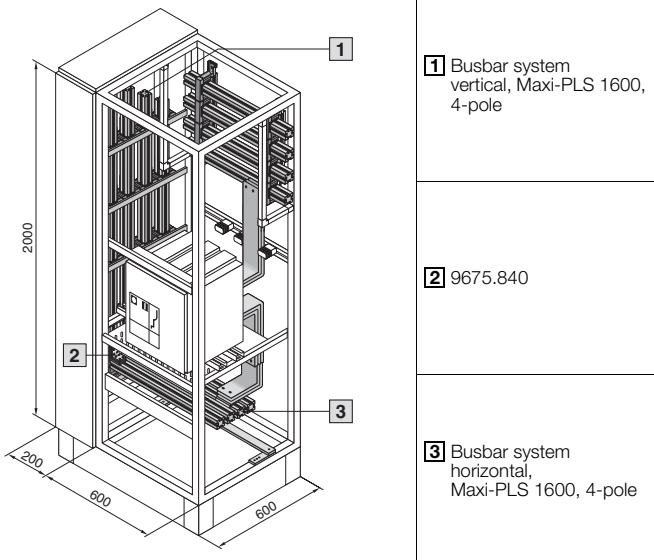
Example of 9676.910, 9676.912, 9676.200, 9676.210
Design code: 806B8A1E4V6D16



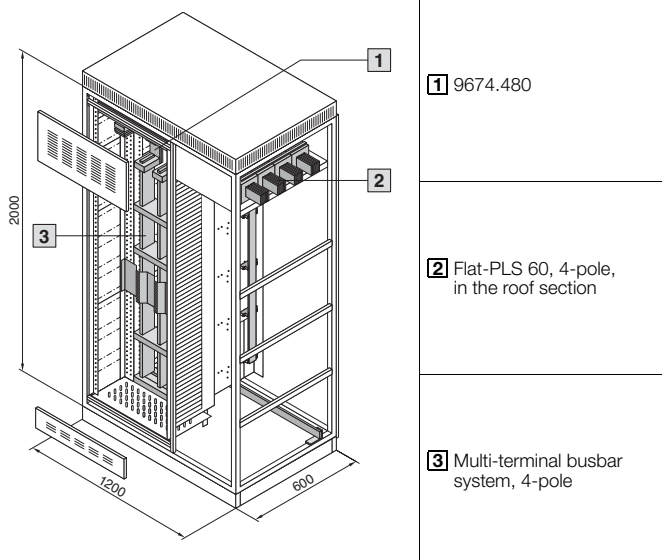
Example of 9675.100
Design code: 606X0T2T1



Example of 9675.840
Design code: 206B9X0A



Example of 9674.480
Design code: 106X0J1F



Busbar systems (100/185/150 mm)



NH slimline fuse-switch disconnecter Page 246/248 NH fuse-switch disconnecter Page 238 Accessories Page 289

Material:
Busbar supports, inserts

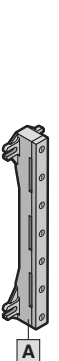
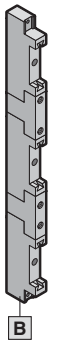


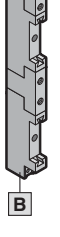

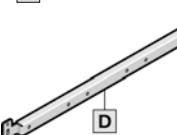
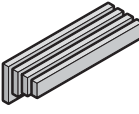

- Fibreglass-reinforced, thermo-plastic polyester (PBT)
- Fire protection corresponding to UL 94-V0

Colour:
- RAL 7035

- Note:**
- The base component of the busbar support 3052.000 may also be used as a single-pole support

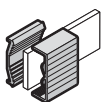
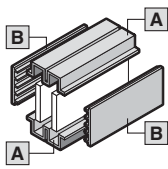
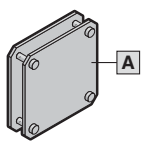
Technical details:
Available on the Internet

Busbar systems up to 1250 A (100 mm), 1600 A (185 mm), 2500 A (150 mm), 3000 A (150 mm)

Busbar support, 3-pole		Packs of	Model No.				Page	
			A] 1250 A	B] 1600 A	C] 2500 A	C] 3000 A		
  			22 x 320 x 70	24 x 515 x 51	30 x 420 x 160	30 x 420 x 170		
Width x height x depth mm			22 x 320 x 70	24 x 515 x 51	30 x 420 x 160	30 x 420 x 170		
Max. bar accommodation mm			60 x 10	80 x 10	2 x 80 x 10	2 x 100 x 10		
Inserts for								
a) Cross-section reduction to mm			30 x 10 to 50 x 10	50/60 x 10	-	-		
b) Reducing the bar width in 10 mm increments			-	-	■	■		
Bar centre distance mm			100	185	150	150		
Packs of			4 pc(s).	2 pc(s).	2 pc(s).	2 pc(s).		
			3073.000	3052.000	3055.000	3057.000		
Accessories								
  		30 x 10 mm	24 pc(s).	3074.000	-	-	-	
		40 x 10 mm	24 pc(s).	3075.000	-	-	-	
		50 x 10 mm	24 pc(s).	3076.000	3074.000	-	-	
		60 x 10 mm	24 pc(s).	-	3075.000	-	-	
		Spacing element for reducing the bar width in 10 mm increments	12 pc(s).	-	-	3056.000	3056.000	
D] System attachment for rear section Material: Sheet steel Surface finish: Zinc-plated Supply includes: Assembly parts			2 pc(s).	-	9674.100	-	-	
Busbars E-Cu¹⁾ to DIN EN 13 601, length 2400 mm								
		Dimensions mm						
		30 x 10	3 pc(s).	3586.005	-	-	-	252
		40 x 10	3 pc(s).	3587.000	-	-	-	
		50 x 10	2 pc(s).	3588.005	3588.005	-	-	
		60 x 10	2 pc(s).	3589.005	3589.005	3589.005	3589.005	
		80 x 10	1 pc(s).	-	3590.005	3590.005	3590.005	
		100 x 10	1 pc(s).	-	-	-	3590.015	
Accessories								
		30 x 10 mm	4 pc(s).	9661.350	-	-	-	649
		40 x 10 mm	4 pc(s).	9661.050	-	-	-	
		80 x 10 mm	4 pc(s).	-	9661.150	-	-	
Longitudinal connector for 2 x bar width x 10 mm			1 pc(s).	-	-	9676.621 ²⁾	9676.621 ²⁾	272

¹⁾ For other busbar lengths, see page 648 ²⁾ The required screw must be ordered separately according to the bar width, see page 273

Busbar systems (100/185/150 mm)

Contact hazard protection			Packs of	Model No.				Page
				1250 A	1600 A	2500 A	3000 A	
End covers for busbar supports			10 pc(s).	3083.000	-	-	-	253
	Busbar cover section, length 1 m for E-Cu	30 x 10 mm	10 pc(s).	3092.000	-	-	-	
		40 x 10 to 60 x 10 mm	10 pc(s).	3085.000	3085.000	-	-	
	A Edge cover section for bar systems with 10 mm space between the strands, length 1 m	for 1 busbar per conductor	10 pc(s).	9676.041	9676.041	-	-	272
		for 2 busbars per conductor	10 pc(s).	-	-	9676.052	9676.052	
	B Side cover section for bar systems, to match the edge cover sections, length 1 m	For busbar width						
		60 mm	10 pc(s).	9676.056	9676.056	9676.056	9676.056	
		80 mm	10 pc(s).	9676.058	9676.058	9676.058	9676.058	
100 mm	10 pc(s).	9676.059	9676.059	9676.059	9676.059			
Connection system, see page 257 (system accessories)								
	A Plate clamps for connecting laminated copper bars; no drilling required							
	For busbars mm	Clamping area for laminated copper bars mm						
	30 x 10	34 x 10	3 pc(s).	3554.000	-	-	-	257
	40 x 10	34 x 10	3 pc(s).	3559.000	-	-	-	
	50 x 10	34 x 10	3 pc(s).	3560.000	3560.000	-	-	
	50 x 10	54 x 10	3 pc(s).	3562.000	3562.000	-	-	
	60 x 10	34 x 10	3 pc(s).	3561.000	3561.000	-	-	
	60 x 10	54 x 10	3 pc(s).	3563.000	3563.000	-	-	
	80 x 10	65 x 10	3 pc(s).	-	3460.500	-	-	
	Conductor connection clamps for 10 mm bar thickness							
Connection of round conductors ¹⁾ mm ²	Clamping area for laminated copper bars mm							
B 1 - 4	-	15 pc(s).	3555.000	3555.000	3555.000	3555.000	257	
1 - 4	-	15 pc(s).	3455.500	3455.500	3455.500	3455.500		
2.5 - 16	8 x 8	15 pc(s).	3456.500	3456.500	-	-		
C 16 - 50	10.5 x 11	15 pc(s).	3457.500	3457.500	-	-		
35 - 70	16.5 x 15	15 pc(s).	3458.500	3458.500	-	-		
70 - 185	22.5 x 20	15 pc(s).	3459.500	3459.500	-	-		
D System covers for conductor connection clamps and plate clamps								
Width x depth mm								
50 x 80		4 pc(s).	3086.000	-	-	-	257	
100 x 80		4 pc(s).	3087.000	-	-	-		
100 x 110		4 pc(s).	3090.000	-	-	-		
200 x 80		4 pc(s).	3088.000	-	-	-		
200 x 110		4 pc(s).	3091.000	-	-	-		
E Inserted screw nuts M12, self-holding nuts with knurled ring for mounting NH slimline fuse-switch disconnectors								
For drilled holes in busbars Ø 14.5 mm		30 pc(s).	3591.060	3591.060	-	-	253	
F Connection plates for laminated copper bars								
Connection of laminated copper bars 2 x 10 x 100 x 1.0 mm on a busbar system with two bars per conductor	For laminated copper bars up to							
	2 x 10 x 32 x 1 mm	1 pc(s).	-	-	9676.747 ²⁾	9676.747 ²⁾	273	
	2 x 10 x 63 x 1 mm	1 pc(s).	-	-	9676.748 ²⁾	9676.748 ²⁾		
2 x 10 x 100 x 1 mm	1 pc(s).	-	-	9676.749 ²⁾	9676.749 ²⁾			
G Direct connection terminals								
For the connection of round conductors 95 - 300 mm ² (single or multi-wire)		1 pc(s).	-	-	9676.730 ²⁾	9676.730 ²⁾	273	

¹⁾ Wire end ferrules should be used with fine and extra-fine wire conductors

²⁾ The required screw connection must be ordered additionally according to the busbar width, see page 273

Connector kits for Maxi-PLS/Flat-PLS

System accessories



Screw connections

for connection brackets

For connecting connection brackets and a connector kit.

May be used for 3- and 4-pole connector kits.

Material:

- Steel screws, zinc-plated, passivated

Supply includes:

- 8 nuts and 16 washers

Note:

- For a bar width of 120 mm, 2 packs are required per connector kit

Technical details:

Available on the Internet

For systems	Screw type	No. of bars per phase	Packs of	Model No.
Maxi-PLS ¹⁾ 1600/2000/3200	M10 x 40	1	8 pc(s).	9676.966
	M10 x 60	2	8 pc(s).	9676.967
	M10 x 80	3	8 pc(s).	9676.968
Maxi-PLS ²⁾ 1600/2000/3200 and Flat-PLS 60/100	M12 x 40	1	8 pc(s).	9676.961
	M12 x 60	2	8 pc(s).	9676.962
	M12 x 80	3	8 pc(s).	9676.963

¹⁾ For connection bracket width 60/80 mm

²⁾ For connection bracket width 100/120 mm



Stacking insulator

To support the connector kits top/bottom for circuit-breakers. Easily retro-fitted.

Supply includes:

- Assembly parts

Packs of	Model No.
6 pc(s).	9660.200

Technical details:

Available on the Internet



Support rails

for stacking insulator

For attaching to the outer mounting level of the TS enclosure and for the configuration of stacking insulators. C rail may also be used as cable management rail.

Material:

- Sheet steel, zinc-plated

Supply includes:

- Assembly parts

For enclosure width mm	Packs of	Model No.
600	2 pc(s).	9676.196
800	2 pc(s).	9676.198



Stabiliser

for connector kit

To increase short-circuit withstand ratings of the connector kits from 75 kA to 100 kA, 1 sec.

2 stabilisers are required per connector kit.

May be used for 3- and 4-pole connector kits. One stabiliser is used in place of a normal stacking insulator arrangement.

Material:

- Reinforcement section: Fibreglass-reinforced plastic

Supply includes:

- 2 reinforcement sections
- 10 stacking insulators
- Assembly parts

For enclosure width mm	Packs of	Model No.
600	2 pc(s).	9676.186
800	2 pc(s).	9676.188



Also required:

- Support rail for stacking insulator, see page 280

Device module

For use in air circuit-breaker outgoing/incoming sections with a minimum depth of 600 mm. The removable mounting plate may be used for the configuration e.g. of fuses, air circuit-breakers and switchgear.

Material:

- Side parts, centre parts: Sheet steel
- Mounting plate: Sheet steel, zinc-plated

Colour:

- Side parts, centre parts: RAL 7035

Supply includes:

- 2 side parts
- 2 centre parts
- Connector parts
- Mounting plate

Note:

- Please observe the manufacturer-specific data regarding the arcing space of air circuit-breakers
- 4 mounting brackets are required to attach a device module

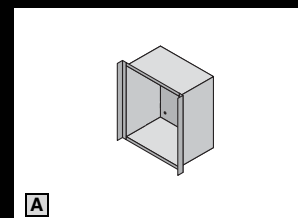
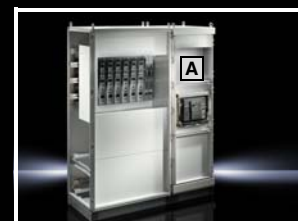
Technical details:

Available on the Internet

For enclosure width mm		Mounting plate		Packs of	Model No.	Page
600	800	Width mm	Height mm			
■	–	420	250	1 pc(s).	9660.700	
–	■	620	250	1 pc(s).	9660.710	

Also required

Mounting bracket	24 pc(s).	9660.090	282
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Contact hazard protection cover

for TS enclosures with air circuit-breaker

To cover incoming and outgoing sections and NH slimline fuse-switch disconnectors with the Maxi-PLS busbar system in the rear enclosure section so that they are safe from finger contact (IP2X).

Material:

- Sheet steel

Colour:

- RAL 7035

Supply includes:

- 3 front covers

Note:

- Cut-outs for air circuit-breakers must be provided by the customer
- 12 mounting brackets are required to attach the contact hazard protection cover

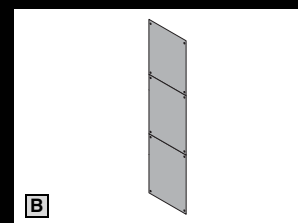
Technical details:

Available on the Internet

For enclosures, 1-door							Packs of	Model No.	Page
Width mm		Height mm	Device module version						
600	800		With	Without					
■	–	2000	■	–	1 set(s)	9660.280			
■	–	2000	–	■	1 set(s)	9660.780			
–	■	2000	■	–	1 set(s)	9660.380			
–	■	2000	–	■	1 set(s)	9660.880			

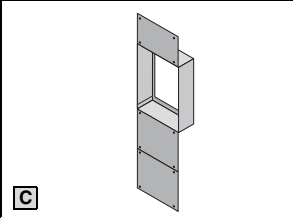
Also required

Mounting bracket	24 pc(s).	9660.090	282
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Cover systems

Form 1



Contact hazard protection cover

For TS enclosures with NH slimline fuse-switch disconnectors

To cover incoming and outgoing sections and NH slimline fuse-switch disconnectors with the Maxi-PLS busbar system in the rear enclosure section so that they are safe from finger contact (IP2X).

Material:

- Sheet steel

Colour:

- RAL 7035

Supply includes:

- 3 front covers
- 2 depth covers
- 2 side covers
- Connector parts

Note:

- 12 mounting brackets are required to attach the contact hazard protection cover

Technical details:

Available on the Internet

For enclosures			Free installation width mm ¹⁾ when using longitudinal connectors			Packs of	Model No.	Page
Width mm	Height mm	Depth mm	Without	One side	Both sides			
600	2000	600	500	450	400	1 set(s)	9660.460	
800	2000	600	700	650	600	1 set(s)	9660.470	
1000	2000	600	900	850	800	1 set(s)	9660.480	
1200	2000	600	1100	1050	1000	1 set(s)	9660.490	

Also required

Mounting bracket		24 pc(s).	9660.090	282
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Accessories

Blanking cover for NH fused isolators	Size 00	4 pc(s).	9660.180	282
	Sizes 1 to 3	4 pc(s).	9660.190	282

¹⁾ When using the top-mounted busbars 9649.160/9659.160, see page 268.
Longitudinal connectors 9640.191/9650.191 for Maxi-PLS busbars, see page 268.



Mounting bracket

For attaching the device modules and contact hazard protection covers. Tapped hole M6.

Material:

- Sheet steel

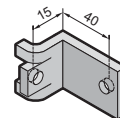
Surface finish:

- Zinc-plated

Supply includes:

- Assembly screws

Packs of	Model No.
24 pc(s).	9660.090



Blanking covers

To cover free NH slimline fuse-switch disconnector slots.

Material:

- Sheet steel

Surface finish:

- Spray-finished

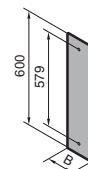
Colour:

- RAL 7035

Supply includes:

- Assembly screws

For NH slimline fuse-switch disconnectors	Width (B) mm	Packs of	Model No.
Size 00	49.5	4 pc(s).	9660.180
Sizes 1 to 3	99.5	4 pc(s).	9660.190



Compartment configuration

Form 1-4

Compartment side panel modules

for internal compartmentalisation

- Side divider panel for compartments, for locating into the TS pitch pattern
- Prepared for the location of mounting brackets for horizontal compartment dividers or mounting plates
- Two TS system punchings in the side panel module allow the use of additional TS accessories
- The side panel modules for reduced compartment depth and an auxiliary construction using TS punched rails 17 x 17 mm can be used to provide a separate enclosure space in the side panel area, e.g. for the provision of a busbar system

Material:

- Sheet steel, 1.5 mm

Surface finish:

- Zinc-plated

Supply includes:

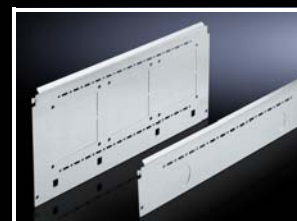
- Assembly parts



Accessories:

- Gland plates, see page 284
- TS punched rail 17 x 17 mm, see page 615
- Frame connector piece, see page 622
- T-connector piece, see page 622
- Corner connector, see page 622

Height mm	For compartment depth mm	With pre-punched knockouts for cable entries M40	With pre-punched knockouts for gland plate for cable entry	Packs of	Model No.
100	425	2	-	6 pc(s).	9673.051
150	425	-	3	6 pc(s).	9673.055
200	425	-	3	6 pc(s).	9673.052
100	600	2	-	6 pc(s).	9673.061
150	600	-	3	6 pc(s).	9673.065
200	600	-	3	6 pc(s).	9673.062
300	600	-	3	2 pc(s).	9673.063
400	600	-	3	2 pc(s).	9673.064
600	600	-	9	2 pc(s).	9673.066
100	800	2	-	6 pc(s).	9673.081
150	800	-	3	6 pc(s).	9673.085
200	800	-	3	6 pc(s).	9673.082
300	800	-	3	2 pc(s).	9673.083
400	800	-	3	2 pc(s).	9673.084
600	800	-	9	2 pc(s).	9673.086



Compartment side panel modules

for cable connection space

For mounting a Maxi-PLS cable connection bar system.

Material:

- Sheet steel, 2 mm

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

Height mm	Packs of	Model No.	
		For enclosure depth mm	
		600	800
450	2 pc(s).	9673.069	9673.089
Suitable for cable connection busbar system			
Maxi-PLS	Number of poles		
1600/2000	3-pole	■	■
1600/2000	4-pole	■	■
3200	3-pole	■	■
3200	4-pole	-	■



Also required:

- End support, see page 268



Accessories:

- 2 compartment side panel modules for internal compartmentalisation with height 150 mm, see page 283



Compartment configuration

Form 1-4



Gland plates

for compartment side panel modules (internal compartmentalisation)

For closing cable entries.

Material:

- PVC, 3 mm
- Fire protection corresponding to UL 94-V0

Colour:

- RAL 7004

Supply includes:

- Assembly parts

For side panel modules height mm	Packs of	Model No.
150	10 pc(s).	9673.195
200/600	10 pc(s).	9673.192
300	4 pc(s).	9673.193
400	4 pc(s).	9673.194



Terminal box Form 4b

for modular outgoing section

For shielding the connections (terminals) of the compartment, busbar space and cable chamber in accordance with Form 4b to IEC 61 439-2. The terminal boxes are externally mounted on the compartment side panel modules in the cable chamber to match the heights of the compartments.

If necessary, a clamping strip may be mounted on the cable retainer included with the supply.

Material:

- Sheet steel, 1.5 mm

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

Note:

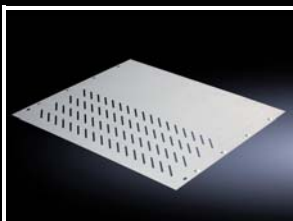
- For installation of the connection spaces, the width of the cable chamber must be at least 400 mm

For compartment height mm	For cable chamber width mm	Packs of	Model No.
150	400/600	1 set(s)	9674.701
200	400/600	1 set(s)	9674.702
300	400/600	1 set(s)	9674.703
400	400/600	1 set(s)	9674.704
600	400/600	1 set(s)	9674.706



Also required:

- Compartment side panel modules for internal compartmentalisation, see page 283



Compartment divider

- For the horizontal separation of compartments
- In combination with the side panel modules, creates form separation to Form 3 or 4

Material:

- Sheet steel, 1.25 mm

Surface finish:

- Zinc-plated

Note:

- 2 mounting brackets are required to install one compartment divider



Also required:

- Mounting bracket, see page 286



With louvres

For enclosure width mm	For compartment depth mm	Width mm	Depth mm	Packs of	Model No.
400	425	306	445	4 pc(s).	9673.444
400	600	306	588	4 pc(s).	9673.445
400	800	306	788	4 pc(s).	9673.448
600	425	506	445	4 pc(s).	9673.464
600	600	506	588	4 pc(s).	9673.465
600	800	506	788	4 pc(s).	9673.468
800	425	706	445	4 pc(s).	9673.484
800	600	706	588	4 pc(s).	9673.485
800	800	706	788	4 pc(s).	9673.488

Compartment configuration

Form 1-4

Compartment divider

for RiLine busbar systems

- For the horizontal separation of compartments with integral RiLine distribution busbar system
- In combination with the side panel modules, creates form separation to Form 3 or 4

Material:

- Sheet steel, 1.25 mm

Surface finish:

- Zinc-plated

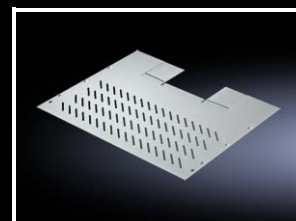
Note:

- 2 mounting brackets are required to install one compartment divider



Also required:

- Mounting bracket, see page 286



With louvres

For enclosure width mm	For compartment depth mm	Width mm	Depth mm	Packs of	Model No.
600	401	506	413	4 pc(s).	9673.454

Compartment divider

with duct for vertical busbar systems

- For the horizontal separation of compartments with vertical busbars
- In combination with the side panel modules, creates form separation to Form 3 or 4

Material:

- Sheet steel, 1.25 mm

Surface finish:

- Zinc-plated

Note:

- 2 mounting brackets are required to install one compartment divider

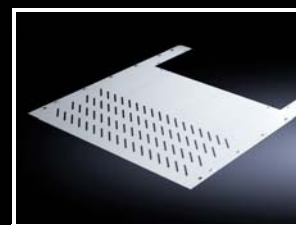


Also required:

- Gland plate, see page 285
- Mounting bracket, see page 286

Technical details:

Available on the Internet



With louvres

For enclosure width mm	For compartment depth mm	Width mm	Depth mm	Width of duct mm	Depth of duct mm	Packs of	Model No.
400	600	306	588	212	201	4 pc(s).	9673.436
400	800	306	788	212	201	4 pc(s).	9673.438
600	600	506	588	412	201	4 pc(s).	9673.456
600	800	506	788	412	201	4 pc(s).	9673.458
800	600	706	588	612	201	4 pc(s).	9673.476
800	800	706	788	612	201	4 pc(s).	9673.478

Gland plates

for compartment divider with duct

To cover the duct.

Material:

- ABS PMMA

For enclosure width mm	Width mm	Height mm	Packs of	Model No.
400	250	223.5	4 pc(s).	9673.504
600	450	223.5	4 pc(s).	9673.506
800	650	223.5	4 pc(s).	9673.508



Compartment configuration

Form 1-4



Air circuit-breaker support rails

- For the configuration of air circuit-breakers (ACB) in compartments
- The support rail is secured using a mounting bracket

Material:

- Sheet steel, 2.5 mm

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

For enclosure width mm	Length of mm	Packs of	Model No.
400	351	2 pc(s).	9673.004
600	551	2 pc(s).	9673.006
800	751	2 pc(s).	9673.008



Also required:

- Mounting bracket for compartment divider and air circuit-breaker support rail, see page 286
- Mounting kit for air circuit-breaker installation, see page 286

Mounting bracket

for compartment divider

- The mounting bracket is secured
 - to the TS frame
 - to the side panel module or
 - between a frame section and an auxiliary construction
- Pre-machined mounting openings allow slide-in attachment of compartment dividers

Material:

- Sheet steel, 1.5 mm

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

For compartment depth mm	Length mm	Packs of	Model No.
425	427	8 pc(s).	9673.405¹⁾
600	552	8 pc(s).	9673.406
800	752	8 pc(s).	9673.408

¹⁾ In conjunction with vertical busbar compartment separation

Mounting bracket

for compartment divider and air circuit-breaker support rail

- The mounting bracket is attached to the side panel module
- Pre-machined mounting openings allow slide-in attachment of compartment dividers
- The air circuit-breaker support rail may be attached to the upper level

Material:

- Sheet steel, 2 mm

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

For compartment depth mm	Length mm	Packs of	Model No.
600	552	2 pc(s).	9673.426
800	752	2 pc(s).	9673.428

Mounting kit

for air circuit-breaker installation

For attaching air circuit-breakers (ACB) to air circuit-breaker support rails.

Material:

- Steel

Surface finish:

- Zinc-plated

Supply includes:

- 4 threaded plates (M8/M12)

Packs of	Model No.
1 set(s)	9660.970

Compartment configuration

Form 1-4

Partial mounting plates

with or without duct

- For direct attachment to the compartment side panel modules
- Universal internal installation with switchgear and control devices
- Additional mounting levels
- In combination with compartment dividers and side panel modules, internal separation in accordance with Form 2, 3 or 4 is possible

Material:

- Sheet steel, 2 mm

Surface finish:

- Zinc-plated

Supply includes:

- 2 angle brackets
- Version with duct:
Additional square cut-out with insulating plates for sealing the cut-out
- Assembly parts



Also required:

- Compartment side panel modules for internal compartmentalisation, see page 283



With duct

For enclosure width mm	For compartment height mm	Width mm	Height mm	Packs of	Model No.
600	150	502	143	1 pc(s).	9673.671
600	200	502	193	1 pc(s).	9673.672
600	300	502	293	1 pc(s).	9673.673
600	400	502	393	1 pc(s).	9673.674
800	200	702	193	1 pc(s).	9673.692
800	300	702	293	1 pc(s).	9673.693
800	400	702	393	1 pc(s).	9673.694

Without duct

For enclosure width mm	For compartment height mm	Width mm	Height mm	Packs of	Model No.
400	200	302	193	1 pc(s).	9673.642
400	300	302	293	1 pc(s).	9673.643
400	400	302	393	1 pc(s).	9673.644
400	600	302	593	1 pc(s).	9673.646
400	800	302	793	1 pc(s).	9673.648
600	150	502	143	1 pc(s).	9673.661
600	200	502	193	1 pc(s).	9673.662
600	300	502	293	1 pc(s).	9673.663
600	400	502	393	1 pc(s).	9673.664
600	600	502	593	1 pc(s).	9673.666
600	800	502	793	1 pc(s).	9673.668
600	1000	502	993	1 pc(s).	9673.660
800	150	702	143	1 pc(s).	9673.681
800	200	702	193	1 pc(s).	9673.682
800	300	702	293	1 pc(s).	9673.683
800	400	702	393	1 pc(s).	9673.684
800	600	702	593	1 pc(s).	9673.686
800	800	702	793	1 pc(s).	9673.688
800	1000	702	993	1 pc(s).	9673.680

Compartment configuration

Form 1-4



Support frame

for DIN rail-mounted devices

- Support frame set for accepting DIN rail-mounted devices (e.g. MCBs)
- The support rails are attached to the compartment side panel modules with two mounting brackets
- The cover is attached to the support frame with knurled screws
- In combination with compartment dividers, partial mounting plates and side panel modules, internal compartmentalisation in accordance with Form 2, 3 or 4 is possible

Material:

- Support frame: Sheet steel 1.5 mm
- Cover: Sheet steel 1.5 mm

Surface finish:

- Support frame: Zinc-plated
- Cover: Spray-finished

Supply includes:

- Support rails
- 2 mounting brackets
- 1 cover with cut-out
- Assembly parts

For enclosure width mm	For compartment height mm	No. of pitch units 17.5 mm	Packs of	Model No.
600	150	1 x 24	1 set(s)	9674.761
600	300	2 x 24	1 set(s)	9674.762
800	300	2 x 36	1 set(s)	9674.782



Also required:

- Compartment side panel modules for internal compartmentalisation, see page 283
- Partial mounting plates, see page 287



Coupling set mounting kit

for busbar enclosure or riser

The mounting kit is used as a base support for a vertical Maxi-PLS busbar system/Flat-PLS busbar system.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- 1 mounting plate
- 2 punched sections with mounting flanges
- Version for Flat-PLS busbar system includes isolating gland plate
- Assembly parts

For Maxi-PLS busbar system

For enclosure width mm	For enclosure depth mm	Packs of	Model No.
200	600	1 set(s)	9674.196
200	800	1 set(s)	9674.198

For Flat-PLS busbar systems

For enclosure width mm	For enclosure depth mm	Packs of	Model No.
400	600	1 set(s)	9674.046
400	800	1 set(s)	9674.048



Also required:

- End support (for Maxi-PLS busbar system), see page 268

Ri4Power accessories

Busbar system

System attachments

for RiLine main busbar system

System attachment with threaded holes M5 and M6 on a 50 mm pitch pattern for rear assembly of a RiLine main busbar system. For locating into the TS frame.

Material:

– Sheet steel

Surface finish:

– Zinc-plated

Supply includes:

– Assembly parts

Note:

– RiLine busbar systems, see page 211

For enclosure width mm	Width mm	Height mm	Packs of	Model No.
400	338.5	362	1 pc(s).	9674.004
600	538.5	362	1 pc(s).	9674.006
800	738.5	362	1 pc(s).	9674.008



Distribution busbars

Material:

– E-Cu

Prepared for the connection of T-connector kits.

Flat bar Cu 30 x 10 mm

For distribution busbar systems behind the compartment	For distribution busbar system in the compartment (indoors)	Packs of	Length mm	Model No.
For enclosure height mm				
1800	–	1 pc(s).	1210	9675.218
2000	–	1 pc(s).	1410	9675.210
2200	1800 ¹⁾	1 pc(s).	1610	9675.212
–	2000 ¹⁾	1 pc(s).	1810	9675.220

¹⁾Also suitable as a vertical busbar for PE/PEN/N

PLS 1600

For distribution busbar systems behind the compartment	For distribution busbar system in the compartment (indoors)	Packs of	Length mm	Model No.
For enclosure height mm				
2000	–	1 pc(s).	1350	9675.230
2200	1800 ¹⁾	1 pc(s).	1550	9675.232
–	2000 ¹⁾	1 pc(s).	1750	9675.240
–	2200 ¹⁾	1 pc(s).	1950	9675.242

¹⁾Also suitable as a vertical busbar for PE/PEN/N



Spacer rolls

for Maxi-PLS busbars and flat copper bars

For use as a universal spacer.

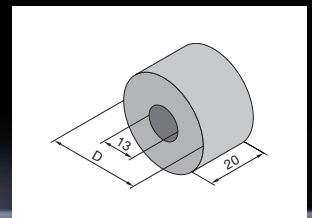
Height: 20 mm

Hole diameter: 13 mm

Material:

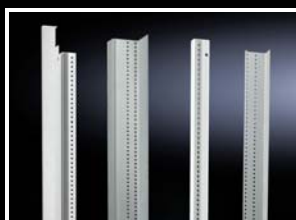
– E-Cu

Diameter (D) mm	For connecting						Packs of	Model No.
	Cu bar – Cu bar		Maxi-PLS – Cu bar		Flat-PLS – Cu bar			
	Cross-section size mm ²	Rated max. current A	Contact area mm ²	Rated max. current A	Contact area mm ²	Rated max. current A		
30	550	1100	360	800	380	850	4 pc(s).	9676.503
40	1100	2200	780	1600	670	1400	4 pc(s).	9676.504
50	1800	3400	1380	2800	990	2000	4 pc(s).	9676.505



Ri4Power accessories

Fuse-switch disconnecter section



Front trim panels

for fuse-switch disconnecter section

The front trim panels cover above and below the mounting area of the NH fuse-switch disconnecter on the front.

Protection categories IP 3X/IP 2X of the fuse-switch disconnecter section are achieved with integral vent openings.

Material:

- Sheet steel, 2 mm

Colour:

- Textured RAL 7035

Supply includes:

- 2 front trim panels
- Assembly parts

Note:

- In order to achieve protection category IP 2X, the inner perforated plate must be removed

Height mm		Packs of	Model No.
Top	Bottom		Version
336	136	1 set(s)	IP 3X with louvres 9674.340



Also required:

- Assembly kit for fuse-switch disconnecter section, see page 290

Assembly kit

for fuse-switch disconnecter section

Assembly kit for installing fuse-switch disconnecter brands ABB or Jean Müller and attaching the distribution busbar system.

Material:

- Section corner piece: Sheet steel, 2 mm
- Trim panel: Sheet steel, 2 mm

Surface finish:

- Section corner piece: Zinc-plated
- Trim panel: Spray-finished

Colour:

- Textured RAL 7035

Supply includes:

- 2 section corner pieces
- 2 trim panels
- Assembly parts

For NH fused-switch disconnecter brand	For enclosure height mm	Packs of	Model No.
Jean Müller SASIL	2000	1 set(s)	9674.350
ABB SlimLine	2000	1 set(s)	9674.356



Also required:

- Divider panel for fuse-switch disconnecter section, see page 291

Ri4Power accessories

Fuse-switch disconnecter section

Divider panels

for fuse-switch disconnecter section

The divider panel is required for interior configuration of the fused-switch disconnecter section, and divides the connection space from the functional space. Depending on the chosen position of the main busbar system, the divider panel is fitted in the prepared fuse-switch disconnecter enclosures. The prepared cut-outs are suitable for the connection of fuse-switch disconnectors Jean Müller Sasil and ABB SlimLine.

Material:

- Sheet steel, 1.5 mm

Surface finish:

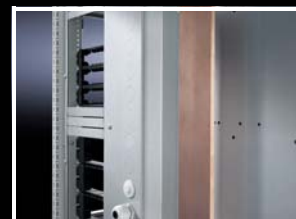
- Zinc-plated

Supply includes:

- Assembly parts

For main busbar system in the roof section

For enclosure height mm	For enclosure depth mm	Packs of	Model No.
2000	600	1 pc(s).	9674.306
2000	800	1 pc(s).	9674.308



Dividing plates

for fuse-switch disconnecter section

Dividing plate to divide the busbar compartment and NH fuse-switch disconnecter compartment.

Material:

- Sheet steel, 1.5 mm

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

For NH fused-switch disconnecter brand	Installation position	Packs of	Model No.
Jean Müller SASIL	Top/bottom	1 pc(s).	9674.346
ABB SlimLine	Top/bottom	1 pc(s).	9674.348



Also required:

- Assembly kit for fuse-switch disconnecter section, see page 290



Contact hazard protection cover

for fuse-switch disconnecter section (cable chamber)

The contact hazard protection cover shields the main busbar in the cable chamber, enabling the safe connection of cables and lines. Suitable for Maxi-PLS and Flat-PLS busbar systems.

Material:

- Sheet steel, 1.5 mm

Surface finish:

- Zinc-plated

Supply includes:

- 2 covers
- 1 mounting bracket
- Assembly parts

For main busbar system in the roof section

For enclosure width mm	For enclosure depth mm	Packs of	Model No.
1000	600	1 set(s)	9674.362
1200	600	1 set(s)	9674.366



Also required:

- Divider panel for fuse-switch disconnecter section, see page 291



Ri4Power accessories

Fuse-switch disconnecter section



Cover

for distribution busbar (Jean Müller fuse-switch disconnecter section)

To cover the distribution busbar system of a fuse-switch disconnecter section, designed to accommodate Jean Müller devices. The 150 mm high busbar and cable connection space covers shield the busbar compartment from the functional space so that it is safe from finger contact, with a protection category of IP 20.

Suitable for use in enclosures with height 2000 mm and 2200 mm.

Material:

- PVC, black

Supply includes:

- 12 busbar covers
- 12 cable connection space covers

Packs of	Model No.
1 set(s)	9674.380



Also required:

- Punched rail for distribution busbar cover, see page 292

Punched rail

for distribution busbar cover (Jean Müller fuse-switch disconnecter section)

Required for mounting the distribution busbar cover. Suitable for use in enclosures with height 2000 mm and 2200 mm.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- 2 punched rails

Note:

- 1 pack of punched rails is required for 1 fuse-switch disconnecter section

Packs of	Model No.
1 set(s)	9674.381

Cover

for distribution busbar (for ABB/Siemens fuse-switch disconnecter section)

To cover the distribution busbar system of a fuse-switch disconnecter section, designed to accommodate ABB (SlimLine) or Siemens (3NJ62) devices. The 200 mm high busbar compartment covers shield the busbar compartment from the functional space so that it is safe from finger contact, with a protection category of IP 20.

Material:

- PVC, black

Note:

- The cover may be ordered from ABB under order reference NHP 407062R000X
- For enclosure height 2000 mm, a height of 1500 mm should be covered, and for enclosure height 2200 mm, a height of 1700 mm should be covered

Ri4Power accessories

Fuse-switch disconnecter section

Busbar support

for fuse-switch disconnecter section

Busbar support for the distribution busbar system of the switch-disconnector-fuse section.

Material:

- Duroplastic polyester

Supply includes:

- Mounting bracket and screws

For busbars mm	Number of poles	Packs of	Model No.
50 x 10	3/4-pole	1 pc(s).	9674.415
60 x 10	3/4-pole	1 pc(s).	9674.416
80 x 10	3/4-pole	1 pc(s).	9674.418
100 x 10	3/4-pole	1 pc(s).	9674.410



Also required:

- Assembly kit for fuse-switch disconnecter section, see page 290
- End support for fuse-switch disconnecter section, see page 293
- Distribution busbar for fuse-switch disconnecter section, see page 293



End support

for fuse-switch disconnecter section

End support for the distribution busbar system of the fuse-switch disconnecter section, for vertical support of the distribution busbar system with infeed from above.

Material:

- Duroplastic polyester

Supply includes:

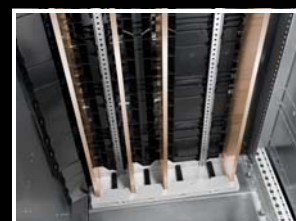
- Mounting bracket and screws

For busbars mm	Number of poles	Packs of	Model No.
50 x 10	3/4-pole	1 pc(s).	9674.435
60 x 10	3/4-pole	1 pc(s).	9674.436
80 x 10	3/4-pole	1 pc(s).	9674.438
100 x 10	3/4-pole	1 pc(s).	9674.430



Also required:

- Assembly kit for fuse-switch disconnecter section, see page 290
- Distribution busbar for fuse-switch disconnecter section, see page 293



Distribution busbars

for fuse-switch disconnecter section

Distribution busbar to fit the main busbar systems Maxi-PLS and Flat-PLS for installation in the fuse-switch disconnecter sections.

Material:

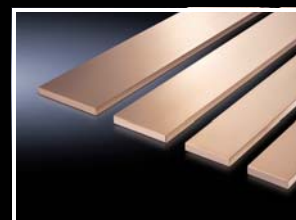
- E-Cu



Also required:

- Busbar support for fuse-switch disconnecter section, see page 293
- End support for fuse-switch disconnecter section, see page 293
- Terminal block for distribution busbar (fuse-switch disconnecter section), see page 294

Size mm	Length mm	For enclosure height mm	Packs of	Model No.
50 x 10	1632.5	2000	1 pc(s).	9674.405
60 x 10	1632.5	2000	1 pc(s).	9674.406
80 x 10	1632.5	2000	1 pc(s).	9674.408
100 x 10	1632.5	2000	1 pc(s).	9674.400



Ri4Power accessories

Fuse-switch disconnecter section



Terminal block

for distribution busbar (fuse-switch disconnecter section)

For connecting the connection brackets to the distribution busbar system of the fuse-switch disconnecter section, no drilling required.

Material:

- E-Cu

Supply includes:

- Assembly parts

For busbar width mm	Packs of	Model No.
50/60	1 pc(s).	9674.485
80/100	1 pc(s).	9674.488



Also required:

- Connection bracket for fuse-switch disconnecter section, see page 274

Technical details:

Available on the Internet



Ri4Power accessories

Software/documentation

Rittal Power Engineering

Planning software for RiLine busbar systems and Ri4Power low-voltage switchgear with design certificate

The multi-lingual software package includes the following functions:

- Project handling, from the initial enquiry through to ordering
- Configuration of RiLine busbar systems in the TS enclosure, compact enclosures AE, CM, KS and free-standing enclosure SE
- Configuration of low-voltage switchgear with Ri4Power systems Form 1-4 and ISV
- Complete, automatic function for the generation of bills of materials and a calculation program for quote preparation
- Input and evaluation of assembly times to calculate man hours
- Access to the entire range of Rittal products
- Output of automatically generated plant documentation with rated current and heat loss calculation

Packs of	Model No.
1 pc(s).	3020.500

- Generation of special fields configured by the customer with graphical processing in the CAD view
- Import/export interfaces for product and CAD data
- Export function for order lists and bills of materials in Excel format
- Interface to EPLAN Electric P8, for the export of CAD data and bills of materials
- The extra benefit for engineering and planning offices: Output of detailed tender texts based on plants that have been project-planned in Power Engineering in MS Word format
- Output of project-specific assembly plans together with field and plant definitions
- Integral configurator for the generation of drawings and bills of materials to create connector kits for connecting air circuit-breakers (ACB)
- Simple generation of the design certificate to IEC 61 439

Supply includes:

- DVD-ROM
- Languages: German/English/French/Dutch/Danish/Swedish/Czech/Italian/Spanish/Polish/Russian/Chinese



Assembly instructions for Ri4Power low-voltage switchgear

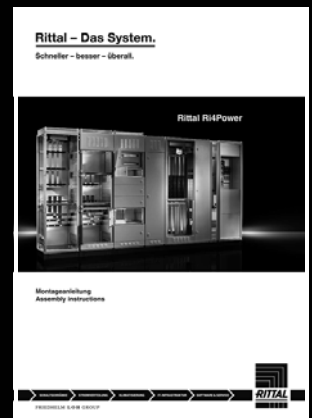
for Form 1-4, with Flat-PLS, Maxi-PLS and RiLine

These assembly instructions explain the configuration of type-tested Ri4Power field types and possible busbar systems, divided into 3 sections. The first section explains the assembly sequence for the individual stages of the possible field types in diagrammatic form.

The second section provides detailed assembly instructions using diagrams and data tables. The final section explains the installation of optional accessories and general work operations.

This documentation is available for downloading at the Rittal website www.rittal.com under "Download brochures". Alternatively, it may be ordered as a CD.

Packs of	Model No.
1 pc(s).	9676.000



Rittal – The System.

Faster – better – everywhere.



Ri4Power ISV distribution enclosures

Installation distribution enclosure

- Based on baying system TS 8,
see page 75
- Based on system enclosure SE 8,
see page 81
- Mounting kits,
see page 298

Wall-mounted distribution

- Based on compact enclosure AE,
see page 46
- Mounting kits,
see page 298

Extension modules

- Easy mounting on support frame or
support plate
- Individual combination and configuration
- Pitch pattern 150 x 250 mm
- Extension modules,
see page 299

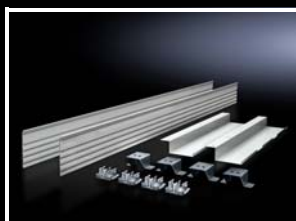
Power distribution components

- Bus-mounting fuse bases,
see page 236
- NH fuse-switch disconnectors,
see page 238
- NH slimline fuse-switch disconnectors,
see page 246



ISV distribution enclosures

Mounting kits



Mounting kits

for TS, SE

For mounting installation modules in TS/SE enclosures.

Note:

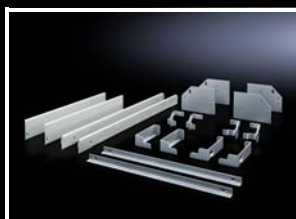
- TS 8 baying systems, see from page 68
- System enclosures SE 8, see from page 81

Supply includes:

- Mounting aid support
- Contact hazard protection
- Support for contact hazard protection
- Basic supports for frame holders
- Assembly parts

For enclosure	Packs of							Page
Design: Sheet steel, spray-finished Model No.		8604.500	8606.500	9666.955	9666.915	9666.965	9666.925	8684.500 8685.500 8686.500 5830.500
Design: Stainless steel 1.4301 Model No.		-	8452.600	-	-	-	-	8457.600 5851.500
Enclosure width mm		600		850		1100		600
Enclosure height mm		2000			2000			1800
Enclosure depth mm		400	600	400	600	400	600	400 500 600
Width unit (WU)		2		3		4		2
Height unit (U)		12		12		12		11
Model No.	1 pc(s).	9666.900		9666.910		9666.920		9666.930
Also required								
Mounting angle 11 U	2 pc(s).	-	-	-	-	-	-	9666.711 305
Mounting angle 12 U	2 pc(s).	9666.712	-	9666.712	-	9666.712	-	305
Depth stay for enclosure depth 400/500/600 mm	2 pc(s).	-	-	-	-	9666.730	-	305
Accessories								
Cross rail 2 WU	2 pc(s).	9666.722	-	9666.722	-	9666.722	9666.722	305
Cross rail 3 WU	2 pc(s).	-	-	9666.723	-	9666.723	-	305
Cross rail 4 WU	2 pc(s).	-	-	-	-	9666.724	-	305
Mounting angle 2 U	2 pc(s).	9666.702	-	9666.702	-	9666.702	9666.702	305
Mounting angle 3 U	2 pc(s).	9666.703	-	9666.703	-	9666.703	9666.703	305
Mounting angle 4 U	2 pc(s).	9666.704	-	9666.704	-	9666.704	9666.704	305
Mounting angle 5 U	2 pc(s).	-	-	-	-	-	9666.705	305
Mounting angle 6 U	2 pc(s).	-	-	-	-	-	9666.706	305
Mounting angle 7 U	2 pc(s).	-	-	-	-	-	9666.707	305
Depth stay for enclosure depth 400/500/600 mm	2 pc(s).	9666.730	-	9666.730	-	-	9666.730	305
Equipment support connectors	4 pc(s).	9666.740	-	9666.740	-	9666.740	9666.740	305

1 WU $\hat{=}$ 250 mm, 1 U $\hat{=}$ 150 mm



Mounting kits

for AE

For mounting installation modules in AE enclosures.

Note:

- Compact enclosures AE, see from page 47

Supply includes:

- Support plates
- Spacer brackets
- Contact hazard protection
- Angle bracket for contact hazard protection
- Horizontal mounting angle
- Assembly parts

For enclosure	Packs of							Page
Design: Sheet steel, spray-finished Model No.		1038.500	1057.500	1076.500	1090.500	1260.500	1213.500	
Design: Stainless steel 1.4301 Model No.		1008.600	-	1012.600	-	-	1019.600	
Design: Stainless steel 1.4404 Model No.		-	-	-	-	-	1019.500	
Enclosure width mm		380	500	600	600	600	1000	
Enclosure height mm		600	700	760	1000	1200	1200	
Enclosure depth mm		210	250	210	250	300	300	
Width unit (WU)		1	1	2	2	2	3	
Height unit (U)		3	4	4	6	7	7	
Model No.	1 pc(s).	9666.800	9666.810	9666.820	9666.830	9666.840	9666.850	
Accessories								
Mounting angle 3 U	2 pc(s).	9666.753	-	-	-	-	-	305
Mounting angle 4 U	2 pc(s).	-	9666.754	9666.754	-	-	-	305
Mounting angle 6 U	2 pc(s).	-	-	-	9666.756	-	-	305
Mounting angle 7 U	2 pc(s).	-	-	-	-	9666.757	9666.757	305

1 WU $\hat{=}$ 250 mm, 1 U $\hat{=}$ 150 mm

ISV distribution enclosures

Installation modules

1 Contact hazard protection modules

- For covering free installation areas
- Cover is prepared for a lead seal

Material:

- Cover: Polystyrene (PS)

Colour:

- RAL 7035

2 Mounting plate modules

- With mounting plate made from 2 mm zinc-plated sheet steel
- Cover is prepared for a lead seal
- Possible installation depth 105 – 140 mm

Size				Packs of	1 Contact hazard protection		2 Mounting plate	
Width unit		Height unit			Interior installation	Model No.	Dimensions of mounting plate mm	Model No.
WU	mm	U	mm					
1	250	1	150	Empty module	9666.000	188 x 116	9666.080	
1	250	2	300		9666.010	188 x 266	9666.090	
1	250	3	450		9666.020	188 x 416	9666.100	
1	250	4	600		9666.030	188 x 566	9666.110	
2	500	1	150		9666.040	438 x 116	9666.120	
2	500	2	300		9666.050	438 x 266	9666.130	
2	500	3	450		9666.060	438 x 416	9666.140	
2	500	4	600		9666.070	438 x 566	9666.150	
3	750	2	300		9666.053	688 x 266	9666.133	
3	750	3	450		9666.063	688 x 416	9666.143	
3	750	4	600		9666.073	–	–	

1 WU \geq 250 mm
1 U \geq 150 mm



1 Support rail modules

- For installing terminal blocks, switchgear, etc.
- Support rails 35/15 mm
- Adjustable on a 25 mm pitch pattern
- Cover is prepared for a lead seal

Material:

- Cover: Polystyrene (PS)

Colour:

- RAL 7035



Accessories:

- Cover strips for DIN rail mounted device modules, see page 304

2 DIN rail mounted device modules

- To accommodate DIN rail mounted devices
- Support rails 35/15 mm
- Cover is prepared for a lead seal

Size				Packs of	1 Support rails		2 DIN rail mounted devices	
Width unit		Height unit			Number of support rails	Model No.	Mechanical interior installation ¹⁾	Model No.
WU	mm	U	mm					
1	250	1	150	1 pc(s).	1	9666.160	12 divider units (1 x 12 x 18 mm)	9666.240
1	250	2	300	1 pc(s).	2	9666.170	24 divider units (2 x 12 x 18 mm)	9666.250
1	250	3	450	1 pc(s).	3	9666.180	36 divider units (3 x 12 x 18 mm)	9666.260
1	250	4	600	1 pc(s).	4	9666.190	48 divider units (4 x 12 x 18 mm)	9666.270
2	500	1	150	1 pc(s).	1	9666.200	24 divider units (2 x 12 x 18 mm)	9666.280
2	500	2	300	1 pc(s).	2	9666.210	48 divider units (4 x 12 x 18 mm)	9666.290
2	500	3	450	1 pc(s).	3	9666.220	72 divider units (6 x 12 x 18 mm)	9666.300
2	500	4	600	1 pc(s).	4	9666.230	–	–
3	750	2	300	1 pc(s).	2	9666.213	72 divider units (6 x 12 x 18 mm)	9666.293
3	750	3	450	1 pc(s).	3	9666.223	108 divider units (9 x 12 x 18 mm)	9666.303

1 WU \geq 250 mm
1 U \geq 150 mm

¹⁾ No. of fields x divider units x width



ISV distribution enclosures

Installation modules



Connection terminal blocks

- For connecting copper and aluminium conductors
- Single-wire or multi-wire conductors with crimped wire end ferrule or laminated copper bar

Material:

– Duroplastic

Colour:

– RAL 7035

Design	Connection of round conductors mm ²	Clamping area for laminated copper bars, W x H mm	Packs of	Model No.	Page
250 A, 5-pole	1 x 16 – 150 or 2 x 16 – 70	17 x 21	1 pc(s).	9666.340	
400 A, 5-pole	1 x 50 – 240 or 2 x 25 – 120	25 x 21	1 pc(s).	9666.350	

Also required

Description	Size				Packs of	Model No.	Page
	Width unit		Height unit				
	WU	mm	U	mm			
Mounting kit for connection terminal block	1	250	3	450	1 pc(s).	9666.310	
Contact hazard protection modules	1	250	3	450	1 pc(s).	9666.020	299

Accessories

Laminated copper bars	255
1 WU $\hat{=}$ 250 mm	
1 U $\hat{=}$ 150 mm	



NH fuse-switch disconnecter modules

- Suitable for the accommodation of NH fuse-switch disconnectors for mounting plate assembly
- Cover is prepared for a lead seal

Material:

– Cover: Polystyrene (PS)

Colour:

– RAL 7035

Note:

– Blanking cover 9666.665 should be used to seal unneeded cut-outs for NH fuse-switch disconnectors size 00

To fit NH disconnector		Size				Packs of	Model No.	Page
Size	Model No.	Width unit		Height unit				
		WU	mm	U	mm			
2 pc(s), size 00	9344.000/.010/ .020/.030/.040/.050	1	250	2	300	1 pc(s).	9666.380	
4 pc(s), size 00		2	500	2	300	1 pc(s).	9666.390	
1 pc(s), size 1	9344.100/.110/ 130/.150	1	250	3	450	1 pc(s).	9666.400	
1 pc(s), size 2	9344.200/.210/ 230/.250	1	250	3	450	1 pc(s).	9666.410	
1 pc(s), size 3 or 2 pc(s), size 2	9344.300/.310/ 330/.350	2	500	3	450	1 pc(s).	9666.060 ¹⁾	299
						1 pc(s).	9666.420 ¹⁾	300

1 WU $\hat{=}$ 250 mm
1 U $\hat{=}$ 150 mm

¹⁾ Module unit consisting of disconnector cross-member 9666.420 and contact hazard protection module 9666.060



Disconnector cross-member

for NH fuse-switch disconnecter, size 2/3

- Suitable for the accommodation of NH fuse-switch disconnectors for mounting plate assembly

To fit NH disconnector		Size				Packs of	Model No.	Page
Size	Model No.	Width unit		Height unit				
		WU	mm	U	mm			
1 pc(s), size 3 or 2 pc(s), size 2	9344.300/.310/ 330/.350	2	500	3	450	1 pc(s).	9666.420	

Also required

Contact hazard protection modules	1 pc(s).	9666.060	299
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ISV distribution enclosures

Installation modules

NH slimline fuse-switch disconnecter modules

For NH slimline fuse-switch disconnecters, sizes 00 to 3 (100/185 mm bar centre distance).

Material:

– Cover: Polystyrene (PS)

Colour:

– RAL 7035

Note:

- Busbars are not included with the supply
- In order to ensure problem-free cable connection, a contact hazard protection module or an N/PE busbar module must be installed above or below the NH slimline fuse-switch disconnecter modules



Design	To fit NH slimline fuse-switch disconnecters Model No.	Size				Packs of	Model No.	Page
		Width unit		Height unit				
		WU	mm	U	mm			
100 mm module, 3-pole, max. 3 x size 00	9346.020 9346.030	1	250	3	450	1 pc(s).	9666.570	
100 mm module, 3-pole, max. 6 x size 00		2	500	3	450	1 pc(s).	9666.580	
100 mm module, 3-pole, max. 10 x size 00		3	750	3	450	1 pc(s).	9666.583	
185 mm module, 3-pole, max. 8 x size 00/ 4 x size 1, 2, 3	9346.040 9346.050 9346.110/.115 9346.210/.215 9346.310/.315	2	500	5	750	1 pc(s).	9666.550	
185 mm module, 3-pole, max. 12 x size 00/ 6 x size 1, 2, 3		3	750	5	750	1 pc(s).	9666.560	

Also required

Contact hazard protection modules	299
Busbar modules N/PE	302

1 WU Δ 250 mm

1 U Δ 150 mm

Circuit-breaker modules

- Suitable for accommodating standard moulded-case circuit-breakers from ABB, Eaton, Schneider Electric and Siemens
- Cover is prepared for a lead seal

Material:

– Cover: Polystyrene (PS)

Colour:

– RAL 7035

Note:

- Attachment of the circuit-breakers and the corresponding cut-out dimensions for the cover are shown in the enclosed assembly instructions
- Circuit-breakers are not included with the supply



For moulded-case circuit-breakers	Size				Packs of	Model No.
	Width unit		Height unit			
	WU	mm	U	mm		
up to 250 A	1	250	2	300	1 pc(s).	9666.430
up to 630 A	2	500	3	450	1 pc(s).	9666.440

1 WU Δ 250 mm

1 U Δ 150 mm

ISV distribution enclosures

Installation modules



Meter mounting board module

- Open module for internal measurements
- Clearance depth available for meter installation 170 mm

Material:

- Meter mounting board: Polystyrene (PS)

Colour:

- RAL 7035

Note:

- The meter mounting board module does not comply with meter mounting board standard DIN 43 870/VDE 0603 and does not meet the conditions for total insulation. Use in unmeasured areas only by arrangement with the local electricity supply company.
- 1 contact hazard protection module/DIN rail mounted device module with 1 WU and at least 1 U is required both above and below the module

Size				Packs of	Model No.	Page
Width unit		Height unit				
WU	mm	U	mm			
1	250	3	450	1 pc(s).	9666.640	

Also required

Contact hazard protection modules	299
Support rail modules	299
DIN rail mounted device modules	299
1 WU $\hat{=}$ 250 mm	
1 U $\hat{=}$ 150 mm	



Busbar modules N/PE

- For attaching the busbars for N and PE
- Cover is prepared for a lead seal

Material:

- Cover: Polystyrene (PS)

Colour:

- RAL 7035

Note:

- Copper or CUPONAL busbars should be ordered separately, see page 252
- Not suitable for use in mounting kit AE

For busbars mm	Size				Packs of	Model No.
	Width unit		Height unit			
	WU	mm	U	mm		
12 x 5 to 30 x 10 mm	1	250	2	300	1 pc(s).	9666.590
	2	500	2	300	1 pc(s).	9666.600
	3	750	2	300	1 pc(s).	9666.603

- 1 WU $\hat{=}$ 250 mm
- 1 U $\hat{=}$ 150 mm

ISV distribution enclosures

Installation modules

Busbar modules

For assembling bus-mounting fuse bases E18, E27, E33 and D-Switch as well as NH fuse-switch disconnectors sizes 000 and 00 (3-pole, 60 mm bar centre distance).

Material:

– Cover: Polystyrene (PS)

Colour:

– RAL 7035

Note:

– Busbars are not included with the supply



Size				To fit		Packs of	Model No.	Page
Width unit		Height unit		Fusible elements for busbar systems Model No.	NH disconnectors Model No.			
WU	mm	U	mm					
1	250	2	300	3418.010 3427.010 3433.010 9340.950	9343.000 ¹⁾ 9343.020 ¹⁾ 9343.040 ¹⁾ 3431.020 3431.030 3431.035	1 pc(s).	9666.520	
2	500	2	300		3431.020 3431.030 3431.035	1 pc(s).	9666.530	
3	750	2	300		3431.020 3431.030 3431.035	1 pc(s).	9666.533	

Accessories

Blanking cover	10 pc(s).	9666.660	304
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1 WU \geq 250 mm

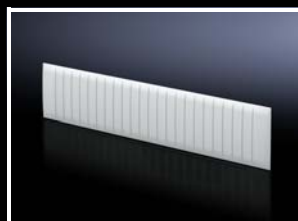
1 U \geq 150 mm

¹⁾ A depth extension frame 9666.680 should additionally be used to ensure unrestricted connection. NH fuse-switch disconnectors size 00 cannot be combined with other equipment.



ISV distribution enclosures

Accessories



Cover strips

for DIN rail mounted device modules

For blanking spare component cut-outs in DIN rail mounted device modules, max. 12 divider units (12 x 18 mm), divisible every 9 mm.

Material:

– ABS

Colour:

– RAL 7035

Packs of	Model No.
5 pc(s).	9666.650



Blanking cover

- For blanking unused cut-outs
- To fit bus-mounting fuse base, D-Switch and NH fuse-switch disconnecter size 000 (3-pole, 60 mm busbar systems) in busbar modules (9666.520/.530/.533)
- Width: 16 – 34 mm variable

Material:

– Polypropylene (PP)

Colour:

– RAL 7035

Packs of	Model No.
10 pc(s).	9666.660



Blanking cover

for disconnectors, size 00

- For blanking unused cut-outs with NH fuse-switch disconnectors size 00 in NH fuse-switch disconnecter modules (9666.380/.390)
- Width: 117 mm

Material:

– PVC

Colour:

– RAL 7035

Packs of	Model No.
1 pc(s).	9666.665



Wiring brackets

For tool-free attachment to support rails TS 35/15, for cable routing on the rear of support rail modules.

Material:

– Polyamide (PA 6.6)

Packs of	Model No.
10 pc(s).	9666.670



Depth extension frame

For extending the depth of the contact hazard protection cover. Allows unrestricted connection of NH fuse-switch disconnectors, size 00 (3-pole, 60 mm busbar systems).

Material:

– Polystyrene (PS)

Colour:

– RAL 7035

Size				Packs of	Model No.
Width unit		Height unit			
WU	mm	U	mm		
1	250	2	300	1 pc(s).	9666.680

1 WU \triangleq 250 mm

1 U \triangleq 150 mm

Note:

- NH fuse-switch disconnectors size 00 with covers and depth extension frame cannot be used in conjunction with other equipment

ISV distribution enclosures

Accessories

Cross rails

for TS, SE

For horizontal sub-division of the support frame in the TS/SE enclosure.

Material:

– Sheet steel

Surface finish:

– Zinc-plated

Width unit		Packs of	Model No.
WU	mm		
2	500	2 pc(s).	9666.722
3	750	2 pc(s).	9666.723
4	1000	2 pc(s).	9666.724

1 WU \triangleq 250 mm



Mounting angles

for TS, SE

For vertical sub-division of the support frame in the TS/SE enclosure.

Material:

– Sheet steel

Surface finish:

– Zinc-plated

Height unit		Packs of	Model No.
U	mm		
2	300	2 pc(s).	9666.702
3	450	2 pc(s).	9666.703
4	600	2 pc(s).	9666.704
5	750	2 pc(s).	9666.705
6	900	2 pc(s).	9666.706
7	1050	2 pc(s).	9666.707
11	1650	2 pc(s).	9666.711
12	1800	2 pc(s).	9666.712

1 U \triangleq 150 mm



Accessories:

– Equipment support connector, see page 305

Mounting angles

for AE

For vertical sub-division of the support frame in the AE enclosure.

Material:

– Sheet steel

Surface finish:

– Zinc-plated

Height unit		Packs of	Model No.
U	mm		
3	450	2 pc(s).	9666.753
4	600	2 pc(s).	9666.754
6	900	2 pc(s).	9666.756
7	1050	2 pc(s).	9666.757

1 U \triangleq 150 mm



Depth stay

- For enclosure depth 400/500/600 mm
- For attaching the support frame in the TS/SE enclosure

Material:

– Sheet steel

Surface finish:

– Zinc-plated

Packs of	Model No.
2 pc(s).	9666.730



Equipment support connector

- For connecting 2 mounting angles for TS/SE
- Increases the stability of the frame structure

Material:

– T-section: Aluminium

Packs of	Model No.
4 pc(s).	9666.740



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ENCLOSURES

POWER DISTRIBUTION

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Climate control

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Rack-mounted fans/tangential fans.....	326
Air/air heat exchangers.....	329

Cooling units

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Wall-mounted cooling units.....	335
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Cooling with water

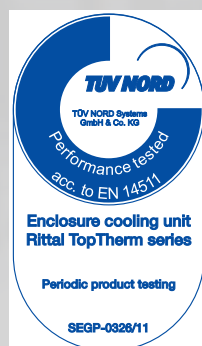
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TÜV-tested performance to DIN EN 14511:2012-01

Rittal is the only supplier worldwide whose complete range of enclosure cooling units is tested to the latest (DIN) EN standard (except cooling units with Atex approval for zone 22 and NEMA 4X).

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With our Therm software and the innovative Therm App, calculating the climate control requirements becomes child's play.

Meanwhile, the Rittal range of climate control products has the right solution to suit every application.

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- Rittal – Therm software
- Rittal – Type-tested climate control systems



ENCLOSURES

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- Cooling with ambient air
- Cooling units
- Cooling with water
- Enclosure heaters



ENCLOSURES

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SOFTWARE & SERVICES



Your benefits

As a system supplier, Rittal is the world's leading provider of exceptionally effective yet energy-efficient and environmentally-friendly climate control solutions, precisely tailored to the customer's individual requirements.

Faster – Simple project planning with the Therm App

Better – Efficient, energy-saving climate control technology, TÜV-tested

Everywhere – Global spare parts service



ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL

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Cooling with ambient air

TopTherm fan-and-filter units

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Roof-mounted fans

TopTherm roof-mounted fans.....	400 – 800 m ³ /h.....	324
Roof-mounted fans, roof ventilation.....	360 m ³ /h.....	325

Rack-mounted climate control

Rack-mounted fans for 482.6 mm (19').....	320 – 480 m ³ /h.....	326
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Tangential fans for 482.6 mm (19').....	320 m ³ /h.....	328

Air/air heat exchangers

TopTherm, wall-mounted with controller.....	17.5 – 90 W/K.....	329
Roof-mounted.....	66 W/K.....	330



TopTherm fan-and-filter units



Air throughputs incl. outlet filter and protection categories Page 323 **Climate control accessories** Page 369 **Therm software** Page 385

Colour:

– RAL 7035

Supply includes:

– Complete unit ready to install, including filter mat

Note:

– For energy-efficient operation of the fan-and-filter units, we recommend using the enclosure internal thermostat, the speed control or the digital enclosure internal temperature display and thermostat

Approvals:

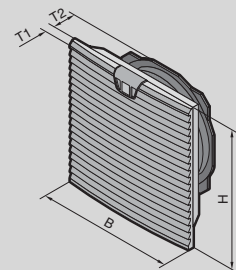
Available on the Internet

Performance diagrams:

Available on the Internet

Technical details:

Available on the Internet



Air throughput 20 – 55 m³/h

Model No.	Packs of	3237.100	3237.110	3237.124	3238.100	3238.110	3238.124	Page
Rated operating voltage V, ~, Hz		230, 1~, 50/60	115, 1~, 50/60	24 (DC)	230, 1~, 50/60	115, 1~, 50/60	24 (DC)	
Air throughput, unimpeded air flow m³/h		20 / 25	20 / 25	20	55 / 66	55 / 66	55	
Rated current A		0.065 / 0.052	0.12 / 0.1	0.125	0.12 / 0.11	0.24 / 0.22	0.24	
Pre-fuse A		2	2	2	2	2	2	
Motor circuit-breaker		–	–	–	–	–	–	
Power consumption W		11 / 9	11 / 9	3	19 / 18	19 / 18	5.5	
Width (B) mm		116.5	116.5	116.5	148.5	148.5	148.5	
Height (H) mm		116.5	116.5	116.5	148.5	148.5	148.5	
Depth (T1) mm		16	16	16	16	16	16	
Max. installation depth (T2) mm		43	43	43	58.5	58.5	58.5	
Required mounting cut-out (BxH) mm		92 x 92	92 x 92	92 x 92	124 x 124	124 x 124	124 x 124	
Fan		Axial, self-starting shaded pole motor	Axial, self-starting shaded pole motor	Axial, DC motor	Diagonal, self-starting shaded pole motor	Diagonal, self-starting shaded pole motor	Diagonal, DC motor	
Operating temperature range		-15°C...+55°C	-15°C...+55°C	-15°C...+55°C	-15°C...+55°C	-15°C...+55°C	-15°C...+55°C	
Storage temperature range		-30°C...+70°C	-30°C...+70°C	-30°C...+70°C	-30°C...+70°C	-30°C...+70°C	-30°C...+70°C	
Noise level dB(A)		38 / 43	38 / 43	38	46 / 49	46 / 49	46	

Accessories

Outlet filter	1 pc(s).	3237.200	3237.200	3237.200	3238.200	3238.200	3238.200	372
Spare filter mats		see page	see page	see page	see page	see page	see page	371
Fine filter mats	5 pc(s).	–	–	–	3238.055	3238.055	3238.055	371
Hose-proof hood	1 pc(s).	3237.080	3237.080	3237.080	3238.080	3238.080	3238.080	372
Blanking cover	2 pc(s).	3237.020	3237.020	3237.020	3238.020	3238.020	3238.020	372
Enclosure internal thermostat	1 pc(s).	3110.000	3110.000	3110.000	3110.000	3110.000	3110.000	379
Digital enclosure internal temperature display and thermostat	1 pc(s).	3114.200	3114.200	3114.200	3114.200	3114.200	3114.200	379
Hygrostat	1 pc(s).	3118.000	3118.000	3118.000	3118.000	3118.000	3118.000	380
Speed control	1 pc(s).	3120.200	3120.200	–	3120.200	3120.200	–	381

TopTherm fan-and-filter units

Air throughput 105 – 180 m³/h

Model No.	Packs of	3239.100	3239.110	3239.124	3240.100	3240.110	3240.124	Page
Rated operating voltage V, ~, Hz		230, 1~, 50/60	115, 1~, 50/60	24 (DC)	230, 1~, 50/60	115, 1~, 50/60	24 (DC)	
Air throughput, unimpeded air flow m ³ /h		105 / 120	105 / 120	105	180 / 160	180 / 160	180	
Rated current A		0.12 / 0.11	0.24 / 0.22	0.23	0.21 / 0.19	0.42 / 0.38	0.43	
Pre-fuse A		2	2	2	2	4	2	
Motor circuit-breaker		–	–	–	–	–	–	
Power consumption W		19 / 18	19 / 18	5.5	35 / 34	35 / 34	10	
Width (B) mm		204	204	204	255	255	255	
Height (H) mm		204	204	204	255	255	255	
Depth (T1) mm		24	24	24	25	25	25	
Max. installation depth (T2) mm		90	90	90	107	107	107	
Required mounting cut-out (BxH) mm		177 x 177	177 x 177	177 x 177	224 x 224	224 x 224	224 x 224	
Fan		Diagonal, self-starting shaded pole motor	Diagonal, self-starting shaded pole motor	Diagonal, DC motor	Diagonal, self-starting shaded pole motor	Diagonal, self-starting shaded pole motor	Diagonal, DC motor	
Operating temperature range		-15°C...+55°C	-15°C...+55°C	-15°C...+55°C	-30°C...+55°C	-30°C...+55°C	-30°C...+55°C	
Storage temperature range		-30°C...+70°C	-30°C...+70°C	-30°C...+70°C	-30°C...+70°C	-30°C...+70°C	-30°C...+70°C	
Noise level dB(A)		46 / 49	46 / 49	46	51 / 46	51 / 46	51	

Accessories

Outlet filter	1 pc(s).	3239.200	3239.200	3239.200	3240.200	3240.200	3240.200	372
Spare filter mats		see page	see page	see page	see page	see page	see page	371
Fine filter mats	5 pc(s).	3181.100	3181.100	3181.100	3182.100	3182.100	3182.100	371
Hose-proof hood	1 pc(s).	3239.080	3239.080	3239.080	3240.080	3240.080	3240.080	372
Blanking cover	2 pc(s).	3239.020	3239.020	3239.020	3240.020	3240.020	3240.020	372
Enclosure internal thermostat	1 pc(s).	3110.000	3110.000	3110.000	3110.000	3110.000	3110.000	379
Digital enclosure internal temperature display and thermostat	1 pc(s).	3114.200	3114.200	3114.200	3114.200	3114.200	3114.200	379
Hygrostat	1 pc(s).	3118.000	3118.000	3118.000	3118.000	3118.000	3118.000	380
Speed control	1 pc(s).	3120.200	3120.200	–	3120.200	3120.200	–	381

Air throughput 230 – 550 m³/h

Model No.	Packs of	3241.100	3241.110	3241.124	3243.100	3243.110	Page
Rated operating voltage V, ~, Hz		230, 1~, 50/60	115, 1~, 50/60	24 (DC)	230, 1~, 50/60	115, 1~, 50/60	
Air throughput, unimpeded air flow m ³ /h		230 / 250	230 / 250	230	550 / 600	550 / 600	
Rated current A		0.26 / 0.24	0.52 / 0.48	0.8	0.37 / 0.39	0.78 / 0.8	
Pre-fuse A		4	4	2	4	6	
Motor circuit-breaker		–	–	–	–	–	
Power consumption W		40 / 42	40 / 42	19	70 / 87	75 / 90	
Width (B) mm		255	255	255	323	323	
Height (H) mm		255	255	255	323	323	
Depth (T1) mm		25	25	25	25	25	
Max. installation depth (T2) mm		107	107	107	118.5	118.5	
Required mounting cut-out (BxH) mm		224 x 224	224 x 224	224 x 224	292 x 292	292 x 292	
Fan		Diagonal, self-starting shaded pole motor	Diagonal, self-starting shaded pole motor	Diagonal, DC motor	Diagonal, 1~ capacitor motor	Diagonal, 1~ capacitor motor	
Operating temperature range		-30°C...+55°C	-30°C...+55°C	-30°C...+55°C	-30°C...+55°C	-30°C...+55°C	
Storage temperature range		-30°C...+70°C	-30°C...+70°C	-30°C...+70°C	-30°C...+70°C	-30°C...+70°C	
Noise level dB(A)		54 / 56	54 / 56	54	59 / 61	59 / 61	

Accessories


Outlet filter	1 pc(s).	3240.200	3240.200	3240.200	3243.200	3243.200	372
Spare filter mats		see page	see page	see page	see page	see page	371
Fine filter mats	5 pc(s).	3182.100	3182.100	3182.100	3183.100	3183.100	371
Hose-proof hood	1 pc(s).	3240.080	3240.080	3240.080	3243.080	3243.080	372
Blanking cover	2 pc(s).	3240.020	3240.020	3240.020	3243.020	3243.020	372
Enclosure internal thermostat	1 pc(s).	3110.000	3110.000	3110.000	3110.000	3110.000	379
Digital enclosure internal temperature display and thermostat	1 pc(s).	3114.200	3114.200	3114.200	3114.200	3114.200	379
Hygrostat	1 pc(s).	3118.000	3118.000	3118.000	3118.000	3118.000	380
Speed control	1 pc(s).	3120.200	3120.200	–	3120.200	3120.200	381

TopTherm fan-and-filter units

Air throughput 700 m³/h

Model No.	Packs of	3244.100	3244.110	3244.140	Page
Rated operating voltage V, ~, Hz		230, 1~, 50/60	115, 1~, 50/60	400, 3~, 50 460, 3~, 60	
Air throughput, unimpeded air flow m ³ /h		700 / 770	700 / 770	700 / 770	
Rated current A		0.43 / 0.6	0.9 / 1.25	0.17 / 0.21	
Pre-fuse A		4	6	–	
Motor circuit-breaker A		–	–	6.3...10	
Power consumption W		95 / 135	100 / 145	93 / 140	
Width (B) mm		323	323	323	
Height (H) mm		323	323	323	
Depth (T1) mm		25	25	25	
Max. installation depth (T2) mm		130.5	130.5	130.5	
Required mounting cut-out (BxH) mm		292 x 292	292 x 292	292 x 292	
Fan		Diagonal, 1~ capacitor motor	Diagonal, 1~ capacitor motor	Diagonal, three-phase motor	
Operating temperature range		-30°C...+55°C	-30°C...+55°C	-30°C...+55°C	
Storage temperature range		-30°C...+70°C	-30°C...+70°C	-30°C...+70°C	
Noise level dB(A)		65 / 66	65 / 66	65 / 66	
Accessories					
Outlet filter	1 pc(s).	3243.200	3243.200	3243.200	372
Spare filter mats		see page	see page	see page	371
Fine filter mats	5 pc(s).	3183.100	3183.100	3183.100	371
Hose-proof hood	1 pc(s).	3243.080	3243.080	3243.080	372
Blanking cover	2 pc(s).	3243.020	3243.020	3243.020	372
Enclosure internal thermostat	1 pc(s).	3110.000	3110.000	–	379
Digital enclosure internal temperature display and thermostat	1 pc(s).	3114.200	3114.200	–	379
Hygrostat	1 pc(s).	3118.000	3118.000	–	380
Speed control	1 pc(s).	3120.200	3120.200	–	381

Accessories



Spare filter mats

see page 371

TopTherm fan-and-filter units



Air throughputs incl. outlet filter and protection categories Page 323 **Climate control accessories** Page 369 **Therm software** Page 385

Energy-efficient version of the TopTherm fan-and-filter units with diagonal fan technology. Model numbers 3240.500 to 3245.510 have a control interface with tachometer signal output integrated as standard, allowing the fan to be controlled and its speed monitored.

Colour:
– RAL 7035

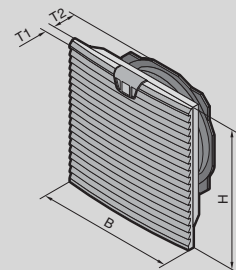
Supply includes:
– Complete unit ready to install, including filter mat

Note:
– For even more efficient operation or for monitoring the fan-and-filter units, we recommend the use of an EC speed control for EC fan-and-filter units

Approvals:
Available on the Internet

Performance diagrams:
Available on the Internet

Technical details:
Available on the Internet



Air throughput 55 – 230 m³/h, with EC technology

Model No.	Packs of	3238.500	3239.500	3240.500	3241.500	Page
Control interface		–	–	■	■	
Rated operating voltage V, ~, Hz		200 - 240, 1~, 50/60	200 - 240, 1~, 50/60	200 - 240, 1~, 50/60	200 - 240, 1~, 50/60	
Air throughput, unimpeded air flow m ³ /h		55	105	180	230	
Rated current A		0.05	0.05	0.12	0.17	
Pre-fuse A		6	6	6	6	
Power consumption W		6	6	11	16	
Width (B) mm		148.5	204	255	255	
Height (H) mm		148.5	204	255	255	
Depth (T1) mm		16	24	25	25	
Max. installation depth (T2) mm		58.5	90	107	107	
Required mounting cut-out (BxH) mm		124 x 124	177 x 177	224 x 224	224 x 224	
Fan		Diagonal, EC motor	Diagonal, EC motor	Diagonal, EC motor	Diagonal, EC motor	
Operating temperature range		-20°C...+55°C	-20°C...+55°C	-25°C...+55°C	-25°C...+55°C	
Storage temperature range		-30°C...+70°C	-30°C...+70°C	-25°C...+70°C	-25°C...+70°C	
Noise level dB(A)		49	53	47	52	

Accessories						
Outlet filter	1 pc(s).	3238.200	3239.200	3240.200	3240.200	372
Spare filter mats		see page	see page	see page	see page	371
Fine filter mats	5 pc(s).	3238.055	3181.100	3182.100	3182.100	371
Hose-proof hood	1 pc(s).	3238.080	3239.080	3240.080	3240.080	372
Blanking cover	2 pc(s).	3238.020	3239.020	3240.020	3240.020	372
EC speed control		–	–	from page	from page	380
Enclosure internal thermostat	1 pc(s).	3110.000	3110.000	3110.000	3110.000	379
Digital enclosure internal temperature display and thermostat	1 pc(s).	3114.200	3114.200	3114.200	3114.200	379
Hygrostat	1 pc(s).	3118.000	3118.000	3118.000	3118.000	380

TopTherm fan-and-filter units


Air throughput 550 – 900 m³/h, with EC technology

Model No.	Packs of	3243.500	3244.500	3245.500	3245.510	Page
Control interface		■	■	■	■	
Rated operating voltage V, ~, Hz		200 - 240, 1~, 50/60	200 - 240, 1~, 50/60	200 - 240, 1~, 50/60	100 - 130, 1~, 50/60	
Air throughput, unimpeded air flow m ³ /h		550	700	900	900	
Rated current A		0.5	0.7	1.33	2.1	
Pre-fuse A		6	6	4	6	
Power consumption W		51	80	165	165	
Width (B) mm		323	323	323	323	
Height (H) mm		323	323	323	323	
Depth (T1) mm		25	25	25	25	
Max. installation depth (T2) mm		118.5	130.5	130.5	130.5	
Required mounting cut-out (BxH) mm		292 x 292	292 x 292	292 x 292	292 x 292	
Fan		Diagonal, EC motor	Diagonal, EC motor	Diagonal, EC motor	Diagonal, EC motor	
Operating temperature range		-25°C...+55°C	-25°C...+55°C	-25°C...+55°C	-25°C...+55°C	
Storage temperature range		-25°C...+70°C	-25°C...+70°C	-25°C...+70°C	-25°C...+70°C	
Noise level dB(A)		63	64	72	72	

Accessories

Outlet filter	1 pc(s).	3243.200	3243.200	3243.200	3243.200	372
Spare filter mats		see page	see page	see page	see page	371
Fine filter mats	5 pc(s).	3183.100	3183.100	3183.100	3183.100	371
Hose-proof hood	1 pc(s).	3243.080	3243.080	3245.080	3245.080	372
Blanking cover	2 pc(s).	3243.020	3243.020	3243.020	3243.020	372
EC speed control		from page	from page	from page	from page	380
Enclosure internal thermostat	1 pc(s).	3110.000	3110.000	3110.000	3110.000	379
Digital enclosure internal temperature display and thermostat	1 pc(s).	3114.200	3114.200	3114.200	3114.200	379
Hygrostat	1 pc(s).	3118.000	3118.000	3118.000	3118.000	380

Accessories



EC speed control

see page 380

TopTherm fan-and-filter units



Air throughputs incl. outlet filter and protection categories Page 323 **Climate control accessories** Page 369 **Therm software** Page 385

Colour:

– RAL 7035

Supply includes:

– Complete unit ready to install, including filter mat

Note:

– For energy-efficient operation of the fan-and-filter units, we recommend using the enclosure internal thermostat, the speed control or the digital enclosure internal temperature display and thermostat

Approvals:

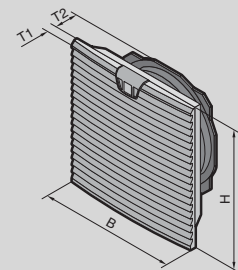
Available on the Internet

Performance diagrams:

Available on the Internet

Technical details:

Available on the Internet



Air throughput 20 – 180 m³/h, EMC

Model No.	Packs of	3237.600	3238.600	3239.600	3240.600	Page
Rated operating voltage V, ~, Hz		230, 1~, 50/60	230, 1~, 50/60	230, 1~, 50/60	230, 1~, 50/60	
Air throughput, unimpeded air flow m ³ /h		20 / 25	55 / 66	105 / 120	180 / 160	
Rated current A		0.065 / 0.052	0.12 / 0.11	0.12 / 0.11	0.21 / 0.19	
Pre-fuse A		2	2	2	2	
Power consumption W		11 / 9	19 / 18	19 / 18	35 / 34	
Width (B) mm		116.5	148.5	204	255	
Height (H) mm		116.5	148.5	204	255	
Depth (T1) mm		16	16	24	25	
Max. installation depth (T2) mm		43	58.5	90	107	
Required mounting cut-out (BxH) mm		92 x 92	124 x 124	177 x 177	224 x 224	
Fan		Axial, self-starting shaded pole motor	Diagonal, self-starting shaded pole motor	Diagonal, self-starting shaded pole motor	Diagonal, self-starting shaded pole motor	
Operating temperature range		-15°C...+55°C	-15°C...+55°C	-15°C...+55°C	-30°C...+55°C	
Storage temperature range		-30°C...+70°C	-30°C...+70°C	-30°C...+70°C	-30°C...+70°C	
Noise level dB(A)		38 / 43	46 / 49	46 / 49	51 / 46	


Accessories						
Outlet filter	1 pc(s).	3237.060	3238.060	3239.060	3240.060	372
Spare filter mats	5 pc(s).	3237.066	3238.066	3239.066	3240.066	371
Fine filter mats	5 pc(s).	–	3238.055	3181.100	3182.100	371
Hose-proof hood	1 pc(s).	3237.080	3238.080	3239.080	3240.080	372
Blanking cover	2 pc(s).	3237.020	3238.020	3239.020	3240.020	372
EC speed control		–	–	–	–	380
Enclosure internal thermostat	1 pc(s).	3110.000	3110.000	3110.000	3110.000	379
Digital enclosure internal temperature display and thermostat	1 pc(s).	3114.200	3114.200	3114.200	3114.200	379
Hygrostat	1 pc(s).	3118.000	3118.000	3118.000	3118.000	380
Speed control	1 pc(s).	3120.200	3120.200	3120.200	3120.200	381

TopTherm fan-and-filter units

Air throughput 230 – 900 m³/h, EMC

Model No.	Packs of	3241.600	3243.600	3244.600	3245.600	Page
Rated operating voltage V, ~, Hz		230, 1~, 50/60	230, 1~, 50/60	230, 1~, 50/60	200 - 240, 1~, 50/60	
Air throughput, unimpeded air flow m ³ /h		230 / 250	550 / 600	700 / 770	900	
Rated current A		0.26 / 0.24	0.37 / 0.39	0.43 / 0.6	1.33 / 1.33	
Pre-fuse A		4	4	4	4	
Power consumption W		40 / 42	70 / 87	95 / 135	165 / 165	
Width (B) mm		255	323	323	323	
Height (H) mm		255	323	323	323	
Depth (T1) mm		25	25	25	25	
Max. installation depth (T2) mm		107	118.5	130.5	130.5	
Required mounting cut-out (BxH) mm		224 x 224	292 x 292	292 x 292	292 x 292	
Fan		Diagonal, self-starting shaded pole motor	Diagonal, 1~ capacitor motor	Diagonal, 1~ capacitor motor	Diagonal, EC motor	
Operating temperature range		-30°C...+55°C	-30°C...+55°C	-30°C...+55°C	-25°C...+55°C	
Storage temperature range		-30°C...+70°C	-30°C...+70°C	-30°C...+70°C	+25°C...+70°C	
Noise level dB(A)		54 / 56	59 / 61	65 / 66	72	
Accessories						
Outlet filter	1 pc(s).	3240.060	3243.060	3243.060	3243.060	372
Spare filter mats	5 pc(s).	3240.066	3243.066	3243.066	3243.066	371
Fine filter mats	5 pc(s).	3182.100	3183.100	3183.100	3183.100	371
Hose-proof hood	1 pc(s).	3240.080	3243.080	3243.080	3245.080	372
Blanking cover	2 pc(s).	3240.020	3243.020	3243.020	3243.020	372
EC speed control		–	–	–	from page	380
Enclosure internal thermostat	1 pc(s).	3110.000	3110.000	3110.000	3110.000	379
Digital enclosure internal temperature display and thermostat	1 pc(s).	3114.200	3114.200	3114.200	3114.200	379
Hygrostat	1 pc(s).	3118.000	3118.000	3118.000	3118.000	380
Speed control	1 pc(s).	3120.200	3120.200	3120.200	–	381

Accessories



Therm software

see page 385

TopTherm fan-and-filter units

Air throughput and protection category

TopTherm fan-and-filter units

Model No.	Air throughput m ³ /h at 50/60 Hz				Protection category IP to IEC 60 529		
	Unimpeded air flow	With outlet filter including filter mat			Standard	With additional fine filter mat	With hose-proof hood
3237.100	20/25	1 x 3237.200	-	-	IP 54	IP 55	IP 56
3237.110		15/18	-	-			
3237.124		20	-	-			
3238.100	55/66	1 x 3238.200	2 x 3238.200	-			
3238.110		43/50	48/57	-			
3238.124	55	1 x 3238.200	2 x 3238.200	-			
3239.100	105/120	1 x 3239.200	2 x 3239.200	1 x 3240.200			
3239.110		87/100	93/108	98/111			
3239.124	105	1 x 3239.200	2 x 3239.200	1 x 3240.200			
3240.100	180/160	1 x 3240.200	2 x 3240.200	1 x 3243.200			
3240.110		138/115	165/140	165/140			
3240.124	180	1 x 3240.200	2 x 3240.200	1 x 3243.200			
3241.100	230/250	1 x 3240.200	2 x 3240.200	1 x 3243.200			
3241.110		183/195	203/230	203/230			
3241.124	230	1 x 3240.200	2 x 3240.200	1 x 3243.200			
3243.100	550/600	1 x 3243.200	2 x 3243.200	-			
3243.110		440/490	510/560	-			
3244.100	700/770	1 x 3243.200	2 x 3243.200	-			
3244.110		544/610	630/690	-			
3244.140		-	-	-			

TopTherm fan-and-filter units with EC technology

Model No.	Air throughput m ³ /h at 50/60 Hz				Protection category IP to IEC 60 529		
	Unimpeded air flow	With outlet filter including filter mat			Standard	With additional fine filter mat	With hose-proof hood
3238.500	55	1 x 3238.200	2 x 3238.200	-	IP 54	IP 55	IP 56
3239.500	105	1 x 3239.200	2 x 3239.200	1 x 3240.200			
3240.500	180	1 x 3240.200	2 x 3240.200	1 x 3243.200			
3241.500	230	1 x 3240.200	2 x 3240.200	1 x 3243.200			
3243.500	550	1 x 3243.200	2 x 3243.200	-			
3244.500	700	1 x 3243.200	2 x 3243.200	-			
3245.500	900	1 x 3243.200	2 x 3243.200	-	IP 51	IP 52	
3245.510	900	1 x 3243.200	2 x 3243.200	-			

TopTherm fan-and-filter units, EMC

Model No.	Air throughput m ³ /h at 50/60 Hz				Protection category IP to IEC 60 529		
	Unimpeded air flow	With EMC outlet filter including EMC filter mat			Standard	With additional fine filter mat	With hose-proof hood
3237.600	20/25	1 x 3237.060	-	-	IP 54	IP 55	IP 56
3238.600	55/66	1 x 3238.060	2 x 3238.060	-			
3239.600	105/120	1 x 3239.060	2 x 3239.060	1 x 3240.060			
3240.600	180/160	1 x 3240.060	2 x 3240.060	1 x 3243.060			
3241.600	230/250	1 x 3240.060	2 x 3240.060	1 x 3243.060			
3243.600	550/600	1 x 3243.060	2 x 3243.060	-			
3244.600	700/770	1 x 3243.060	2 x 3243.060	-			
3245.600	900	1 x 3243.060	2 x 3243.060	-	IP 51	IP 52	

TopTherm roof-mounted fans



Climate control accessories Page 369 Vent attachment TS Page 383

The active roof-mounted fans fit precisely onto the cut-outs of the small and medium performance categories of TopTherm roof-mounted cooling units.

Material:
– Sheet steel, spray-finished

Colour:
– RAL 7035

Protection category IP to IEC 60 529:
– IP 43

Technical details:
Available on the Internet

Supply includes:
– Unit ready for connection with built-in radial fan
– Sealing and assembly parts

Air throughput 400 – 800 m³/h

Model No.	Packs of	3149.410	3149.420	3149.440	3149.810	3149.820	3149.840	Page
Rated operating voltage V, ~, Hz		115, 1~, 50/60	230, 1~, 50/60	400, 3~, 50/60 460, 3~, 60	115, 1~, 50/60	230, 1~, 50/60	400, 3~, 50/60 460, 3~, 60	
Air throughput, unimpeded air flow m³/h		400	400	400	800	800	800	
Rated current A		1.1 / 1.6	0.55 / 0.88	0.35 / 0.35	1.5 / 2.2	0.75 / 1.1	0.35 / 0.55	
Power consumption W		120 / 170	120 / 170	95 / 140	170 / 225	170 / 225	180 / 310	
Width mm		550	550	550	550	550	550	
Height mm		125	125	125	125	125	125	
Depth mm		370	370	370	370	370	370	
Required mounting cut-out mm		475 x 260	475 x 260	475 x 260	475 x 260	475 x 260	475 x 260	
Operating temperature range		-10°C...+55°C	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C	
Noise level dB(A)		68 / 69	68 / 69	68 / 69	69 / 70	69 / 70	69 / 70	
Weight kg		10.0	10.0	10.0	11.0	11.0	11.0	
Accessories								
Roof plates TS	1 pc(s).	8801.320	8801.320	8801.320	8801.320	8801.320	8801.320	383
Digital enclosure internal temperature display and thermostat	1 pc(s).	3114.200	3114.200	–	3114.200	3114.200	–	379
Speed control	1 pc(s).	3120.200	3120.200	–	3120.200	3120.200	–	381
Enclosure internal thermostat	1 pc(s).	3110.000	3110.000	–	3110.000	3110.000	–	379

Roof-mounted fans, roof ventilation



Climate control accessories Page 369

Material:

- Sheet steel, spray-finished

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 43

Supply includes:

- Unit ready for connection with built-in radial fan
- Sealing and assembly parts
- Connection cable (3 m)
- Drilling template

Note:

- Via additional installation of the filter holder with filter mat, a protection category of IP 44 is achieved with roof vent 3148.007

Technical details:

Available on the Internet

Air throughput 360 m³/h

Model No.	Packs of	3148.007	3149.007	3169.007	Page
Rated operating voltage V, ~, Hz		without fan motor	230, 1~, 50/60	115, 1~, 50/60	
Air throughput, unimpeded air flow m³/h		-	360	360	
Rated current A		-	0.2	0.55	
Power consumption W		-	42	65	
Width mm		420	420	420	
Height mm		65	95	95	
Depth mm		340	340	340	
Required mounting cut-out mm		345 x 265	345 x 265	345 x 265	
Operating temperature range		-10°C...+60°C	-10°C...+60°C	-10°C...+60°C	
Noise level dB(A)		-	53	53	
Weight kg		6.8	7.8	7.8	
Accessories					
Digital enclosure internal temperature display and thermostat	1 pc(s).	-	3114.200	3114.200	379
Enclosure internal thermostat	1 pc(s).	-	3110.000	3110.000	379
Filter holder	1 pc(s).	3175.000	-	-	373

Rack-mounted fans for 482.6 mm (19")



Climate control accessories Page 369

Supply includes:

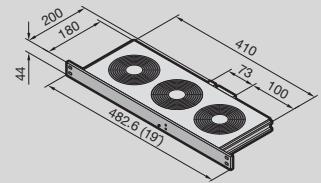
- Fully wired unit ready for connection
- Terminal strip and assembly parts

Approvals:

Available on the Internet

Technical details:

Available on the Internet



Air throughput 320 – 480 m³/h

Model No.	Packs of	3340.230	3341.115	3341.230	3342.024	3342.230	3342.500	Page
With monitoring		-	-	-	-	-	■	
Rated operating voltage V, ~, Hz		230, 1~, 50/60	115, 1~, 50/60	230, 1~, 50/60	24 (DC)	230, 1~, 50/60	115 - 230, 1~, 50/60 24 (DC)	
Air throughput, unimpeded air flow m³/h		320	480	480	480	480	480	
No. of fans		2	3	3	3	3	3	
Distance between axes mm		85	85	85	105	105	105	
Rated current A		0.24 / 0.22	0.69 / 0.69	0.36 / 0.33	0.74	0.36 / 0.33	0.85	
Pre-fuse A		6	6	6	6	6	6	
Width mm		482.6	482.6	482.6	482.6	482.6	482.6	
Height mm		44	44	44	44	44	44	
Depth mm		200	200	200	200	200	200	
Operating temperature range		-10°C...+55°C	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C	
Noise level dB(A)		51	52	51	51	51	51	

Accessories

Digital enclosure internal temperature display and thermostat	1 pc(s).	3114.200	3114.200	3114.200	3114.200	3114.200	3114.200	379
Enclosure internal thermostat	1 pc(s).	3110.000	3110.000	3110.000	3110.000	3110.000	3110.000	379
Speed control	1 pc(s).	3120.200	3120.200	3120.200	-	3120.200	-	381

Vario rack-mounted fans for 482.6 mm (19")



Climate control accessories Page 369

Supply includes:

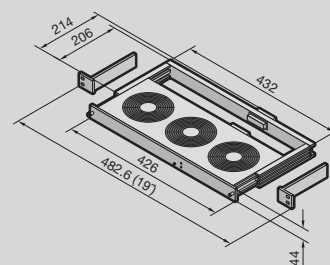
- Fully wired unit ready for connection
- Terminal strip and assembly parts.

Approvals:

Available on the Internet

Technical details:

Available on the Internet



Air throughput 320 – 480 m³/h

Model No.	Packs of	3350.230	3351.230	3352.230	3352.500	Page
With monitoring		–	–	–	■	
Rated operating voltage V, ~, Hz		230, 1~, 50/60	230, 1~, 50/60	230, 1~, 50/60	115 - 230, 1~, 50/60 24 (DC)	
Air throughput, unimpeded air flow m³/h		320	480	480	480	
No. of fans		2	3	3	3	
Distance between axes mm		85	85	105	105	
Rated current A		0.24 / 0.22	0.36 / 0.33	0.36 / 0.33	0.85 / 0.85	
Pre-fuse A		6	6	6	6	
Width mm		482.6	482.6	482.6	482.6	
Height mm		44	44	44	44	
Depth mm		200	200	200	200	
Operating temperature range		-10°C...+55°C	-10°C...+55°C	-10°C...+55°C	-10°C...+55°C	
Noise level dB(A)		51	51	51	51	
Also required						
Guide frame	1 pc(s).	3355.100	3355.100	3355.100	3357.100	384
Accessories						
Digital enclosure internal temperature display and thermostat	1 pc(s).	3114.200	3114.200	3114.200	3114.200	379
Enclosure internal thermostat	1 pc(s).	3110.000	3110.000	3110.000	3110.000	379
Speed control	1 pc(s).	3120.200	3120.200	3120.200	–	381

Tangential fans for 482.6 mm (19")



Climate control accessories Page 369

Supply includes:

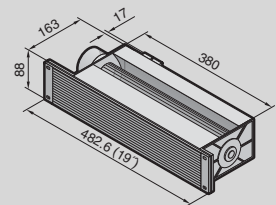
- Fully wired unit ready for connection
- Filter mat

Approvals:

Available on the Internet

Technical details:

Available on the Internet



Air throughput 320 m³/h

Model No.	Packs of	3144.000	3145.000	Page
Rated operating voltage V, ~, Hz		230, 1~, 50/60	115, 1~, 50/60	
Air throughput, unimpeded air flow m³/h		320	320	
Rated current A		0.16	0.32	
Power consumption W		37	37	
Width mm		482.6	482.6	
Height mm		88	88	
Depth mm		158	158	
Operating temperature range		-10°C...+55°C	-10°C...+55°C	
Noise level dB(A)		52	52	
Speed rpm		2245	2245	
Maximum static pressure difference Pa		65 - 70	65 - 70	

Accessories

Digital enclosure internal temperature display and thermostat	1 pc(s).	3114.200	3114.200	379
Enclosure internal thermostat	1 pc(s).	3110.000	3110.000	379
Filter mats	5 pc(s).	3177.000	3177.000	369
Front outlet grille 2 U	1 pc(s).	3176.000	3176.000	372
Roof-mounted fan, roof vent	1 pc(s).	3148.007	3148.007	325
Speed control	1 pc(s).	3120.200	3120.200	381

TopTherm air/air heat exchangers



Climate control accessories Page 369

Temperature control:

- Electronic control with digital display (factory setting +35°C)

Colour:

- RAL 7035

Protection category IP to

IEC 60 529:

- Internal circuit IP 54

Supply includes:

- Complete unit ready for connection
- Plug-in terminal strip
- Floating fault signal contact in case of overtemperature

Approvals:

Available on the Internet

Performance diagrams:

Available on the Internet

Technical details:

Available on the Internet

Specific thermal output 17.5 – 90 W/K, wall-mounted with controller

Model No.	Packs of	3126.100	3127.100	3128.100	3129.100	3130.100	Page
Rated operating voltage V, ~, Hz		230, 1~, 50/60	230, 1~, 50/60	230, 1~, 50/60	230, 1~, 50/60	230, 1~, 50/60	
Specific thermal output W/K		17.5	30	45	60	90	
Max. rated current per fan A		0.11 / 0.13	0.28 / 0.34	0.3 / 0.4	0.38 / 0.4	0.67 / 0.88	
Pre-fuse A		2	2	2	2	4	
Output per fan W		23 / 27	60 / 75	70 / 90	85 / 90	150 / 200	
Air throughput of fans (unimpeded air flow), external circuit m ³ /h		265 / 315	480 / 525	600 / 625	860 / 900	850 / 945	
Air throughput of fans (unimpeded air flow), internal circuit m ³ /h		265 / 315	480 / 525	600 / 625	860 / 900	850 / 945	
Width mm		280	400	400	400	400	
Height mm		550	950	950	950	1580	
Depth mm		150	205	205	225	215	
Operating temperature range		-5°C...+55°C	-5°C...+55°C	-5°C...+55°C	-5°C...+55°C	-5°C...+55°C	
Weight kg		10.0	18.0	19.0	21.0	34.0	
Accessories							
Filter mats	3 pc(s).	3286.300	3286.400	3286.400	3286.400	3286.400	369
Metal filters	1 pc(s).	3286.310	3286.410	3286.410	3286.410	3286.410	370

Air/air heat exchangers



Climate control accessories Page 369 Therm software Page 385

Colour:

- RAL 7035
- RAL 9005

Protection category IP to IEC 60 529:

- Internal circuit IP 54

Supply includes:

- Complete unit ready for connection
- The fans are connected via two 3-wire connection cables, with wire end ferrules

Note:

- For precise temperature control inside the enclosure, we recommend the enclosure internal thermostat, the digital enclosure internal temperature display and thermostat or the speed control

Technical details:

Available on the Internet

Specific thermal output 66 W/K, roof-mounted

Model No.	Packs of	3248.000	Page
Rated operating voltage V, ~, Hz		230, 1~, 50/60	
Specific thermal output W/K		66	
No. of fans		2	
Max. rated current per fan A		0.45 / 0.55	
Pre-fuse A		4	
Output per fan W		75	
Air throughput of fans (unimpeded air flow), external circuit m ³ /h		965	
Air throughput of fans (unimpeded air flow), internal circuit m ³ /h		965	
Width mm		595	
Height mm		362	
Depth mm		440	
Operating temperature range		-5°C...+55°C	
Type of electrical connection		Connection cable	
Weight kg		16.8	
Accessories			
Digital enclosure internal temperature display and thermostat	1 pc(s).	3114.200	379
Enclosure internal thermostat	1 pc(s).	3110.000	379
Hygrostat	1 pc(s).	3118.000	380
Speed control	1 pc(s).	3120.200	381

Rittal – The System.

Faster – better – everywhere.

Efficient climate control solutions for every application



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Cooling units

Thermoelectric coolers

Thermoelectric coolers	100 W	334
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Wall-mounted cooling units

TopTherm, horizontal format	300 W	335
TopTherm	300 W	336
TopTherm "Blue e"	500 W	337
TopTherm "Blue e"	750 W	338
TopTherm "Blue e"	1000 W	339
TopTherm "Blue e"	1500 W	340
TopTherm "Blue e"	2000 W	341
TopTherm "Blue e"	2500 W	342
TopTherm "Blue e"	4000 W	342
TopTherm "Blue e", slimline	1500 W	343
TopTherm "Blue e", NEMA 4X	500 – 1500 W	344
TopTherm "Blue e", NEMA 4X	2000 – 2500 W	345

Roof-mounted cooling units

TopTherm "Blue e"	500 W	346
TopTherm "Blue e"	750 W	347
TopTherm "Blue e"	1000 W	347
TopTherm "Blue e"	1100 – 1500 W	348
TopTherm "Blue e"	2000 W	348
TopTherm "Blue e"	3000 – 4000 W	349

Modular climate control concept

Cooling module "Blue e"	1500/2500 W	350
Section doors for installing cooling modules		351



Generation "Blue e"

Permanent energy savings with Rittal cooling units.

Up to 45% reduced energy consumption
(70% over the Rittal TopTherm Plus cooling unit
actually achieved in field trials).



Thermoelectric coolers



Climate control accessories Page 369 Therm software Page 385

Material:

- Aluminium, anodised

Colour of cover:

- RAL 7024

Protection category IP to IEC 60 529:

- External circuit IP 34
- Internal circuit IP 54

Supply includes:

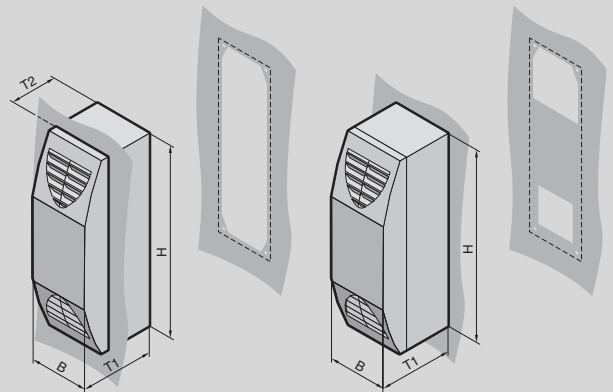
- Thermoelectric climate control unit
- Fully wired ready for connection (plug-in terminal strip)
- Mounting accessories
- Configuration software

Performance diagrams:

Available on the Internet

Technical details:

Available on the Internet



Total cooling output/heating output 100 W

Model No.	Packs of	3201.200	3201.300	Page
Rated operating voltage V, ~, Hz		100 - 240, 1~, 50/60	24 (DC)	
Total cooling output L35 L35 W		100 / 100	100	
Heating output W		100	100	
Width (B) mm		125	125	
Height (H) mm		400	400	
Depth (T1) mm		155	155	
Installation depth (T2) mm		100	100	
Start-up current A		6.4	4.5	
Rated current max. A		1.9	4.5	
Pre-fuse A		4	10	
Operating temperature range		-30°C...+55°C	-30°C...+60°C	
Refrigeration factor/COP		1	1.2	
Power pack integrated		■	-	
Air throughput of fans (unimpeded air flow), internal circuit / external circuit m³/h		50 / 50	50 / 50	
Weight kg		3.0	2.4	
Accessories				
Spare filter mats	5 pc(s).	3201.050	3201.050	371
SK BUS system	1 pc(s).	3201.070	3201.070	382
Condensate hose	1 pc(s).	3301.606	3301.606	377

TopTherm wall-mounted cooling units, horizontal format



Climate control accessories Page 369 Therm software Page 385

Temperature control:

- Basic controller (factory setting +35°C)

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- External circuit IP 34
- Internal circuit IP 54

Supply includes:

- Nano-coated condenser
- Fully wired ready for connection (plug-in terminal strip)
- Drilling template
- Assembly parts

Approvals:

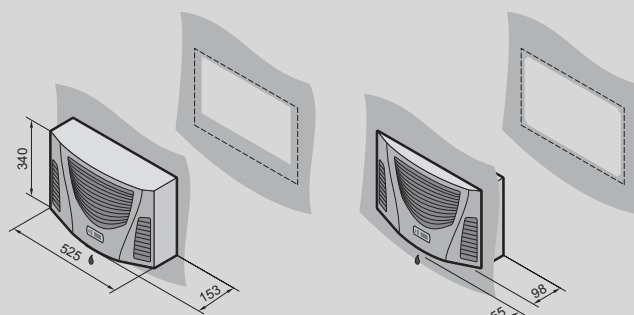
Available on the Internet

Performance diagrams:

Available on the Internet

Technical details:

Available on the Internet



Output class 300 W

Model No.	Packs of	3302.300	3302.310	Page
Material	Sheet steel	■	■	
Total cooling output 50 Hz L35 L35 to DIN EN 14511 kW		0.36	-	
Total cooling output 50/60 Hz L35 L35 kW		0.36 / 0.38	0.38	
Total cooling output 50/60 Hz L35 L50 kW		0.21 / 0.22	0.23	
Rated operating voltage V, ~, Hz		230, 1~, 50/60	115, 1~, 60	
Width mm		525	525	
Height mm		340	340	
Depth mm		153	153	
Rated current max. A		1.6 / 1.7	4	
Start-up current A		4.3 / 5.3	12	
Pre-fuse A		10	10	
Power consumption P _{el} 50/60 Hz L35 L35 kW		0.27 / 0.29	0.32	
Power consumption P _{el} 50/60 Hz L35 L50 kW		0.31 / 0.33	0.37	
Operating temperature range		+10°C...+55°C	+10°C...+55°C	
Setting range		+30°C...+55°C	+30°C...+55°C	
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511		1.3	1.18	
Refrigerant g		R134a, 100	R134a, 95	
Permissible operating pressure (p. max.) bar		25	25	
Air throughput of fans (unimpeded air flow), internal circuit / external circuit m ³ /h		310 / 310	300 / 300	
Weight kg		13.0	13.0	
Accessories				
Filter mats	3 pc(s).	3286.110	3286.110	369
Metal filters	1 pc(s).	3286.120	3286.120	370
Door-operated switch	1 pc(s).	4127.010	4127.010	639
Condensate hose	1 pc(s).	3301.610	3301.610	377

TopTherm wall-mounted cooling units



Climate control accessories Page 369 Therm software Page 385

Temperature control:

- Basic controller (factory setting +35°C)

Protection category IP to IEC 60 529:

- External circuit IP 34
- Internal circuit IP 54

Supply includes:

- Nano-coated condenser
- Fully wired ready for connection (plug-in terminal strip)
- Drilling template
- Assembly parts

Approvals:

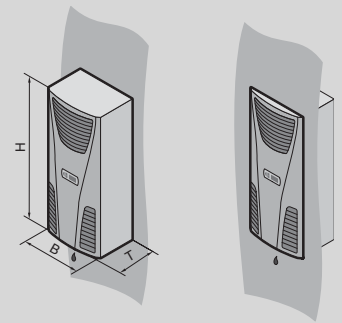
Available on the Internet

Performance diagrams:

Available on the Internet

Technical details:

Available on the Internet



Output class 300 W

Model No.	Packs of	3302.100	3302.110	3302.200	Page
Material	Sheet steel	■	■	-	
	Stainless steel	-	-	■	
Colour	RAL 7035	■	■	-	
Total cooling output 50 Hz L35 L35 to DIN EN 14511 kW		0.36	-	0.36	
Total cooling output 50/60 Hz L35 L35 kW		0.36 / 0.38	0.38	0.36 / 0.38	
Total cooling output 50/60 Hz L35 L50 kW		0.21 / 0.23	0.23	0.21 / 0.23	
Rated operating voltage V, -, Hz		230, 1-, 50/60	115, 1-, 60	230, 1-, 50/60	
Width (B) mm		280	280	280	
Height (H) mm		550	550	550	
Depth (T) mm		140	140	140	
Rated current max. A		1.6 / 1.7	3.3	1.6 / 1.7	
Start-up current A		3 / 3.4	8	3 / 3.4	
Pre-fuse A		10	10	10	
Power consumption P _{el} 50/60 Hz L35 L35 kW		0.27 / 0.28	0.32	0.28 / 0.29	
Power consumption P _{el} 50/60 Hz L35 L50 kW		0.28 / 0.3	0.37	0.29 / 0.31	
Operating temperature range		+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	
Setting range		+30°C...+55°C	+30°C...+55°C	+30°C...+55°C	
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511		1.32	1.18	1.3	
Refrigerant g		R134a, 100	R134a, 100	R134a, 100	
Permissible operating pressure (p. max.) bar		25	25	25	
Air throughput of fans (unimpeded air flow), internal circuit / external circuit m ³ /h		345 / 310	345 / 310	345 / 310	
Weight kg		13.0	13.0	13.0	
Accessories					
Filter mats	3 pc(s).	3286.300	3286.300	3286.300	369
Metal filters	1 pc(s).	3286.310	3286.310	3286.310	370
Door-operated switch	1 pc(s).	4127.010	4127.010	4127.010	639
Condensate hose	1 pc(s).	3301.610	3301.610	3301.610	377

TopTherm wall-mounted cooling units "Blue e"



Climate control accessories Page 369 Therm software Page 385

Temperature control:

- e-Comfort controller (factory setting +35°C)

Protection category IP to IEC 60 529:

- External circuit IP 34
- Internal circuit IP 54

Supply includes:

- Nano-coated condenser
- Fully wired ready for connection (plug-in terminal strip)
- Drilling template
- Assembly parts

Approvals:

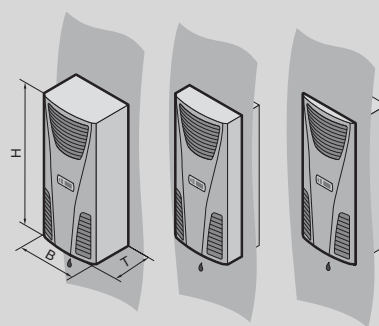
Available on the Internet

Performance diagrams:

Available on the Internet

Technical details:

Available on the Internet



Output class 500 W


Model No.	Packs of	3303.500	3303.510	3303.600	Page
Material	Sheet steel	■	■	-	
	Stainless steel	-	-	■	
Colour	RAL 7035	■	■	-	
Total cooling output 50 Hz L35 L35 to DIN EN 14511 kW		0.55	-	0.55	
Total cooling output 50/60 Hz L35 L35 kW		0.55 / 0.66	0.66	0.55 / 0.66	
Total cooling output 50/60 Hz L35 L50 kW		0.33 / 0.4	0.4	0.33 / 0.4	
Rated operating voltage V, ~, Hz		230, 1~, 50/60	115, 1~, 60	230, 1~, 50/60	
Width (B) mm		280	280	280	
Height (H) mm		550	550	550	
Depth (T) mm		210	210	210	
Rated current max. A		2.6 / 2.6	5.7	2.6 / 2.6	
Start-up current A		5.1 / 6.4	11.5	5.1 / 6.4	
Pre-fuse A		10	10	10	
Power consumption P _{el} 50/60 Hz L35 L35 kW		0.39 / 0.41	0.5	0.39 / 0.41	
Power consumption P _{el} 50/60 Hz L35 L50 kW		0.45 / 0.42	0.53	0.45 / 0.42	
Operating temperature range		+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	
Setting range		+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511		1.4	1.31	1.4	
Refrigerant g		R134a, 170	R134a, 170	R134a, 170	
Permissible operating pressure (p. max.) bar		28	28	28	
Air throughput of fans (unimpeded air flow), internal circuit / external circuit m ³ /h		265 / 315	280 / 345	265 / 315	
Weight kg		17.0	17.0	17.0	
Accessories					
Filter mats	3 pc(s).	3286.300	3286.300	3286.300	369
Metal filters	1 pc(s).	3286.310	3286.310	3286.310	370
Door-operated switch	1 pc(s).	4127.010	4127.010	4127.010	639
Condensate hose	1 pc(s).	3301.610	3301.610	3301.610	377

TopTherm wall-mounted cooling units "Blue e"

Output class 750 W

Model No.	Packs of	3361.500	3361.510	3361.540	3361.600	Page
Material	Sheet steel	■	■	■	–	
	Stainless steel	–	–	–	■	
Colour	RAL 7035	■	■	■	–	
Total cooling output 50 Hz L35 L35 to DIN EN 14511 kW		0.85	–	0.85	0.85	
Total cooling output 50/60 Hz L35 L35 kW		0.85 / 0.89	0.89	0.85 / 0.89	0.85 / 0.89	
Total cooling output 50/60 Hz L35 L50 kW		0.67 / 0.67	0.67	0.67 / 0.67	0.67 / 0.67	
Rated operating voltage V, ~, Hz		230, 1~, 50/60	115, 1~, 60	400, 2~, 50/60	230, 1~, 50/60	
Width (B) mm		280	280	280	280	
Height (H) mm		550	550	550	550	
Depth (T) mm		280	280	280	280	
Rated current max. A		2.7 / 2.7	5.3	1.2 / 1.4	2.7 / 2.7	
Start-up current A		6 / 9.6	12	3.1 / 3.3	6 / 9.6	
Pre-fuse A		10	10	–	10	
Transformer circuit-breaker A		–	–	6.3...10	–	
Toroidal transformer (external) Ø x D mm		–	–	126 x 65	–	
Power consumption P _{el} 50/60 Hz L35 L35 kW		0.41 / 0.44	0.56	0.41 / 0.44	0.41 / 0.44	
Power consumption P _{el} 50/60 Hz L35 L50 kW		0.47 / 0.5	0.66	0.47 / 0.5	0.47 / 0.5	
Operating temperature range		+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	
Operating temperature (max.) 60 Hz		+10°C...+53°C	+10°C...+52°C	+10°C...+53°C	+10°C...+53°C	
Setting range		+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511		2.08	1.59	2.08	2.08	
Refrigerant g		R134a, 280	R134a, 260	R134a, 280	R134a, 280	
Permissible operating pressure (p. max.) bar		28	28	28	28	
Air throughput of fans (unimpeded air flow), internal circuit / external circuit m ³ /h		230 / 550	230 / 625	230 / 550	230 / 550	
Weight kg		22.0	22.0	22.0	22.0	
Accessories						
Filter mats	3 pc(s).	3286.300	3286.300	3286.300	3286.300	369
Metal filters	1 pc(s).	3286.310	3286.310	3286.310	3286.310	370
Door-operated switch	1 pc(s).	4127.010	4127.010	4127.010	4127.010	639
Condensate hose	1 pc(s).	3301.610	3301.610	3301.610	3301.610	377

Accessories



Thermoelectric coolers

see page 334

TopTherm wall-mounted cooling units "Blue e"



Climate control accessories Page 369 Therm software Page 385

Temperature control:

- e-Comfort controller (factory setting +35°C)

Protection category IP to IEC 60 529:

- External circuit IP 34
- Internal circuit IP 54

Supply includes:

- Nano-coated condenser
- Integral electric condensate evaporation
- Fully wired ready for connection (plug-in terminal strip)
- Drilling template
- Assembly parts

Approvals:

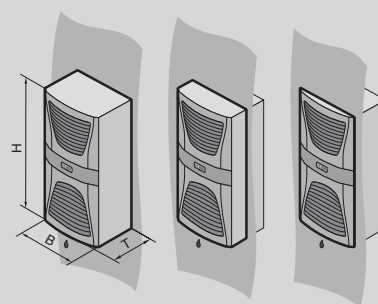
Available on the Internet

Performance diagrams:

Available on the Internet

Technical details:

Available on the Internet



Output class 1000 W


Model No.		Packs of	3304.500	3304.510	3304.540	3304.600	3304.640	Page
Material	Sheet steel		■	■	■	-	-	
	Stainless steel		-	-	-	■	■	
Colour	RAL 7035		■	■	■	-	-	
Total cooling output 50 Hz L35 L35 to DIN EN 14511 kW			1.1	1.1	1.1	1.1	1.1	
Total cooling output 50/60 Hz L35 L35 kW			1.1 / 1.25	1.1 / 1.25	1.1 / 1.25	1.1 / 1.25	1.1 / 1.25	
Total cooling output 50/60 Hz L35 L50 kW			0.91 / 0.9	0.91 / 0.9	0.98 / 0.9	0.91 / 0.9	0.98 / 0.9	
Rated operating voltage V, ~, Hz			230, 1~, 50/60	115, 1~, 50/60	400, 3~, 50 460, 3~, 60	230, 1~, 50/60	400, 3~, 50 460, 3~, 60	
Width (B) mm			400	400	400	400	400	
Height (H) mm			950	950	950	950	950	
Depth (T) mm			260	260	260	260	260	
Rated current max. A			5.4 / 5	10.6 / 11.1	2.8 / 2.9	5.4 / 5	2.8 / 2.4	
Start-up current A			12 / 14	26 / 28	11.5 / 12.7	12 / 14	11.5 / 12.7	
Pre-fuse A			10	-	-	10	-	
Transformer circuit-breaker A			-	11...16	-	-	-	
Motor circuit-breaker A			-	-	6.3...10	-	6.3...10	
Power consumption P _{el} 50/60 Hz L35 L35 kW			0.6 / 0.68	0.6 / 0.68	0.64 / 0.79	0.6 / 0.68	0.64 / 0.79	
Power consumption P _{el} 50/60 Hz L35 L50 kW			0.71 / 0.81	0.71 / 0.81	0.73 / 0.9	0.71 / 0.81	0.73 / 0.9	
Operating temperature range			+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	
Setting range			+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511			1.83	1.83	1.83	1.83	1.83	
Refrigerant g			R134a, 325	R134a, 500	R134a, 325	R134a, 325	R134a, 325	
Permissible operating pressure (p. max.) bar			28	28	28	28	28	
Air throughput of fans (unimpeded air flow), internal circuit / external circuit m ³ /h			600 / 900	600 / 900	600 / 900	600 / 900	600 / 900	
Weight kg			39.0	44.0	40.0	39.0	40.0	
Accessories								
Filter mats		3 pc(s).	3286.400	3286.400	3286.400	3286.400	3286.400	369
Metal filters		1 pc(s).	3286.410	3286.410	3286.410	3286.410	3286.410	370
Door-operated switch		1 pc(s).	4127.010	4127.010	4127.010	4127.010	4127.010	639

TopTherm wall-mounted cooling units "Blue e"

Output class 1500 W

Model No.	Packs of	3305.500	3305.510	3305.540	3305.600	3305.640	Page
Material	Sheet steel	■	■	■	–	–	
	Stainless steel	–	–	–	■	■	
Colour	RAL 7035	■	■	■	–	–	
Total cooling output 50 Hz L35 L35 to DIN EN 14511 kW		1.6	1.6	1.6	1.6	1.6	
Total cooling output 50/60 Hz L35 L35 kW		1.6 / 1.76	1.6 / 1.76	1.6 / 1.61	1.6 / 1.76	1.6 / 1.61	
Total cooling output 50/60 Hz L35 L50 kW		1.25 / 1.37	1.25 / 1.37	1.33 / 1.35	1.25 / 1.37	1.33 / 1.35	
Rated operating voltage V, ~, Hz		230, 1~, 50/60	115, 1~, 50/60	400, 3~, 50 460, 3~, 60	230, 1~, 50/60	400, 3~, 50 460, 3~, 60	
Width (B) mm		400	400	400	400	400	
Height (H) mm		950	950	950	950	950	
Depth (T) mm		260	260	260	260	260	
Rated current max. A		5.5 / 5.8	11.5 / 12.5	2.5 / 2.8	5.5 / 5.8	2.5 / 2.8	
Start-up current A		12 / 14	26 / 28	12.2 / 11.3	12 / 14	12.2 / 11.3	
Pre-fuse A		16	–	–	16	–	
Transformer circuit-breaker A		–	14...20	–	–	–	
Motor circuit-breaker A		–	–	6.3...10	–	6.3...10	
Power consumption P _{el} 50/60 Hz L35 L35 kW		0.87 / 0.98	0.87 / 0.98	0.9 / 1.08	0.87 / 0.98	0.9 / 1.08	
Power consumption P _{el} 50/60 Hz L35 L50 kW		1.03 / 1.15	1.03 / 1.15	1.06 / 1.25	1.03 / 1.15	1.06 / 1.25	
Operating temperature range		+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	
Setting range		+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511		1.83	1.83	1.83	1.83	1.83	
Refrigerant g		R134a, 500	R134a, 500	R134a, 500	R134a, 500	R134a, 500	
Permissible operating pressure (p. max.) bar		28	28	28	28	28	
Air throughput of fans (unimpeded air flow), internal circuit / external circuit m ³ /h		800 / 900	800 / 900	800 / 900	800 / 900	800 / 900	
Weight kg		41.0	46.0	42.0	41.0	42.0	
Accessories							
Filter mats	3 pc(s).	3286.400	3286.400	3286.400	3286.400	3286.400	369
Metal filters	1 pc(s).	3286.410	3286.410	3286.410	3286.410	3286.410	370
Door-operated switch	1 pc(s).	4127.010	4127.010	4127.010	4127.010	4127.010	639

Accessories



Therm software

see page 385

TopTherm wall-mounted cooling units "Blue e"



Climate control accessories Page 369 Therm software Page 385

Temperature control:

- e-Comfort controller (factory setting +35°C)

Protection category IP to IEC 60 529:

- External circuit IP 34
- Internal circuit IP 54

Supply includes:

- Nano-coated condenser
- Integral electric condensate evaporation
- Fully wired ready for connection (plug-in terminal strip)
- Drilling template
- Assembly parts

Note:

- Full installation not supported on model numbers 3332.XXX

Approvals:

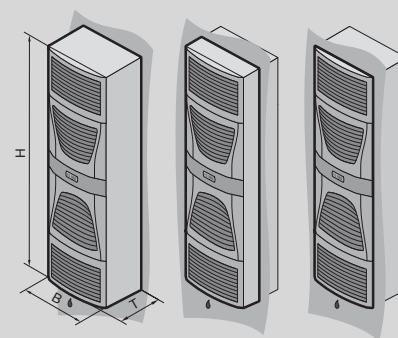
Available on the Internet

Performance diagrams:

Available on the Internet

Technical details:

Available on the Internet



Output class 2000 W

Model No.	Packs of	3328.500	3328.510	3328.540	3328.600	3328.640	Page
Material	Sheet steel	■	■	■	-	-	
	Stainless steel	-	-	-	■	■	
Colour	RAL 7035	■	■	■	-	-	
Total cooling output 50 Hz L35 L35 to DIN EN 14511 kW		2.2	2.2	2.2	2.2	2.2	
Total cooling output 50/60 Hz L35 L35 kW		2.2 / 2.56	2.2 / 2.56	2.2 / 2.55	2.2 / 2.56	2.2 / 2.55	
Total cooling output 50/60 Hz L35 L50 kW		1.82 / 1.95	1.82 / 1.95	1.65 / 1.89	1.82 / 1.95	1.65 / 1.89	
Rated operating voltage V, ~, Hz		230, 1~, 50/60	115, 1~, 50/60	400, 3~, 50 460, 3~, 60	230, 1~, 50/60	400, 3~, 50 460, 3~, 60	
Width (B) mm		400	400	400	400	400	
Height (H) mm		1580	1580	1580	1580	1580	
Depth (T) mm		295	295	295	295	295	
Rated current max. A		6.1 / 6.6	13.4 / 14.8	2.8 / 3.3	6.1 / 6.6	2.8 / 3.3	
Start-up current A		20 / 22	40 / 38	6.8 / 7.8	20 / 22	6.8 / 7.8	
Pre-fuse A		16	-	-	16	-	
Transformer circuit-breaker A		-	18...25	-	-	-	
Motor circuit-breaker A		-	-	6.3...10	-	6.3...10	
Power consumption P _{el} 50/60 Hz L35 L35 kW		0.92 / 1.03	0.92 / 1.03	0.92 / 1.15	0.92 / 1.03	0.93 / 1.15	
Power consumption P _{el} 50/60 Hz L35 L50 kW		1.06 / 1.23	1.06 / 1.23	1.15 / 1.4	1.06 / 1.23	1.15 / 1.4	
Operating temperature range		+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	
Setting range		+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511		2.4	2.4	2.2	2.4	2.2	
Refrigerant g		R134a, 950	R134a, 950	R134a, 950	R134a, 950	R134a, 950	
Permissible operating pressure (p. max.) bar		28	28	28	28	28	
Air throughput of fans (unimpeded air flow), internal circuit / external circuit m ³ /h		980 / 980	980 / 980	900 / 900	980 / 980	900 / 900	
Weight kg		66.0	73.0	67.0	66.0	67.0	
Accessories							
Filter mats	3 pc(s).	3286.400	3286.400	3286.400	3286.400	3286.400	369
Metal filters	1 pc(s).	3286.410	3286.410	3286.410	3286.410	3286.410	370

TopTherm wall-mounted cooling units "Blue e"

Output class 2500 W

Model No.		Packs of	3329.500	3329.510	3329.540	3329.600	3329.640	Page
Material	Sheet steel		■	■	■	–	–	
	Stainless steel		–	–	–	■	■	
Colour	RAL 7035		■	■	■	–	–	
Total cooling output 50 Hz L35 L35 to DIN EN 14511 kW			2.55	2.55	2.55	2.55	2.55	
Total cooling output 50/60 Hz L35 L35 kW			2.55 / 2.71	2.55 / 2.71	2.55 / 2.75	2.55 / 2.71	2.55 / 2.75	
Total cooling output 50/60 Hz L35 L50 kW			1.89 / 1.97	1.89 / 1.97	1.95 / 2	1.89 / 1.97	1.95 / 2	
Rated operating voltage V, ~, Hz			230, 1~, 50/60	115, 1~, 50/60	400, 3~, 50 460, 3~, 60	230, 1~, 50/60	400, 3~, 50 460, 3~, 60	
Width (B) mm			400	400	400	400	400	
Height (H) mm			1580	1580	1580	1580	1580	
Depth (T) mm			295	295	295	295	295	
Rated current max. A			8.2 / 9.3	17 / 22	3.7 / 3.8	8.2 / 9.3	3.7 / 3.8	
Start-up current A			20 / 24	44 / 42	6.8 / 7.6	20 / 24	6.8 / 7.6	
Pre-fuse A			16	–	–	16	–	
Transformer circuit-breaker A			–	18...25	–	–	–	
Motor circuit-breaker A			–	–	6.3...10	–	6.3...10	
Power consumption P _{el} 50/60 Hz L35 L35 kW			1.21 / 1.35	1.21 / 1.35	1.2 / 1.4	1.21 / 1.35	1.2 / 1.4	
Power consumption P _{el} 50/60 Hz L35 L50 kW			1.41 / 1.64	1.41 / 1.64	1.45 / 1.75	1.41 / 1.64	1.45 / 1.75	
Operating temperature range			+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	
Setting range			+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511			2.11	2.11	2.11	2.11	2.11	
Refrigerant g			R134a, 950	R134a, 950	R134a, 950	R134a, 950	R134a, 950	
Permissible operating pressure (p. max.) bar			28	28	28	28	28	
Air throughput of fans (unimpeded air flow), internal circuit / external circuit m ³ /h			1230 / 1230	1230 / 1230	1200 / 1200	1230 / 1230	1200 / 1200	
Weight kg			69.0	76.0	70.0	69.0	70.0	

Accessories

Filter mats	3 pc(s).	3286.400	3286.400	3286.400	3286.400	3286.400	369
Metal filters	1 pc(s).	3286.410	3286.410	3286.410	3286.410	3286.410	370
Door-operated switch	1 pc(s).	4127.010	4127.010	4127.010	4127.010	4127.010	639

Output class 4000 W

Model No.		Packs of	3332.540	3332.640	Page
Material	Sheet steel		■	–	
	Stainless steel		–	■	
Colour	RAL 7035		■	–	
Total cooling output 50 Hz L35 L35 to DIN EN 14511 kW			3.95	3.95	
Total cooling output 50/60 Hz L35 L35 kW			3.95 / 4.35	3.95 / 4.35	
Total cooling output 50/60 Hz L35 L50 kW			3.02 / 3.52	3.02 / 3.52	
Rated operating voltage V, ~, Hz			400, 3~, 50 460, 3~, 60	400, 3~, 50 460, 3~, 60	
Width (B) mm			500	500	
Height (H) mm			1580	1580	
Depth (T) mm			340	340	
Rated current max. A			4.2 / 4.2	4.2 / 4.2	
Start-up current A			9.2 / 11	9.2 / 11	
Pre-fuse			–	–	
Transformer circuit-breaker			–	–	
Motor circuit-breaker A			6.3...10	6.3...10	
Power consumption P _{el} 50/60 Hz L35 L35 kW			1.6 / 2	1.6 / 2	
Power consumption P _{el} 50/60 Hz L35 L50 kW			1.87 / 2.34	1.87 / 2.34	
Operating temperature range			+10°C...+55°C	+10°C...+55°C	
Setting range			+20°C...+55°C	+20°C...+55°C	
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511			2.47	2.47	
Refrigerant g			R134a, 2995	R134a, 2995	
Permissible operating pressure (p. max.) bar			28	28	
Air throughput of fans (unimpeded air flow), internal circuit / external circuit m ³ /h			1500 / 2000	1500 / 2000	
Weight kg			91.0	91.0	

Accessories

Filter mats	3 pc(s).	3286.400	3286.400	3286.400	369
Metal filters	1 pc(s).	3286.410	3286.410	3286.410	370
Door-operated switch	1 pc(s).	4127.010	4127.010	4127.010	639

TopTherm wall-mounted cooling units "Blue e", slimline



Climate control accessories Page 369 Therm software Page 385

Temperature control:

- e-Comfort controller (factory setting +35°C)

Protection category IP to IEC 60 529:

- External circuit IP 34
- Internal circuit IP 54

Supply includes:

- Nano-coated condenser
- Integral electric condensate evaporation
- Fully wired ready for connection (plug-in terminal strip)
- Drilling template
- Assembly parts

Approvals:

Available on the Internet

Performance diagrams:

Available on the Internet

Technical details:

Available on the Internet

Output class 1500 W

Model No.	Packs of	3366.500	3366.540	Page
Material	Sheet steel	■	■	
Colour	RAL 7035	■	■	
Total cooling output 50 Hz L35 L35 to DIN EN 14511 kW		1.6	1.6	
Total cooling output 50/60 Hz L35 L35 kW		1.6 / 1.6	1.6 / 1.6	
Total cooling output 50/60 Hz L35 L50 kW		1.15 / 1.2	1.08 / 1.18	
Rated operating voltage V, ~, Hz		230, 1~, 50/60	400, 3~, 50 460, 3~, 60	
Width mm		435	435	
Height mm		1590	1590	
Depth mm		205	205	
Rated current max. A		6.7 / 6.9	2.7 / 2.9	
Start-up current A		22 / 24	8 / 8.8	
Pre-fuse A		10	-	
Motor circuit-breaker A		-	6.3...10	
Power consumption P _{el} 50/60 Hz L35 L35 kW		0.84 / 0.97	0.91 / 1.06	
Power consumption P _{el} 50/60 Hz L35 L50 kW		1.02 / 1.13	1.08 / 1.25	
Operating temperature range		+10°C...+55°C	+10°C...+55°C	
Setting range		+20°C...+55°C	+20°C...+55°C	
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511		1.9	1.9	
Refrigerant g		R134a, 700	R134a, 700	
Permissible operating pressure (p. max.) bar		28	28	
Air throughput of fans (unimpeded air flow), internal circuit / external circuit m ³ /h		860 / 910	860 / 910	
Weight kg		45.0	46.0	

Accessories

Accessories	Packs of	3286.400	3286.410	4127.010	Page
Filter mats	3 pc(s).	3286.400	3286.400	3286.400	369
Metal filters	1 pc(s).	3286.410	3286.410	3286.410	370
Door-operated switch	1 pc(s).	4127.010	4127.010	4127.010	639

TopTherm wall-mounted cooling units "Blue e", NEMA 4X



Climate control accessories Page 369 Therm software Page 385

Temperature control:

- e-Comfort controller (factory setting +35°C)

Protection category NEMA:

- NEMA 4X

Supply includes:

- Nano-coated condenser
- Integral electric condensate evaporation
- Fully wired ready for connection (plug-in terminal strip)
- Drilling template
- Assembly parts

Note:

- 3303.XXX without integral condensate evaporation

Approvals:

Available on the Internet

Performance diagrams:

Available on the Internet

Technical details:

Available on the Internet

Output class 500 – 1500 W

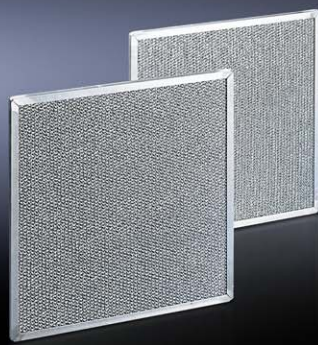
Model No.	Packs of	3303.504	3303.514	3304.504	3304.544	3305.504	3305.544	Page
Material	Stainless steel	■	■	■	■	■	■	
Total cooling output 50 Hz L35 L35 to DIN EN 14511 kW		0.55	–	1.1	1.1	1.6	1.6	
Total cooling output 50/60 Hz L35 L35 kW		0.55 / 0.66	0.66	1.1 / 1.25	1.1 / 1.25	1.6 / 1.76	1.6 / 1.61	
Total cooling output 50/60 Hz L35 L50 kW		0.33 / 0.4	0.4	0.91 / 0.9	0.98 / 0.91	1.25 / 1.37	1.33 / 1.35	
Rated operating voltage V, ~, Hz		230, 1~, 50/60	115, 1~, 60	230, 1~, 50/60	400, 3~, 50 460, 3~, 60	230, 1~, 50/60	400, 3~, 50 460, 3~, 60	
Width mm		285	285	405	405	405	405	
Height mm		620	620	1020	1020	1020	1020	
Depth mm		298	298	358	358	358	358	
Rated current max. A		2.6 / 2.6	5.7	3.9 / 4.3	2.2 / 2.1	5.5 / 5.8	2.6 / 2.8	
Start-up current A		5.1 / 6.4	11.5	12 / 14	11.5 / 12.7	12 / 14	12.2 / 11.3	
Pre-fuse A		10	10	10	–	16	–	
Motor circuit-breaker A		–	–	–	6.3...10	–	6.3...10	
Power consumption P _{el} 50/60 Hz L35 L35 kW		0.36 / 0.38	0.47	0.6 / 0.68	0.64 / 0.82	0.79 / 0.98	0.9 / 1.08	
Power consumption P _{el} 50/60 Hz L35 L50 kW		0.42 / 0.39	0.5	0.71 / 0.81	0.73 / 0.93	0.9 / 1.15	1.06 / 1.25	
Operating temperature range		+10°C...+50°C	+10°C...+50°C	+10°C...+50°C	+10°C...+50°C	+10°C...+50°C	+10°C...+50°C	
Setting range		+20°C...+50°C	+20°C...+50°C	+20°C...+50°C	+20°C...+50°C	+20°C...+50°C	+20°C...+50°C	
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511		1.4	1.31	1.83	1.83	1.83	1.83	
Refrigerant g		R134a, 170	R134a, 170	R134a, 325	R134a, 325	R134a, 600	R134a, 600	
Permissible operating pressure (p. max.) bar		28	28	28	28	28	28	
Air throughput of fans (unimpeded air flow), internal circuit / external circuit m ³ /h		265 / 315	280 / 345	600 / 900	600 / 900	800 / 900	800 / 900	
Weight kg		25.0	25.0	49.0	50.0	51.0	52.0	
Accessories								
Door-operated switch	1 pc(s).	4127.010	4127.010	4127.010	4127.010	4127.010	4127.010	639

TopTherm wall-mounted cooling units "Blue e", NEMA 4X

Output class 2000 – 2500 W

Model No.	Packs of	3328.504	3328.544	3329.504	3329.544	Page
Material	Stainless steel	■	■	■	■	
Total cooling output 50 Hz L35 L35 to DIN EN 14511 kW		2.2	2.2	2.55	2.55	
Total cooling output 50/60 Hz L35 L35 kW		2.2 / 2.36	2.2 / 2.35	2.55 / 2.66	2.55 / 2.7	
Total cooling output 50/60 Hz L35 L50 kW		1.62 / 1.75	1.45 / 1.69	1.84 / 1.92	1.9 / 1.95	
Rated operating voltage V, ~, Hz		230, 1~, 50/60	400, 3~, 50 460, 3~, 60	230, 1~, 50/60	400, 3~, 50 460, 3~, 60	
Width mm		405	405	405	405	
Height mm		1650	1650	1650	1650	
Depth mm		388	388	388	388	
Rated current max. A		6.1 / 6.6	2.8 / 3.3	8.2 / 9.3	3.7 / 3.8	
Start-up current A		20 / 22	6.8 / 7.8	20 / 24	6.8 / 7.6	
Pre-fuse A		16	–	16	–	
Motor circuit-breaker A		–	6.3...10	–	6.3...10	
Power consumption P _{el} 50/60 Hz L35 L35 kW		0.92 / 1.06	0.92 / 1.15	1.21 / 1.35	1.2 / 1.4	
Power consumption P _{el} 50/60 Hz L35 L50 kW		1.06 / 1.25	1.15 / 1.4	1.41 / 1.64	1.44 / 1.75	
Operating temperature range		+10°C...+50°C	+10°C...+50°C	+10°C...+50°C	+10°C...+50°C	
Setting range		+20°C...+50°C	+20°C...+50°C	+20°C...+50°C	+20°C...+50°C	
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511		2.4	2.4	2.11	2.11	
Refrigerant g		R134a, 900	R134a, 900	R134a, 900	R134a, 900	
Permissible operating pressure (p. max.) bar		28	28	28	28	
Air throughput of fans (unimpeded air flow), Internal circuit / external circuit m ³ /h		980 / 980	900 / 900	1230 / 1230	1200 / 1200	
Weight kg		80.0	81.0	83.0	84.0	
Accessories						
Door-operated switch	1 pc(s).	4127.010	4127.010	4127.010	4127.010	639

Accessories



Metal filters

see page 370

TopTherm roof-mounted cooling units "Blue e"



Climate control accessories Page 369 Therm software Page 385 Roof plates TS with mounting cut-out Page 383

Temperature control:

- e-Comfort controller (factory setting +35°C)

Protection category IP to IEC 60 529:

- External circuit IP 34
- Internal circuit IP 54

Supply includes:

- Nano-coated condenser
- Integral electric condensate evaporation
- Fully wired ready for connection (plug-in terminal strip)
- Drilling template
- Assembly parts

Note:

- The roof-mounted cooling units 3273.500 and 3273.515 are suitable for office applications due to their low noise level

Approvals:

Available on the Internet

Performance diagrams:

Available on the Internet

Technical details:

Available on the Internet

Output class 500 W

Model No.	Packs of	3382.500	3382.510	3382.600	Page
Material	Sheet steel	■	■	-	
	Stainless steel	-	-	■	
Colour	RAL 7035	■	■	-	
Total cooling output 50 Hz L35 L35 to DIN EN 14511 kW		0.55	0.55	0.55	
Total cooling output 50/60 Hz L35 L35 kW		0.55 / 0.62	0.55 / 0.62	0.55 / 0.62	
Total cooling output 50/60 Hz L35 L50 kW		0.42 / 0.48	0.42 / 0.48	0.42 / 0.48	
Rated operating voltage V, ~, Hz		230, 1~, 50/60	115, 1~, 50/60	230, 1~, 50/60	
Width mm		597	597	597	
Height mm		417	417	417	
Depth mm		380	380	380	
Rated current max. A		2.3 / 2.6	4.7 / 5.4	2.3 / 2.6	
Start-up current A		9.1 / 8.8	18.2 / 15.9	9.1 / 8.8	
Pre-fuse A		10	-	10	
Transformer circuit-breaker A		-	6.3...10	-	
Motor circuit-breaker		-	-	-	
Power consumption P _{el} 50/60 Hz L35 L35 kW		0.27 / 0.31	0.27 / 0.32	0.27 / 0.32	
Power consumption P _{el} 50/60 Hz L35 L50 kW		0.31 / 0.37	0.31 / 0.37	0.31 / 0.37	
Operating temperature range		+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	
Setting range		+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511		2.04	2.04	2.04	
Refrigerant g		R134a, 300	R134a, 300	R134a, 300	
Permissible operating pressure (p. max.) bar		28	28	28	
Air throughput of fans (unimpeded air flow), internal circuit / external circuit m ³ /h		170 / 800	170 / 800	170 / 800	
Weight kg		30.0	35.0	30.0	
Accessories					
Filter mats	3 pc(s).	3286.500	3286.500	3286.500	369
Metal filters	1 pc(s).	3286.510	3286.510	3286.510	370
Door-operated switch	1 pc(s).	4127.010	4127.010	4127.010	639
Air duct system	1 pc(s).	3286.870	3286.870	3286.870	374
Stoppers	2 pc(s).	3286.780	3286.780	3286.780	376

TopTherm roof-mounted cooling units "Blue e"

Output class 750 W

Model No.		Packs of	3359.500	3359.510	3359.540	3359.600	Page
Material	Sheet steel		■	■	■	–	
	Stainless steel		–	–	–	■	
Colour	RAL 7035		■	■	■	–	
Total cooling output 50 Hz L35 L35 to DIN EN 14511 kW			0.77	0.77	0.77	0.77	
Total cooling output 50/60 Hz L35 L35 kW			0.77 / 0.79	0.77 / 0.79	0.77 / 0.79	0.77 / 0.79	
Total cooling output 50/60 Hz L35 L50 kW			0.52 / 0.47	0.52 / 0.47	0.52 / 0.47	0.52 / 0.47	
Rated operating voltage V, ~, Hz			230, 1~, 50/60	115, 1~, 50/60	400, 2~, 50/60	230, 1~, 50/60	
Width mm			597	597	597	597	
Height mm			417	417	417	417	
Depth mm			380	380	380	380	
Rated current max. A			2.8 / 3.7	5.6 / 7.4	1.6 / 2.1	2.8 / 3.7	
Start-up current A			9.2 / 9	18.4 / 18	5.4 / 5.2	9.2 / 9	
Pre-fuse A			10	–	–	10	
Transformer circuit-breaker A			–	11...16	6.3...10	–	
Power consumption P _{el} 50/60 Hz L35 L35 kW			0.33 / 0.43	0.33 / 0.43	0.33 / 0.43	0.33 / 0.43	
Power consumption P _{el} 50/60 Hz L35 L50 kW			0.49 / 0.42	0.49 / 0.42	0.49 / 0.42	0.49 / 0.42	
Operating temperature range			+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	
Setting range			+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511			2.28	2.28	2.28	2.28	
Refrigerant g			R134a, 400	R134a, 400	R134a, 400	R134a, 400	
Permissible operating pressure (p. max.) bar			28	28	28	28	
Air throughput of fans (unimpeded air flow), internal circuit / external circuit m ³ /h			585 / 800	440 / 910	585 / 800	585 / 800	
Weight kg			32.0	37.0	37.0	32.0	
Accessories							
Filter mats		3 pc(s).	3286.500	3286.500	3286.500	3286.500	369
Metal filters		1 pc(s).	3286.510	3286.510	3286.510	3286.510	370
Door-operated switch		1 pc(s).	4127.010	4127.010	4127.010	4127.010	639
Air duct system		1 pc(s).	3286.870	3286.870	3286.870	3286.870	374
Stoppers		2 pc(s).	3286.780	3286.780	3286.780	3286.780	376

Output class 1000 W

Model No.		Packs of	3383.500	3383.510	3383.540	3383.600	Page
Material	Sheet steel		■	■	■	–	
	Stainless steel		–	–	–	■	
Colour	RAL 7035		■	■	■	–	
Total cooling output 50 Hz L35 L35 to DIN EN 14511 kW			1	1	1	1	
Total cooling output 50/60 Hz L35 L35 kW			1 / 1.09	1 / 1.09	1 / 1.09	1 / 1.09	
Total cooling output 50/60 Hz L35 L50 kW			0.71 / 0.81	0.71 / 0.81	0.71 / 0.81	0.71 / 0.81	
Rated operating voltage V, ~, Hz			230, 1~, 50/60	115, 1~, 50/60	400, 2~, 50/60	230, 1~, 50/60	
Width mm			597	597	597	597	
Height mm			417	417	417	417	
Depth mm			475	475	475	475	
Rated current max. A			2.9 / 3.9	6.2 / 8.4	1.7 / 2.2	2.9 / 3.9	
Start-up current A			8.8 / 10	14.4 / 15.8	4.6 / 5.7	8.8 / 10.1	
Pre-fuse A			10	–	–	10	
Transformer circuit-breaker A			–	11...16	6.3...10	–	
Power consumption P _{el} 50/60 Hz L35 L35 kW			0.39 / 0.48	0.39 / 0.45	0.39 / 0.45	0.39 / 0.46	
Power consumption P _{el} 50/60 Hz L35 L50 kW			0.45 / 0.57	0.43 / 0.54	0.42 / 0.54	0.43 / 0.55	
Operating temperature range			+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	
Setting range			+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511			2.58	2.58	2.58	2.58	
Refrigerant g			R134a, 650	R134a, 650	R134a, 650	R134a, 650	
Permissible operating pressure (p. max.) bar			28	28	28	28	
Air throughput of fans (unimpeded air flow), internal circuit / external circuit m ³ /h			491 / 1600	491 / 1600	491 / 1600	491 / 1600	
Weight kg			40.0	46.0	46.0	40.0	
Accessories							
Filter mats		3 pc(s).	3286.500	3286.500	3286.500	3286.500	369
Metal filters		1 pc(s).	3286.510	3286.510	3286.510	3286.510	370
Door-operated switch		1 pc(s).	4127.010	4127.010	4127.010	4127.010	639
Air duct system		1 pc(s).	3286.870	3286.870	3286.870	3286.870	374
Stoppers		2 pc(s).	3286.880	3286.880	3286.880	3286.880	376

TopTherm roof-mounted cooling units "Blue e"

Output class 1100 – 1500 W

Model No.		Packs of	3273.500	3273.515	3384.500	3384.510	3384.540	3384.600	Page
Material	Sheet steel		■	■	■	■	■	–	
	Stainless steel		–	–	–	–	–	■	
Colour	RAL 7035		■	■	■	■	■	–	
Total cooling output 50 Hz L35 L35 to DIN EN 14511 kW			1.1	1.1	1.5	1.5	1.5	1.5	
Total cooling output 50/60 Hz L35 L35 kW			1.1 / 1.2	1.1 / 1.2	1.5 / 1.65	1.5 / 1.65	1.5 / 1.65	1.5 / 1.65	
Total cooling output 50/60 Hz L35 L50 kW			0.85 / 0.87	0.85 / 0.87	1.15 / 1.3	1.15 / 1.3	1.15 / 1.3	1.15 / 1.3	
Rated operating voltage V, ~, Hz			230, 1~, 50/60	110 (DC), 1~, 50/60	230, 1~, 50/60	115, 1~, 50/60	400, 2~, 50/60	230, 1~, 50/60	
Width mm			597	597	597	597	597	597	
Height mm			417	417	417	417	417	417	
Depth mm			475	475	475	475	475	475	
Rated current max. A			5.2 / 5.4	11 / 11.5	3.9 / 4.8	8.5 / 15.3	2.4 / 2.8	3.9 / 4.8	
Start-up current A			15.5 / 16.5	32 / 35	14.8 / 16	27.4 / 27.2	8.7 / 9	14.8 / 16	
Pre-fuse A			10	–	10	–	–	10	
Transformer circuit-breaker A			–	11...16	–	14...20	6.3...10	–	
Power consumption P _{el} 50/60 Hz L35 L35 kW			0.52 / 0.54	0.52 / 0.54	0.67 / 0.77	0.67 / 0.76	0.67 / 0.76	0.67 / 0.77	
Power consumption P _{el} 50/60 Hz L35 L50 kW			0.59 / 0.73	0.59 / 0.74	0.79 / 0.91	0.8 / 0.93	0.79 / 0.93	0.79 / 0.91	
Operating temperature range			+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	
Setting range			+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511			2.16	2.16	2.24	2.24	2.24	2.24	
Refrigerant g			R134a, 700	R134a, 700	R134a, 700	R134a, 700	R134a, 700	R134a, 700	
Permissible operating pressure (p. max.) bar			28	28	28	28	28	28	
Air throughput of fans (unimpeded air flow), internal circuit / external circuit m ³ /h			440 / 1760	440 / 1760	491 / 1600	491 / 1600	491 / 1600	491 / 1600	
Weight kg			42.0	47.0	41.0	47.0	47.0	41.0	

Accessories									
Filter mats	3 pc(s).	3286.500	3286.500	3286.500	3286.500	3286.500	3286.500	3286.500	369
Metal filters	1 pc(s).	3286.510	3286.510	3286.510	3286.510	3286.510	3286.510	3286.510	370
Door-operated switch	1 pc(s).	4127.010	4127.010	4127.010	4127.010	4127.010	4127.010	4127.010	639
Air duct system	1 pc(s).	3286.870	3286.870	3286.870	3286.870	3286.870	3286.870	3286.870	374
Stoppers	2 pc(s).	3286.880	3286.880	3286.880	3286.880	3286.880	3286.880	3286.880	376

Output class 2000 W

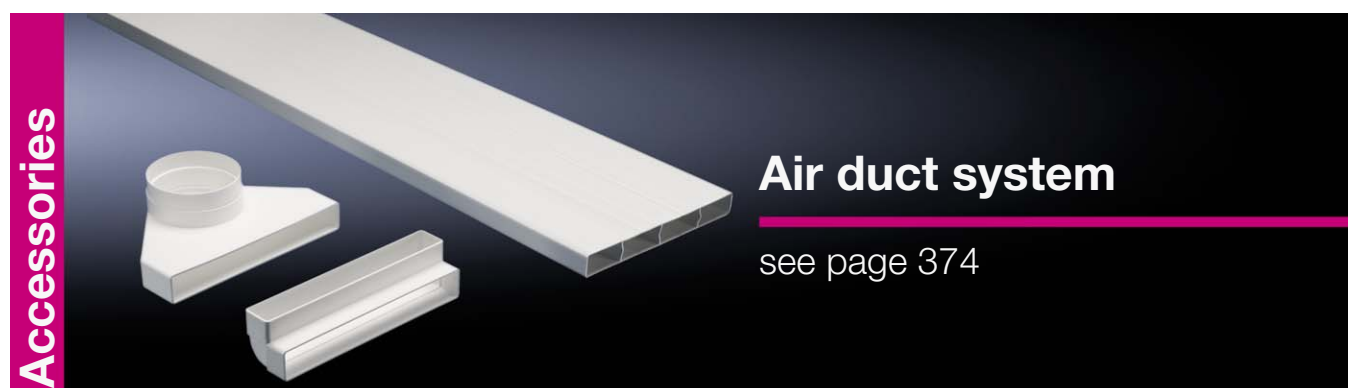
Model No.		Packs of	3385.500	3385.510	3385.540	3385.600	3385.640	Page
Material	Sheet steel		■	■	■	–	–	
	Stainless steel		–	–	–	■	■	
Colour	RAL 7035		■	■	■	–	–	
Total cooling output 50 Hz L35 L35 to DIN EN 14511 kW			2	2	2	2	2	
Total cooling output 50/60 Hz L35 L35 kW			2 / 2.14	2 / 2.14	2 / 2.14	2 / 2.14	2 / 2.14	
Total cooling output 50/60 Hz L35 L50 kW			1.41 / 1.51	1.41 / 1.51	1.41 / 1.51	1.41 / 1.51	1.41 / 1.51	
Rated operating voltage V, ~, Hz			230, 1~, 50/60	115, 1~, 50/60	400, 2~, 50/60	230, 1~, 50/60	400, 2~, 50/60	
Width mm			597	597	597	597	597	
Height mm			417	417	417	417	417	
Depth mm			475	475	475	475	475	
Rated current max. A			5.9 / 6.3	14.2 / 15.4	3.7 / 4.2	6.3 / 7.2	3.7 / 4.2	
Start-up current A			19.7 / 17.9	36 / 32	36 / 32	19.7 / 17.9	36 / 32	
Pre-fuse A			10	10	–	10	–	
Transformer circuit-breaker A			–	–	6.3...10	–	6.3...10	
Power consumption P _{el} 50/60 Hz L35 L35 kW			0.96 / 1.14	0.96 / 1.17	0.96 / 1.17	0.96 / 1.17	0.96 / 1.17	
Power consumption P _{el} 50/60 Hz L35 L50 kW			1.07 / 1.23	1.07 / 1.24	1.07 / 1.24	1.07 / 1.23	1.07 / 1.24	
Operating temperature range			+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	
Setting range			+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511			2.09	2.09	2.09	2.09	2.09	
Refrigerant g			R134a, 900	R134a, 900	R134a, 900	R134a, 900	R134a, 900	
Permissible operating pressure (p. max.) bar			28	28	28	28	28	
Air throughput of fans (unimpeded air flow), internal circuit / external circuit m ³ /h			470 / 1760	470 / 1760	470 / 1760	470 / 1760	470 / 1760	
Weight kg			42.0	48.0	48.0	42.0	48.0	

Accessories									
Filter mats	3 pc(s).	3286.500	3286.500	3286.500	3286.500	3286.500	3286.500	3286.500	369
Metal filters	1 pc(s).	3286.510	3286.510	3286.510	3286.510	3286.510	3286.510	3286.510	370
Door-operated switch	1 pc(s).	4127.010	4127.010	4127.010	4127.010	4127.010	4127.010	4127.010	639
Air duct system	1 pc(s).	3286.870	3286.870	3286.870	3286.870	3286.870	3286.870	3286.870	374
Stoppers	2 pc(s).	3286.880	3286.880	3286.880	3286.880	3286.880	3286.880	3286.880	376

TopTherm roof-mounted cooling units "Blue e"

Output class 3000 – 4000 W

Model No.	Packs of	3386.540	3386.640	3387.540	3387.640	Page
Material	Sheet steel	■	–	■	–	
	Stainless steel	–	■	–	■	
Colour	RAL 7035	■	–	■	–	
Total cooling output 50 Hz L35 L35 to DIN EN 14511 kW		3	3	3.8	3.8	
Total cooling output 50/60 Hz L35 L35 kW		3 / 3.3	3 / 3.3	3.8 / 4	3.8 / 4	
Total cooling output 50/60 Hz L35 L50 kW		2.2 / 2.5	2.2 / 2.5	3.05 / 3.3	3.05 / 3.3	
Rated operating voltage V, –, Hz		400, 3~, 50 460, 3~, 60	400, 3~, 50 460, 3~, 60	400, 3~, 50 460, 3~, 60	400, 3~, 50 460, 3~, 60	
Width mm		796	796	796	796	
Height mm		470	470	470	470	
Depth mm		580	580	580	580	
Rated current max. A		3.4 / 3.4	3.4 / 3.4	3.9 / 3.9	3.9 / 3.9	
Start-up current A		8 / 9	8 / 9	17 / 19	17 / 19	
Motor circuit-breaker A		6.3...10	6.3...10	6.3...10	6.3...10	
Power consumption P _{el} 50/60 Hz L35 L35 kW		1.17 / 1.48	1.17 / 1.48	1.59 / 2.03	1.59 / 2.03	
Power consumption P _{el} 50/60 Hz L35 L50 kW		1.42 / 1.76	1.42 / 1.76	1.84 / 2.31	1.84 / 2.31	
Operating temperature range		+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	
Setting range		+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511		2.56	2.56	2.38	2.38	
Refrigerant g		R134a, 1600	R134a, 1600	R134a, 1600	R134a, 1600	
Permissible operating pressure (p. max.) bar		28	28	28	28	
Air throughput of fans (unimpeded air flow), internal circuit / external circuit m ³ /h		1280 / 3450	1280 / 3450	1420 / 3870	1420 / 3870	
Weight kg		70.0	70.0	77.0	77.0	
Accessories						
Filter mats	3 pc(s).	3286.600	3286.600	3286.600	3286.600	369
Metal filters	1 pc(s).	3286.610	3286.610	3286.610	3286.610	370
Door-operated switch	1 pc(s).	4127.010	4127.010	4127.010	4127.010	639
Air duct system	1 pc(s).	3286.970	3286.970	3286.970	3286.970	374
Stoppers	2 pc(s).	3286.980	3286.980	3286.980	3286.980	376



Modular climate control concept - Cooling module "Blue e"



Climate control accessories Page 369 TS 8 enclosures Page 65 Therm software Page 385

All cooling modules are compatible with all section doors.

Temperature control:

- e-Comfort controller (factory setting +35°C)

Material:

- Sheet steel

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- External circuit IP 34
- Internal circuit IP 54

Supply includes:

- Cooling module prepared for installation in section door
- Nano-coated condenser
- Integral electric condensate evaporation

Note:

- A base/plinth with a height of 100 or 200 mm is required for efficient operation

Approvals:

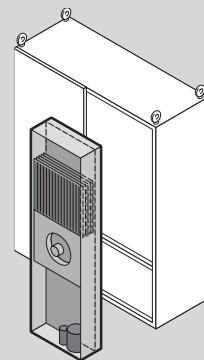
Available on the Internet

Performance diagrams:

Available on the Internet

Technical details:

Available on the Internet



Output class 1500 – 2500 W

Model No.	Packs of	3307.700	3307.740	3310.700	3310.740	Page
Material	Sheet steel	■	■	■	■	
Rated operating voltage V, ~, Hz		230, 1~, 50/60	400, 3~, 50 460, 3~, 60	230, 1~, 50/60	400, 3~, 50 460, 3~, 60	
Total cooling output 50/60 Hz L35 L35 kW		1.55 / 1.55	1.55 / 1.55	2.5 / 2.52	2.5 / 2.5	
Total cooling output 50/60 Hz L35 L50 kW		0.85 / 0.9	0.93 / 0.95	1.62 / 1.76	1.76 / 1.8	
Rated current max. A		6 / 6.1	2.5 / 2.7	7.6 / 9.4	3.5 / 3.7	
Start-up current A		22 / 24	8.5 / 9.2	22 / 24	13 / 14	
Pre-fuse A		16	-	16	-	
Motor circuit-breaker A		-	6.3...10	-	6.3...10	
Power consumption P _{el} 50/60 Hz L35 L35 kW		0.85 / 1.05	0.79 / 1	1.31 / 1.52	1.13 / 1.48	
Power consumption P _{el} 50/60 Hz L35 L50 kW		1 / 1.15	0.9 / 1.1	1.48 / 1.85	1.4 / 1.75	
Operating temperature range		+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	+10°C...+55°C	
Setting range		+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511		1.8	1.9	1.9	2.2	
Refrigerant g		R134a, 700	R134a, 700	R134a, 1175	R134a, 1175	
Permissible operating pressure (p. max.) bar		28	28	30	30	
Air throughput of fans (unimpeded air flow), internal circuit / external circuit m ³ /h		600 / 1100	600 / 1100	1100 / 1100	1100 / 1100	
Weight kg		68.0	68.0	73.0	72.0	

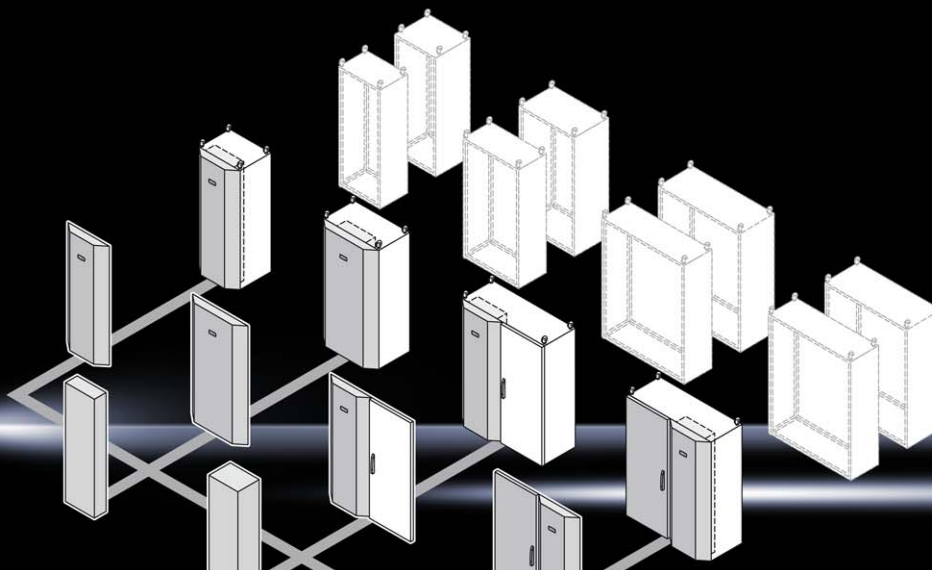
Also required

Modular climate control concept - Section doors		see page	see page	see page	see page	351
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Accessories

Accessories						
Door-operated switch	1 pc(s).	4127.010	4127.010	4127.010	4127.010	639
SK BUS system	1 pc(s).	3124.100	3124.100	3124.100	3124.100	382
RiDiag II	1 pc(s).	3159.100	3159.100	3159.100	3159.100	385
Interface board	1 pc(s).	3124.200	3124.200	3124.200	3124.200	381

Modular climate control concept - Section doors



Climate control accessories Page 369 TS 8 enclosures Page 65 Therm software Page 385

Material:

- Sheet steel

Colour:

- RAL 7035

Supply includes:

- Section door without pre-configured cooling module
- TS 8 hinges, door opening angle approx. 110°

Note:

The following information applies to 1200 mm wide TS 8 enclosures

- With the unit positioned on the right, one pack consists of a section door for installing in the right-hand half of the enclosure plus a special lockable door for the left-hand half.
- With the unit positioned on the left, one pack consists of a section door for installing in the left-hand half of the enclosure. The existing lockable door on the right may be used.

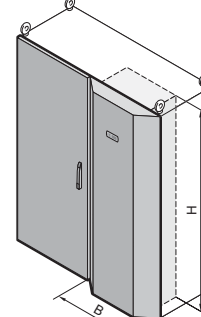
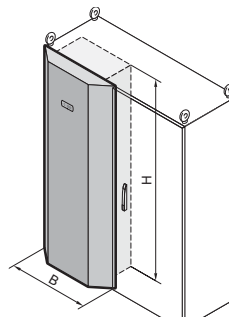
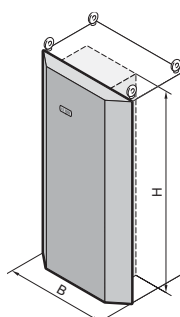
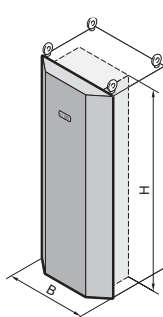
Approvals:

Available on the Internet

Technical details:

Available on the Internet

for installing cooling modules



Model No.	Packs of	3300.040	3300.050	3300.060	3300.070	3300.080	3300.090	3300.110	3300.120	Page
Dimensions to fit enclosure type		TS 8	TS 8	TS 8	TS 8	TS 8	TS 8	TS 8	TS 8	
with height mm		1800	2000	1800	2000	1800	2000	1800	2000	
with width mm		600	600	800	800	1200	1200	1200	1200	
Unit positioned on the left		-	-	-	-	■	■	-	-	
Unit positioned on the right		-	-	-	-	-	-	■	■	

Also required

Modular climate control concept - Cooling module "Blue e"		see page	see page	see page	see page	see page	see page	see page	see page	350
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Accessories

Metal filters	1 pc(s).	3284.210	3284.210	3284.210	3284.210	3284.210	3284.210	3284.210	3284.210	370
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Cooling with water

Air/water heat exchangers

Wall-mounted	300 – 500 W	354
Wall-mounted	600 – 1000 W	355
Wall-mounted	1250 – 3000 W	356
Wall-mounted	3000 – 5000 W	357
Wall-mounted	7000 W	358
Roof-mounted	1875 – 4000 W	359

Liquid Cooling Package

LCP Rack Industry	10 kW	360
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Chillers

TopTherm	1000 – 1500 W	361
TopTherm	3000 – 6000 W	362
TopTherm, wall-mounted	1000 – 2500 W	363
TopTherm	8000 – 16000 W	364
TopTherm	20000 – 40000 W	365



Air/water heat exchangers



Climate control accessories Page 369 Chillers Page 361 Therm software Page 385

Colour:

– RAL 7035

Protection category IP to IEC 60 529:

– IP 55

Cooling medium:

– Water (see Internet for specifications)

Supply includes:

- Fully wired ready for connection (plug-in terminal strip)
- Drilling template
- Sealing and assembly parts

Note:

- Integral non-return valve for version with e-Comfort controller

Approvals:

Available on the Internet

Performance diagrams:

Available on the Internet

Technical details:

Available on the Internet

Output class 300 – 500 W, wall-mounted

Model No.		Packs of	3212.024	3212.115	3212.230	3363.100	3363.500	Page
Water-carrying parts	Copper/brass (Cu/CuZn)		■	■	■	■	■	
Temperature control	Basic controller (factory setting +35°C)		–	–	–	■	–	
	e-Comfort controller (factory setting +35°C)		–	–	–	–	■	
Total cooling output L35 W10, 200 l/h kW			0.3	0.3	0.3	–	–	
Total cooling output L35 W10, 400 l/h kW			–	–	–	0.5	0.5	
Rated operating voltage V, ~, Hz			24 (DC)	115, 1~, 50/60	230, 1~, 50/60	230, 1~, 50/60	230, 1~, 50/60	
Width mm			150	150	150	280	280	
Height mm			300	300	300	550	550	
Depth mm			85	85	85	120	120	
Power consumption P _{el} 50/60 Hz W			26	26 / 30	23 / 27	37 / 38	37 / 38	
Rated current max. A			1.2	0.23 / 0.24	0.11 / 0.13	0.18 / 0.18	0.18 / 0.18	
Pre-fuse A			2	2	2	4	4	
Operating temperature range			+1°C...+70°C	+1°C...+70°C	+1°C...+70°C	+1°C...+70°C	+1°C...+70°C	
Setting range			–	–	–	+20°C...+55°C	+20°C...+55°C	
Water inlet temperature			+1°C...+30°C	+1°C...+30°C	+1°C...+30°C	+1°C...+30°C	+1°C...+30°C	
Water connection	½" connector sleeve		–	–	–	■	■	
	G ¾" external thread		–	–	–	■	■	
	¾" connector sleeve		■	■	■	–	–	
Permissible operating pressure (p. max.) bar			1 - 10	1 - 10	1 - 10	1 - 10	1 - 10	
Air throughput of fans (unimpeded air flow) m³/h			250	260 / 300	280 / 310	290 / 345	290 / 345	
Weight kg			3.2	3.2	3.2	8.0	8.0	

Accessories


Condensate hose	1 pc(s).	3301.610	3301.610	3301.610	3301.612	3301.612	377
Door-operated switch	1 pc(s).	4127.010	4127.010	4127.010	4127.010	4127.010	639
Toroidal transformer, primary connection 115 V/400 V	1 pc(s).	–	–	3201.960	see page	see page	382
Fitting G ¾"	2 pc(s).	–	–	–	3201.900	3201.900	378
Flow regulator valve		see page	see page	see page	see page	see page	378
Digital enclosure internal temperature display and thermostat	1 pc(s).	3114.200	3114.200	3114.200	–	–	379
SK BUS system	1 pc(s).	–	–	–	–	3124.100	382
Interface board	1 pc(s).	–	–	–	–	3124.200	381

Air/water heat exchangers

Output class 600 – 1000 W, wall-mounted

Model No.	Packs of	3214.100	3364.504	3364.100	3364.500	Page
Water-carrying parts	Copper/brass (Cu/CuZn)	■	–	■	■	
	Stainless steel (1.4571)	–	■	–	–	
Temperature control	Basic controller (factory setting +35°C)	–	–	■	–	
	e-Comfort controller (factory setting +35°C)	–	■	–	■	
	Thermostat-controlled magnetic valve	■	–	–	–	
Total cooling output L35 W10, 200 l/h kW		0.6	–	–	–	
Total cooling output L35 W10, 400 l/h kW		0.7	0.95	1	1	
Rated operating voltage V, ~, Hz		230, 1~, 50/60	230, 1~, 50/60	230, 1~, 50/60	230, 1~, 50/60	
Width mm		200	280	280	280	
Height mm		500	550	550	550	
Depth mm		100	120	120	120	
Power consumption P _{el} 50/60 Hz W		36 / 37	37 / 38	37 / 38	37 / 38	
Rated current max. A		0.17 / 0.18	0.18 / 0.18	0.18 / 0.18	0.18 / 0.18	
Pre-fuse A		2	4	4	4	
Operating temperature range		+1°C...+70°C	+1°C...+70°C	+1°C...+70°C	+1°C...+70°C	
Setting range		+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	
Water inlet temperature		+1°C...+30°C	+1°C...+30°C	+1°C...+30°C	+1°C...+30°C	
Water connection	½" connector sleeve	■	■	■	■	
	G ¾" external thread	–	■	■	■	
Permissible operating pressure (p. max.) bar		1 - 10	1 - 10	1 - 10	1 - 10	
Air throughput of fans (unimpeded air flow) m³/h		280 / 310	290 / 345	290 / 345	290 / 345	
Weight kg		7.0	9.0	9.0	9.0	
Accessories						
Condensate hose	1 pc(s).	3301.612	3301.612	3301.612	3301.612	377
Door-operated switch	1 pc(s).	4127.010	4127.010	4127.010	4127.010	639
Toroidal transformer, primary connection 115 V/400 V		see page	see page	see page	see page	382
Fitting G ¾"	2 pc(s).	–	3201.900	3201.900	3201.900	378
Flow regulator valve		see page	see page	see page	see page	378
Digital enclosure internal temperature display and thermostat		–	–	–	–	
SK BUS system	1 pc(s).	–	3124.100	–	3124.100	382
Interface board	1 pc(s).	–	3124.200	–	3124.200	381

Accessories



Therm software

see page 385

Air/water heat exchangers

Output class 1250 – 3000 W, wall-mounted

Model No.	Packs of	3215.100	3373.100	3373.500	3374.504	3374.100	Page
Water-carrying parts	Copper/brass (Cu/CuZn)	■	■	■	–	■	
	Stainless steel (1.4571)	–	–	–	■	–	
Temperature control	Basic controller (factory setting +35°C)	–	■	–	–	■	
	e-Comfort controller (factory setting +35°C)	–	–	■	■	–	
	Thermostat-controlled magnetic valve	■	–	–	–	–	
Total cooling output L35 W10, 200 l/h kW		1.25	–	–	–	–	
Total cooling output L35 W10, 400 l/h kW		1.3	2	2	2.8	3	
Rated operating voltage V, ~, Hz		230, 1~, 50/60	230, 1~, 50/60	230, 1~, 50/60	230, 1~, 50/60	230, 1~, 50/60	
Width mm		200	400	400	400	400	
Height mm		950	950	950	950	950	
Depth mm		100	145	145	145	145	
Power consumption P _{el} 50/60 Hz W		83 / 85	110 / 140	110 / 140	169 / 232	169 / 232	
Rated current max. A		0.38 / 0.4	0.49 / 0.61	0.49 / 0.61	0.76 / 1.01	0.76 / 1.01	
Pre-fuse A		4	4	4	4	4	
Operating temperature range		+1°C...+70°C	+1°C...+70°C	+1°C...+70°C	+1°C...+70°C	+1°C...+70°C	
Setting range		+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	
Water inlet temperature		+1°C...+30°C	+1°C...+30°C	+1°C...+30°C	+1°C...+30°C	+1°C...+30°C	
Water connection	½" connector sleeve	■	■	■	■	■	
	G ¾" external thread	–	■	■	■	■	
Permissible operating pressure (p. max.) bar		1 - 10	1 - 10	1 - 10	1 - 10	1 - 10	
Air throughput of fans (unimpeded air flow) m³/h		680 / 735	880 / 950	880 / 950	1150 / 1300	1150 / 1300	
Weight kg		13.0	20.0	20.0	23.0	23.0	
Accessories							
Condensate hose	1 pc(s).	3301.612	3301.612	3301.612	3301.612	3301.612	377
Door-operated switch	1 pc(s).	4127.010	4127.010	4127.010	4127.010	4127.010	639
Toroidal transformer, primary connection 115 V/400 V		see page	–	–	–	–	382
Fitting G ¾"	2 pc(s).	–	3201.900	3201.900	3201.900	3201.900	378
Flow regulator valve		see page	see page	see page	see page	see page	378
Digital enclosure internal temperature display and thermostat		–	–	–	–	–	
SK BUS system	1 pc(s).	–	–	3124.100	3124.100	–	382
Interface board	1 pc(s).	–	–	3124.200	3124.200	–	381



LCP – Liquid Cooling Package

see page 360

New

Air/water heat exchangers

Output class 3000 – 5000 W, wall-mounted

Model No.	Packs of	3374.500	3375.504	3375.100	3375.500	Page
Water-carrying parts	Copper/brass (Cu/CuZn)	■	–	■	■	
	Stainless steel (1.4571)	–	■	–	–	
Temperature control	Basic controller (factory setting +35°C)	–	–	■	–	
	e-Comfort controller (factory setting +35°C)	■	■	–	■	
Total cooling output L35 W10, 200 l/h W		–	–	–	–	
Total cooling output L35 W10, 400 l/h kW		3	4.5	5	5	
Rated operating voltage V, ~, Hz		230, 1~, 50/60	230, 1~, 50/60	230, 1~, 50/60	230, 1~, 50/60	
Width mm		400	450	450	450	
Height mm		950	1400	1400	1400	
Depth mm		145	220	220	220	
Power consumption P _{el} 50/60 Hz W		169 / 232	178 / 232	178 / 232	178 / 232	
Rated current max. A		0.76 / 1.01	0.78 / 1.01	0.78 / 1.01	0.78 / 1.01	
Pre-fuse A		4	4	4	4	
Operating temperature range		+1°C...+70°C	+1°C...+70°C	+1°C...+70°C	+1°C...+70°C	
Setting range		+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	
Water inlet temperature		+1°C...+30°C	+1°C...+30°C	+1°C...+30°C	+1°C...+30°C	
Water connection	½" connector sleeve	■	■	■	■	
	G ¾" external thread	■	■	■	■	
Permissible operating pressure (p. max.) bar		1 - 10	1 - 10	1 - 10	1 - 10	
Air throughput of fans (unimpeded air flow) m³/h		1150 / 1300	1490 / 1660	1490 / 1660	1490 / 1660	
Weight kg		23.0	39.0	39.0	39.0	

Accessories

Condensate hose	1 pc(s).	3301.612	3301.612	3301.612	3301.612	377
Door-operated switch	1 pc(s).	4127.010	4127.010	4127.010	4127.010	639
Toroidal transformer, primary connection 115 V/400 V		–	–	–	–	
Fitting G ¾"	2 pc(s).	3201.900	3201.900	3201.900	3201.900	378
Flow regulator valve		see page	see page	see page	see page	378
Digital enclosure internal temperature display and thermostat		–	–	–	–	
SK BUS system	1 pc(s).	3124.100	3124.100	–	3124.100	382
Interface board	1 pc(s).	3124.200	3124.200	–	3124.200	381

Accessories



TopTherm chillers

see page 361

Air/water heat exchangers



Climate control accessories Page 369 Chillers Page 361 Therm software Page 385

Colour:

– RAL 7035

Protection category IP to IEC 60 529:

– IP 55

Cooling medium:

– Water (see Internet for specifications)

Supply includes:

- Fully wired ready for connection (plug-in terminal strip)
- Drilling template
- Sealing and assembly parts

Note:

- Use 3-pole miniature circuit-breaker

Approvals:

Available on the Internet

Performance diagrams:

Available on the Internet

Technical details:

Available on the Internet

Output class 7000 W, wall-mounted

Model No.		Packs of	3216.480	Page
Water-carrying parts	Copper/brass (Cu/CuZn)		■	
Temperature control	Thermostat-controlled magnetic valve		■	
Total cooling output L35 W10, 500 l/h kW			7	
Total cooling output L35 W20, 500 l/h kW			4.5	
Rated operating voltage V, ~, Hz			400, 3~, 50 460, 3~, 60	
Width mm			450	
Height mm			1800	
Depth mm			300	
Rated current max. A			1.4 / 1.6	
Pre-fuse A			4	
Operating temperature range			+1°C...+70°C	
Setting range			+20°C...+55°C	
Water inlet temperature			+1°C...+30°C	
Permissible operating pressure (p. max.) bar			1 - 10	
Air throughput of fans (unimpeded air flow) m³/h			3630 / 4670	
Weight kg			79.0	
Accessories				
Door-operated switch	1 pc(s).		4127.010	639
Condensate hose	1 pc(s).		3301.612	377
Flow regulator valve			see page	378



Climate control accessories Page 369 Chillers Page 361 Roof plates TS with mounting cut-out Page 383 Air routing Page 374

Colour:

– RAL 7035

Protection category IP to IEC 60 529:

– IP 55

Cooling medium:

– Water (see Internet for specifications)

Supply includes:

- Fully wired ready for connection (plug-in terminal strip)
- Drilling template
- Sealing mat
- Assembly parts

Approvals:

Available on the Internet

Performance diagrams:

Available on the Internet

Technical details:

Available on the Internet

Output class 1875 – 4000 W, roof-mounted

Model No.	Packs of	3209.504	3209.100	3209.500	3210.504	3210.100	3210.500	Page
Water-carrying parts	Copper/brass (Cu/CuZn)	–	■	■	–	■	■	
	Stainless steel (1.4571)	■	–	–	■	–	–	
Temperature control	Basic controller (factory setting +35°C)	–	■	–	–	■	–	
	e-Comfort controller (factory setting +35°C)	■	–	■	■	–	■	
Total cooling output L35 W10, 400 l/h kW		1.88	2.5	2.5	3	4	4	
Rated operating voltage V, ~, Hz		230, 1~, 50/60	230, 1~, 50/60	230, 1~, 50/60	230, 1~, 50/60	230, 1~, 50/60	230, 1~, 50/60	
Width mm		597	597	597	597	597	597	
Height mm		417	417	417	417	417	417	
Depth mm		475	475	475	475	475	475	
Power consumption P _{el} 50/60 Hz W		95 / 110	95 / 110	95 / 110	100 / 120	100 / 120	100 / 120	
Rated current max. A		0.4 / 0.48	0.4 / 0.48	0.4 / 0.48	0.44 / 0.5	0.44 / 0.5	0.44 / 0.5	
Pre-fuse A		4	4	4	4	4	4	
Operating temperature range		+1°C...+70°C	+1°C...+70°C	+1°C...+70°C	+1°C...+70°C	+1°C...+70°C	+1°C...+70°C	
Setting range		+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	+20°C...+55°C	
Water inlet temperature		+1°C...+30°C	+1°C...+30°C	+1°C...+30°C	+1°C...+30°C	+1°C...+30°C	+1°C...+30°C	
Water connection	½" connector sleeve	■	■	■	■	■	■	
	G ¾" external thread	■	■	■	■	■	■	
Permissible operating pressure (p. max.) bar		1 - 10	1 - 10	1 - 10	1 - 10	1 - 10	1 - 10	
Air throughput of fans (unimpeded air flow) m³/h		925 / 1030	925 / 1030	925 / 1030	815 / 925	815 / 925	815 / 925	
Weight kg		23.5	23.5	23.5	25.5	25.5	25.5	

Accessories

Door-operated switch	1 pc(s).	4127.010	4127.010	4127.010	4127.010	4127.010	4127.010	639
SK BUS system	1 pc(s).	3124.100	–	3124.100	3124.100	–	3124.100	382
Interface board	1 pc(s).	3124.200	–	3124.200	3124.200	–	3124.200	381
Air duct system	1 pc(s).	3286.870	3286.870	3286.870	3286.870	3286.870	3286.870	374
Stoppers	2 pc(s).	3286.880	3286.880	3286.880	3286.880	3286.880	3286.880	376
Condensate hose	1 pc(s).	3301.612	3301.612	3301.612	3301.612	3301.612	3301.612	377
Flow regulator valve		see page	see page	see page	see page	see page	see page	378

Liquid Cooling Package



Climate control accessories Page 369 Chillers Page 361 Therm software Page 385

Air/water heat exchangers in TS 8 baying system, to fit 600 or 800 mm deep and 2000 mm high TS 8 enclosures. Air outlet either with 5 kW on each side or 10 kW on one side only. Options available for water connection on the top or bottom of the unit.

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 54

Cooling medium:

- Water (see Internet for specifications)

Supply includes:

- Fully wired ready for connection (plug-in terminal strip)
- Front door

Note:

- Bayable by screw-fastening at the sides

Performance diagrams:

Available on the Internet

Photo shows a configuration example with equipment not included in the scope of supply

Output class 10 kW, LCP Rack Industry

Model No.		Packs of	3378.200	3378.280	Page
Water-carrying parts	Copper/brass (Cu/CuZn)		■	■	
Total cooling output L35 W10, 2000 l/h kW			10	10	
Power consumption P _{el} 50/60 Hz W			704 / 816	704 / 816	
Rated operating voltage V, ~, Hz			230, 1~, 50/60	230, 1~, 50/60	
Width mm			300	300	
Height mm			2000	2000	
Depth mm			600	800	
Rated current max. A			3 / 3.5	3 / 3.5	
Pre-fuse A			4	4	
Operating temperature range			+5°C...+70°C	+5°C...+70°C	
Setting range			+20°C...+55°C	+20°C...+55°C	
Water inlet temperature			+7°C...+30°C	+7°C...+30°C	
Water connection	¾" connector sleeve		■	■	
	¾" internal thread		■	■	
Permissible operating pressure (p. max.) bar			1 - 10	1 - 10	
Air throughput of fans (unimpeded air flow) m³/h			2120 / 1960	2120 / 1960	
Weight kg			121.0	130.0	
Accessories					
Base/plinth components, front and rear, 100 mm		1 set(s)	8601.915	8601.915	513
Base/plinth trim panels, side, 100 mm		1 set(s)	8601.060	8601.080	514
Base/plinth components, front and rear, 200 mm		1 set(s)	8602.915	8602.915	513
Base/plinth trim panels, side, 200 mm		1 set(s)	8602.060	8602.080	514
Side panels, screw-fastened, sheet steel		2 pc(s).	8106.235	8108.235	534
Condensate hose		1 pc(s).	3301.612	3301.612	377



Climate control accessories Page 369 Cooling medium Page 378 Flow regulator valve Page 378 Therm software Page 385

Design:

- Compact, modular layout of the refrigeration components
- Nano-coated condenser
- Pump to convey the medium
- Precise temperature control, based on microprocessor technology
- Collective fault signal with floating contact

Temperature control:

- Microcontroller control (factory setting +20°C)

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 44 (electrics)

Supply includes:

- Complete unit ready for connection
- Multilingual documentation including functional diagram and wiring plans

Note:

- For 3334.660, two metal filters are required

Characteristic curves of pump:

Available on the Internet

Approvals:

Available on the Internet

Technical details:

Available on the Internet

Output class 1000 – 1500 W

Model No.	Packs of	3318.600	3318.610	3319.600	3319.610	Page
Total cooling output at $T_w = 10^\circ\text{C} / T_u = 32^\circ\text{C}$ kW		0.8 / 0.9	0.8 / 0.9	1.2 / 1.3	1.2 / 1.3	
Total cooling output at $T_w = 18^\circ\text{C} / T_u = 32^\circ\text{C}$ kW		1 / 1.1	1 / 1.1	1.5 / 1.7	1.5 / 1.7	
Power consumption P_{el} 50/60 Hz kW		0.63 / 0.78	0.63 / 0.78	0.85 / 1.05	0.85 / 1.05	
Rated operating voltage V_n , ~, Hz		230, 1~, 50/60	230, 1~, 50/60	230, 1~, 50/60	230, 1~, 50/60	
Width mm		600	600	600	600	
Height mm		400	400	400	400	
Depth mm		430	430	430	430	
Rated current max. A		4.2 / 4.1	4.2 / 4.1	5.4 / 5.3	5.4 / 5.3	
Operating temperature range		+10°C...+43°C	+10°C...+43°C	+10°C...+43°C	+10°C...+43°C	
Refrigerant		R134a	R134a	R134a	R134a	
Water connection	½" internal thread	■	■	■	■	
Temperature hysteresis		+/- 2 K	+/- 2 K	+/- 2 K	+/- 2 K	
Temperature of liquid		+10°C...+30°C	+10°C...+30°C	+10°C...+30°C	+10°C...+30°C	
Design		Pressure-sealed	Open	Pressure-sealed	Open	
Tank		-	PP plastic	-	PP plastic	
Tank capacity l		-	2.5	-	2.5	
Weight kg		48.0	48.0	51.0	51.0	
Accessories						
Metal filters	1 pc(s).	3286.510	3286.510	3286.510	3286.510	370

TopTherm chillers

Output class 3000 – 6000 W

Model No.	Packs of	3320.600	3334.600	3334.660	Page
Total cooling output at $T_w = 10^\circ\text{C} / T_u = 32^\circ\text{C}$ kW		2.7 / 3	3.9 / 4.7	4.8 / 5.2	
Total cooling output at $T_w = 18^\circ\text{C} / T_u = 32^\circ\text{C}$ kW		3 / 3.4	4.5 / 5.4	6.1 / 6.6	
Power consumption P_{el} 50/60 Hz kW		2.1 / 2.7	2.9 / 4.1	4.1 / 4.8	
Rated operating voltage V, ~, Hz		400, 3~, 50 460, 3~, 60	400, 3~, 50 460, 3~, 60	400, 3~, 50 460, 3~, 60	
Width mm		602	602	602	
Height mm		676	676	1050	
Depth mm		645	645	645	
Rated current max. A		4.1 / 4.4	5.7 / 6.3	8.4 / 9	
Operating temperature range		+10°C...+43°C	+10°C...+43°C	+10°C...+43°C	
Refrigerant		R134a	R134a	R134a	
Integral tank level display		–	–	■	
Water connection	½" internal thread	■	■	–	
	¾" internal thread	–	–	■	
Temperature hysteresis		+/- 2 K	+/- 2 K	+/- 2 K	
Temperature of liquid		+10°C...+30°C	+10°C...+30°C	+10°C...+30°C	
Design		Open	Open	Open	
Tank		PP plastic	PP plastic	PP plastic	
Tank capacity l		30	30	30	
Weight kg		88.0	94.0	125.0	
Accessories					
Metal filters	1 pc(s).	3286.520	3286.520	3286.510	370





Climate control accessories Page 369 Cooling medium Page 378 Flow regulator valve Page 378 Therm software Page 385

Design:

- Compact, modular layout of the refrigeration components
- Nano-coated condenser
- Pump to convey the medium
- Precise temperature control, based on microprocessor technology
- Open system with tank
- Collective fault signal with floating contact

Temperature control:

- Microcontroller control (factory setting +20°C)

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 44 (electrics)

Supply includes:

- Complete unit ready for connection
- Multilingual documentation including functional diagram and wiring plans

Characteristic curves of pump:

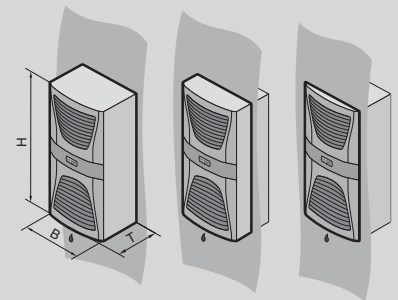
Available on the Internet

Approvals:

Available on the Internet

Technical details:

Available on the Internet



Output class 1000 – 2500 W, wall-mounted

Model No.	Packs of	3360.100	3360.250	Page
Total cooling output at $T_w = 10^\circ\text{C} / T_u = 32^\circ\text{C}$ kW		0.8 / 0.9	2.1 / 2.3	
Total cooling output at $T_w = 18^\circ\text{C} / T_u = 32^\circ\text{C}$ kW		1 / 1.1	2.5 / 2.8	
Power consumption P_{el} 50/60 Hz kW		0.7 / 0.76	1.55 / 2	
Rated operating voltage V, ~, Hz		400, 3~, 50 460, 3~, 60	400, 3~, 50 460, 3~, 60	
Width (B) mm		400	400	
Height (H) mm		950	1580	
Depth (T) mm		310	290	
Rated current max. A		4.2 / 4	5.5 / 5.6	
Operating temperature range		+10°C...+43°C	+10°C...+43°C	
Refrigerant		R134a	R134a	
Water connection	Quick-release coupling (mating part included in accessory bag)	■	■	
Temperature hysteresis		+/- 2 K	+/- 2 K	
Temperature of liquid		+10°C...+30°C	+10°C...+30°C	
Tank		PP plastic	PP plastic	
Tank capacity l		5	10	
Weight kg		47.0	78.0	

Accessories				
Metal filters	1 pc(s).	3286.410	3286.410	370

TopTherm chillers



Climate control accessories Page 369 Cooling medium Page 378 Flow regulator valve Page 378 Therm software Page 385

Benefits:

- Modular design
- Small footprint
- Convenient servicing
- High reliability thanks to icing protection
- One version for two frequencies = international compatibility
- Fast availability, because the basic platform is available off the shelf

Temperature control:

- Microcontroller control (factory setting +18°C, differential value control also available)

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 44 (electrics)

Supply includes:

- Fully wired unit ready for connection with side panels and door
- Multilingual documentation including functional diagram and wiring plans

Note:

- For 3335.880 and 3335.890, two metal filters are required

Characteristic curves of pump:

Available on the Internet

Approvals:

Available on the Internet

Technical details:

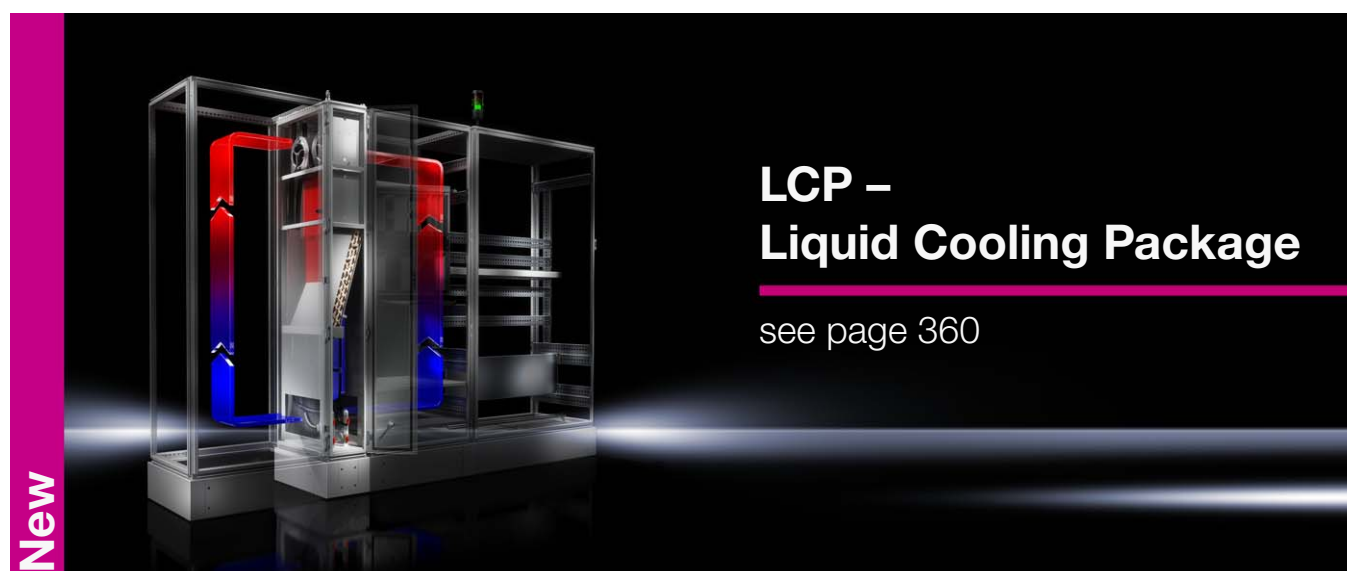
Available on the Internet

Output class 8000 – 16000 W

Model No.	Packs of	3335.790	3335.830	3335.840	3335.850	Page
Total cooling output at $T_w = 10^\circ\text{C} / T_u = 32^\circ\text{C}$ kW		6.5 / 7.5	6.5 / 7.5	10.3 / 11.3	13.8 / 15.2	
Total cooling output at $T_w = 18^\circ\text{C} / T_u = 32^\circ\text{C}$ kW		8 / 8.6	8 / 8.6	12 / 13.1	16 / 17.6	
Power consumption P_{el} 50/60 Hz kW		4.37 / 5.21	4.37 / 5.21	6.6 / 7.76	7.3 / 9.2	
Rated operating voltage V, ~, Hz		400, 3~, 50 460, 3~, 60	400, 3~, 50 460, 3~, 60	400, 3~, 50 460, 3~, 60	400, 3~, 50 460, 3~, 60	
Width mm		805	805	805	805	
Height mm		1700	2100	2140	2140	
Depth mm		605	605	605	605	
Rated current max. A		8.2 / 7.7	8.2 / 7.7	10 / 11.4	12.7 / 13.3	
Operating temperature range		+10°C...+43°C	+10°C...+43°C	+10°C...+43°C	+10°C...+43°C	
Refrigerant		R410a	R410a	R410a	R410a	
Water connection	1" internal thread	■	■	■	■	
Temperature hysteresis		+/- 2 K	+/- 2 K	+/- 2 K	+/- 2 K	
Temperature of liquid		+10°C...+25°C	+10°C...+25°C	+10°C...+25°C	+10°C...+25°C	
Tank capacity l		75	75	75	75	
Weight kg		248.0	248.0	282.0	282.0	
Accessories						
Metal filters	1 pc(s).	3286.550	3286.550	3286.530	3286.530	370
Levelling feet	4 pc(s).	7493.100	7493.100	7493.100	7493.100	521
Flex-Block base/plinth system		from page	from page	from page	from page	510
Base/plinth TS		from page	from page	from page	from page	512
Cooling medium		see page	see page	see page	see page	378

Output class 20000 – 40000 W

Model No.	Packs of	3335.860	3335.870	3335.880	3335.890	Page
Total cooling output at $T_w = 10^\circ\text{C} / T_u = 32^\circ\text{C}$ kW		16.6 / 18.7	20.8 / 23.8	27 / 30.4	32.5 / 37.5	
Total cooling output at $T_w = 18^\circ\text{C} / T_u = 32^\circ\text{C}$ kW		20 / 21.8	25 / 27.6	32 / 35.2	40 / 44	
Power consumption P_{el} 50/60 Hz kW		9.2 / 12	11.4 / 13.9	14.95 / 17.6	17.91 / 23.1	
Rated operating voltage V, -, Hz		400, 3~, 50 460, 3~, 60	400, 3~, 50 460, 3~, 60	400, 3~, 50 460, 3~, 60	400, 3~, 50 460, 3~, 60	
Width mm		1205	1205	1605	2405	
Height mm		2140	2140	2140	2140	
Depth mm		605	605	605	605	
Rated current max. A		20.1 / 17.3	22.8 / 23.8	26.3 / 26.7	38.4 / 32.7	
Operating temperature range		+10°C...+43°C	+10°C...+43°C	+10°C...+43°C	+10°C...+43°C	
Refrigerant		R410a	R410a	R410a	R410a	
Water connection	1" internal thread	■	■	-	-	
	1¼" internal thread	-	-	■	■	
Temperature hysteresis		+/- 2 K	+/- 2 K	+/- 2 K	+/- 2 K	
Temperature of liquid		+10°C...+25°C	+10°C...+25°C	+10°C...+25°C	+10°C...+25°C	
Tank capacity l		150	150	75	150	
Weight kg		360.0	374.0	511.0	646.0	
Accessories						
Metal filters	1 pc(s).	3286.540	3286.540	3286.530	3286.540	370
Levelling feet	4 pc(s).	7493.100	7493.100	7493.100	7493.100	521
Flex-Block base/plinth system		from page	from page	from page	from page	510
Base/plinth TS		from page	from page	from page	from page	512
Cooling medium		see page	see page	see page	see page	378



LCP – Liquid Cooling Package

see page 360

Enclosure heaters



Climate control accessories Page 369 Therm software Page 385

Supply includes:

- PTC heater
- Quick-connection terminal
- Assembly parts

Note:

- For precise temperature control inside the enclosure, we recommend the enclosure internal thermostat or the digital enclosure internal temperature display and thermostat.

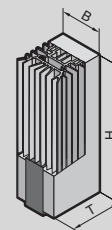
- In order to prevent condensation on assemblies, a hygrostat is recommended to regulate heating.
- In larger enclosures, even heat distribution is best achieved by installing several low-output heaters.
- The installation of heaters is generally advisable, in order to prevent condensation.

Approvals:

- UR
- cUR
- CSA

Technical details:

Available on the Internet



Continuous thermal output 10 – 150 W, without fan

Model No.	Packs of	3105.310	3105.320	3105.330	3105.340	3105.350	3105.360	3105.370	Page
Width (B) mm		45	45	64	64	64	90	90	
Height (H) mm		120	120	155	155	230	165	180	
Depth (T) mm		46	46	56	56	56	75	75	
Continuous thermal output at $T_U = 10^\circ\text{C}$ W		8 - 10	18 - 20	23 - 30	49 - 50	63 - 75	86 - 100	130 - 150	
Rated operating voltage V, ~, Hz		110 - 240, 1~, 50/60	110 - 240, 1~, 50/60	110 - 240, 1~, 50/60	110 - 240, 1~, 50/60	110 - 240, 1~, 50/60	110 - 240, 1~, 50/60	110 - 240, 1~, 50/60	
Pre-fuse A		2	2	4	4	4	4	4	
Accessories									
Enclosure internal thermostat	1 pc(s).	3110.000	3110.000	3110.000	3110.000	3110.000	3110.000	3110.000	379
Hygrostat	1 pc(s).	3118.000	3118.000	3118.000	3118.000	3118.000	3118.000	3118.000	380
Digital enclosure internal temperature display and thermostat	1 pc(s).	3114.200	3114.200	3114.200	3114.200	3114.200	3114.200	3114.200	379
Bottom-mounted adaptor	1 pc(s).	3110.200	3110.200	3110.200	3110.200	3110.200	3110.200	3110.200	380



Climate control accessories Page 369 Therm software Page 385

Supply includes:

- PTC heater
- Fan
- Quick-connection terminal
- Assembly parts

Note:

- For precise temperature control inside the enclosure, we recommend the enclosure internal thermostat or the digital enclosure internal temperature display and thermostat.

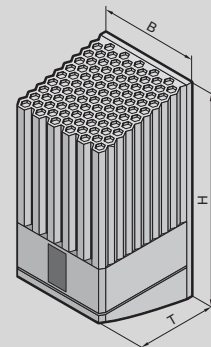
- In order to prevent condensation on assemblies, a hygrostat is recommended to regulate heating.
- In larger enclosures, even heat distribution is best achieved by installing several low-output heaters.
- The installation of heaters is generally advisable, in order to prevent condensation.

Approvals:

- UR
- cUR
- CSA

Technical details:

Available on the Internet



Continuous thermal output 235 – 800 W, with fan

Model No.	Packs of	3105.410	3105.380	3105.420	3105.390	3105.430	3105.400	Page
Width (B) mm		103	103	103	103	103	103	
Height (H) mm		200	200	200	200	200	200	
Depth (T) mm		103	103	103	103	103	103	
Continuous thermal output at T_u = 10°C 50/60 Hz W		235 / 250	250 / 265	355 / 400	400 / 415	710 / 800	800 / 870	
Rated operating voltage V, ~, Hz		115, 1~, 50/60	230, 1~, 50/60	115, 1~, 50/60	230, 1~, 50/60	115, 1~, 50/60	230, 1~, 50/60	
Pre-fuse A		4	4	6	6	10	6	
Accessories								
Enclosure internal thermostat	1 pc(s).	3110.000	3110.000	3110.000	3110.000	3110.000	3110.000	379
Hygrostat	1 pc(s).	3118.000	3118.000	3118.000	3118.000	3118.000	3118.000	380
Digital enclosure internal temperature display and thermostat	1 pc(s).	3114.200	3114.200	3114.200	3114.200	3114.200	3114.200	379
Bottom-mounted adaptor	1 pc(s).	3110.200	3110.200	3110.200	3110.200	3110.200	3110.200	380

Rittal – The System.

Faster – better – everywhere.



Climate control accessories

Filter technology

Filter mats

for tangential fans

Made of chopped-fibre mat with a progressive structure.
 Temperature-resistant to 100°C, self-extinguishing category F1 to DIN 53 438.
 Dust-laden air side: Open structure.
 Clean-air side: Closed structure.
 Reliable filtering of virtually all types of dust from a particle size of 10 µm.

Material:

- Chemical fibres



For tangential fans/front outlet grilles 2 U	W x H x D mm	Packs of	Model No.
3144.000/3145.000/3176.000	425 x 85 x 8	5 pc(s).	3177.000

Filter mats

for

- Cooling units
- Air/air heat exchangers

Rittal cooling units are low-maintenance and are supplied without filter mats. Filter mats may be used for extreme conditions.

Material:

- Open-celled polyurethane foam
- Outstanding physical and mechanical properties
- Temperature-resistant: from -40°C...+80°C
- Thickness: 10 mm

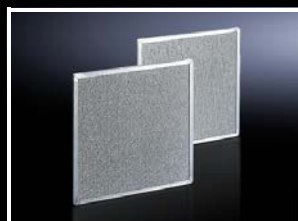


For cooling units	W x H x D mm	Packs of	Model No.
3302.300/3302.310	190 x 95 x 10	3 pc(s).	3286.110
3302.../3303.../3361....	265 x 200 x 10	3 pc(s).	3286.300
3304.../3305.../3328.../3329.../3332.../3366....	344 x 268 x 10	3 pc(s).	3286.400
3273.../3382.../3383.../3384.../3385.../3359....	530 x 255 x 10	3 pc(s).	3286.500
3386.../3387....	720 x 300 x 10	3 pc(s).	3286.600

For air/air heat exchangers	W x H x D mm	Packs of	Model No.
3126.100/3126.115	265 x 200 x 10	3 pc(s).	3286.300
3127.100/3127.115/3128.100/3128.115/3129.100/3129.115/ 3130.100/3130.115	344 x 268 x 10	3 pc(s).	3286.400

Climate control accessories

Filter technology



Metal filter

Particularly when cooling units are used in dusty and oily environments, it is advisable to use washable metal filters.

If air or steam condenses on the metal surfaces, any particles present will adhere to the metal, and can easily be washed out with water or grease-dissolving solvents.

Material:

- Aluminium
- Thickness: 10 mm

Note:

- 2 metal filters are required for 3334.660, 3335.880 and 3335.890

For cooling units	W x H x D mm	Packs of	Model No.
3302.300/3302.310	190 x 95 x 10	1 pc(s).	3286.120
3302.100/3302.110/3302.200/3303. . . /3361. . . .	265 x 200 x 10	1 pc(s).	3286.310
3304. . . /3305. . . /3328. . . /3329. . . /3332. . . /3366. . . .	344 x 268 x 10	1 pc(s).	3286.410
3273. . . /3382. . . /3383. . . /3384. . . /3385. . . /3359. . . .	530 x 255 x 10	1 pc(s).	3286.510
3386. . . /3387. . . .	720 x 300 x 10	1 pc(s).	3286.610
For climate control door/section door	W x H x D mm	Packs of	Model No.
3300.040/3300.050/3300.060/3300.070/3300.080/3300.090/ 3300.110/3300.120	425 x 78 x 10	1 pc(s).	3284.210
For air/air heat exchangers	W x H x D mm	Packs of	Model No.
3126.100/3126.115	265 x 200 x 10	1 pc(s).	3286.310
3127.100/3127.115/3128.100/3128.115/3129.100/3129.115/ 3130.100/3130.115	344 x 268 x 10	1 pc(s).	3286.410
For chillers	W x H x D mm	Packs of	Model No.
3318.600/3318.610/3319.600/3319.610/3334.660	530 x 255 x 10	1 pc(s).	3286.510
3320.600/3334.600	500 x 558 x 8	1 pc(s).	3286.520
3335.790/3335.830	600 x 800 x 20	1 pc(s).	3286.550
3335.840/3335.850/3335.880	600 x 1050 x 20	1 pc(s).	3286.530
3335.860/3335.870/3335.890	1000 x 1035 x 20	1 pc(s).	3286.540
3360.100/.250	344 x 268 x 10	1 pc(s).	3286.410

Climate control accessories

Filter technology

Spare filter mats

Made of chopped-fibre mat with a progressive structure.

Temperature resistant to +100°C, self-extinguishing category F1 to DIN 53 438.

Dust-laden air side: Open structure.

Clean-air side: Closed structure.

Reliable filtering of virtually all types of dust from a particle size of 10 µm.

For thermoelectric coolers	Material	W x H x D mm	Filter class to DIN EN 779	Packs of	Model No.
3201.200/3201.300	Chemical fibres	90 x 106 x 8	G2	5 pc(s).	3201.050

For fan-and-filter units	Material	W x H x D mm	Filter class to DIN EN 779	Packs of	Model No.
3237. . . .	Chemical fibres	89 x 89 (8-sided) x 10	G2	5 pc(s).	3321.700
				50 pc(s).	3321.705
3238. . . .		120 x 120 x 12	G2	5 pc(s).	3322.700
				50 pc(s).	3322.705
3239. . . .		173 x 173 x 17	G3	5 pc(s).	3171.100
				50 pc(s).	3171.105
3240. . . ./3241. . . .	221 x 221 x 17	G3	5 pc(s).	3172.100	
			50 pc(s).	3172.105	
3243. . . ./3244. . . ./3245. . . .	289 x 289 x 17	G3	5 pc(s).	3173.100	
			50 pc(s).	3173.105	

For filter holders	Material	W x H x D mm	Filter class to DIN EN 779	Packs of	Model No.
3175.000	Chemical fibres	338 x 242 x 17	G2	3 pc(s).	3174.000

For EMC fan-and-filter units	Material	W x H x D mm	Filter class to DIN EN 779	Packs of	Model No.
3237. . . .	Copper-nickel-chrome-coated chemical fibres	92 x 92 x 10	G2	5 pc(s).	3237.066
3238. . . .		125 x 125 x 12	G2	5 pc(s).	3238.066
3239. . . .		178 x 178 x 17	G3	5 pc(s).	3239.066
3240. . . ./3241. . . .		226 x 226 x 17	G3	5 pc(s).	3240.066
3243. . . ./3244. . . ./3245. . . .		294 x 294 x 17	G3	5 pc(s).	3243.066

Fine filter mats

for fan-and-filter units

Made of chopped-fibre mat with a progressive structure.

Temperature resistant to +100°C, self-extinguishing category F1 to DIN 53 438.

Dust-laden air side: Open structure.

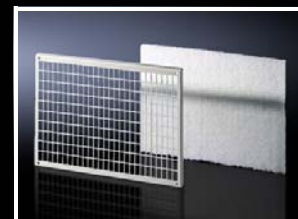
Clean-air side: Closed structure.

Reliable filtering of virtually all types of dust from a particle size of 10 µm.

Material:

– Chemical fibres

For fan-and-filter units	W x H x D mm	Filter class to DIN EN 779	Packs of	Model No.
3238. . . .	120 x 120 x 12	F5/M5	5 pc(s).	3238.055
3239. . . .	173 x 173 x 12	F5/M5	5 pc(s).	3181.100
3240. . . ./3241. . . .	221 x 221 x 12	F5/M5	5 pc(s).	3182.100
3243. . . ./3244. . . ./3245. . . .	289 x 289 x 12	F5/M5	5 pc(s).	3183.100



Climate control accessories

Filter technology



Outlet filter

For ventilation by convection, an outlet filter can be installed in the upper and lower sections of the enclosure.

Material:

- ABS, material resistance to UL 94-5VA

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 54 including filter mat

Supply includes:

- Filter mat

Dimensions W x H x D mm	Model No.	
	Standard	EMC
116.5 x 116.5 x 16	3237.200	3237.060
148.5 x 148.5 x 24	3238.200	3238.060
204 x 204 x 24	3239.200	3239.060
255 x 255 x 25	3240.200	3240.060
323 x 323 x 25	3243.200	3243.060

+ Accessories:

- Spare filter mats, see page 371
- Fine filter mats, see page 371
- Hose-proof hood, see page 372
- Blanking cover, see page 372



Hose-proof hood

to increase the protection category

Easy cleaning thanks to exterior silicone coating approved for use with foodstuffs.

Material:

- Stainless steel
- Silicone

Protection category IP to IEC 60 529:

- IP 56 when fitted over fan-and-filter unit/outlet filter with filter mat

Protection category NEMA:

- NEMA Type 12 for 3237.080
- NEMA Type 1, 12, 3, 4, 4X for 3238.080, 3239.080, 3240.080, 3243.080
- NEMA Type 1, 12, 3R for 3245.080

For fan-and-filter units/ outlet filters	Dimensions mm	Model No.
3237. . . .	150 x 230 x 40	3237.080
3238. . . .	176 x 245 x 55	3238.080
3239. . . .	233 x 330 x 55	3239.080
3240. . . ./3241. . . .	282 x 390 x 85	3240.080
3243. . . ./3244. . . .	350 x 480 x 110	3243.080
3245. . . .	350 x 480 x 160	3245.080



Blanking cover

If existing mounting cut-outs for fan-and-filter units/outlet filters need to be closed to achieve a higher protection category, the filter mat of the fan-and-filter unit/outlet filter can simply be replaced with a blanking cover; welding or other mechanical modification of the enclosure is not necessary.

Material:

- Closed-cell polythene foam

Colour:

- Anthracite

Protection category IP to IEC 60 529:

- IP 54

For fan-and-filter units/ outlet filters	Packs of	Model No.
3237. . . .	2 pc(s).	3237.020
3238. . . .	2 pc(s).	3238.020
3239. . . .	2 pc(s).	3239.020
3240. . . ./3241. . . .	2 pc(s).	3240.020
3243. . . ./3244. . . ./3245. . . .	2 pc(s).	3243.020



Front outlet grille 2 U

for tangential fans

This front outlet grille is required if a 482.6 mm (19") cross-flow blower 3144.000/3145.000 is used in the lower section of the electronic enclosure and the hot air is to be expelled to the outside from the upper section of the enclosure.

The design of the grille matches that of the intake grille in the cross-flow blower.

These grilles can also be used as simple inflow and outflow grilles with natural convection.

Packs of	Model No.
1 pc(s).	3176.000

+ Accessories:

- Filter mat, see page 369

Climate control accessories

Filter technology

Filter holder

for roof ventilation

The use of a filter mat is required in order to increase the protection category of the roof vent 3148.007.

Material:

- Sheet steel

Protection category IP to IEC 60 529:

- IP 44

Supply includes:

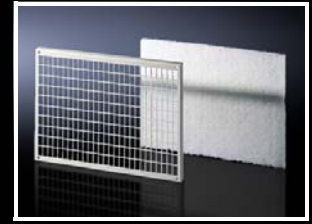
- Filter holder including filter mat

W x H x D mm	Model No.
340 x 244 x 15	3175.000



Accessories:

- Spare filter mat, see page 371



Enclosure internal fans

for TS

To prevent hot-spots and support the air routing of active enclosure climate control components. Adjustable in two axes. Attached to the TS 8 frame section. Several fans may be cascaded using the quick-release clamping strip.

Supply includes:

- Complete unit with radial fan ready for connection
- Snap-on pivot device
- Assembly parts

Air throughput (unimpeded airflow) m³/h	Rated output W	Rated current A	Rated voltage V, ~, Hz	Model No.
160	19.0/18.0	0.12/0.11	230, 1~, 50/60	3108.100
160	19.0/18.0	0.24/0.23	115, 1~, 50/60	3108.115
160	3.5	0.15	24 V (DC)	3108.024

Technical details:

Available on the Internet



Mini-fan

Compact DC fan for enclosure and component cooling in enclosures.

Technical specifications:

- Rated operating voltage: 24 V (DC)
- Power consumption: 1 W
- Air throughput (unimpeded air flow): 21 m³/h
- Noise level (unimpeded air flow): 20 dB (A)
- Operating temperature range: -20°C...+70°C

Dimensions W x H x D mm	Packs of	Model No.
60 x 60 x 25.4	1 pc(s).	3236.124

Supply includes:

- Fan
- Assembly screws
- Contact hazard protection grille (2 pc(s).)



Integrated louvres

For ventilation by convection; easily retro-fitted using 4 screws.

Material:

- Sheet steel

Colour:

- RAL 7035

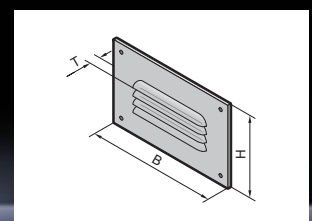
Supply includes:

- Assembly parts

W x H x D mm	Packs of	Model No.
160 x 110 x 8	4 pc(s).	2541.235
210 x 100 x 8	4 pc(s).	2542.235
330 x 110 x 8	4 pc(s).	2543.235

Technical details:

Available on the Internet



Climate control accessories

Air routing



Air duct system

for roof-mounted cooling units and air/water heat exchangers

Cold air can be routed directly to specific areas of the enclosure using the air duct system. The risk of air short circuits due to self-ventilated installed devices is therefore eliminated.

The flat duct has dimensions of W x H x D 229 x 1500 x 29 mm, and may be shortened to the required length.

Material:

- Flame-resistant plastic to DIN 4102/B1

Colour:

- RAL 7035

Supply includes:

- Flat duct, compensating hose

Note:

- Do not direct cold air straight at active components.
- When using the ducting system, the performance of the cooling unit may be reduced, depending on the respective application.



Also required:

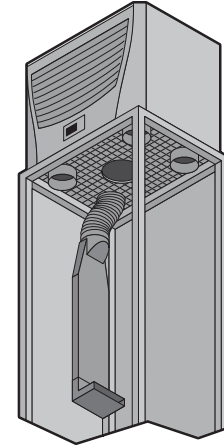
- TS support strips, see page 609
- Air duct adaptor 3286.840 (for units 3359. . . /3382. . .), see page 374



Accessories:

- Deflector 90°, see page 374
- Stopper, see page 376
- Flat duct extension, see page 375

For unit	Packs of	Model No.
3209. . . /3210. . . /3273. . . /3359. . . /3382. . . /3383. . . /3384. . . /3385. . .	1 pc(s).	3286.870
3386. . . /3387. . .	1 pc(s).	3286.970



Air duct adaptor

for air duct system and flat air duct system

An adaptor that allows connection of the spigot from which air is supplied by the cooling unit to the air duct system. To fit roof-mounted cooling units 3359.XXX, 3382.XXX.

Material:

- ABS

Colour:

- RAL 9005

Packs of	Model No.
1 pc(s).	3286.840



Deflector, 90°

for air duct system

For targeted air deflection at the end of the flat duct.

Colour:

- RAL 7035

Packs of	Model No.
1 pc(s).	3286.990

Flat air duct system

for roof-mounted cooling units and air/water heat exchangers, to fit TS 8 enclosures from a width of 800 mm and a depth of 600 mm

Cold air may be routed directly to specific areas of the enclosure using the air duct system. The risk of air short circuits due to self-ventilated installed devices is therefore eliminated.

The flat duct has dimensions of W x H x D 229 x 1500 x 29 mm, and may be shortened to the required length.

Material:

- Flame-resistant plastic to DIN 4102/B1

Colour:

- RAL 7035

Supply includes:

- Flat duct
- Adaptor
- Compensating piece
- Deflector, 90°

Note:

- Do not direct cold air straight at active components
- When using the ducting system, the performance of the heat exchanger may be reduced, depending on the respective application
- Not to be used in conjunction with quick-change frame, see page 384



Also required:

- TS support strips, see page 609



Accessories:

- Deflector 90°, see page 374
- Stopper, see page 376
- Flat duct extension, see page 375

For unit	Packs of	Model No.
3209... /3210... /3273... /3383... /3384... /3385...	1 pc(s).	3286.850

Flat duct extension

Extension kit for air duct system and flat air duct system for width, depth or height length extensions in TS 8 enclosures.

Material:

- Flame-resistant plastic to DIN 4102/B1

Packs of	Model No.
1 pc(s).	3286.860

Supply includes:

- Flat duct 1500 mm
- Connecting piece



Climate control accessories

Air routing



Stoppers

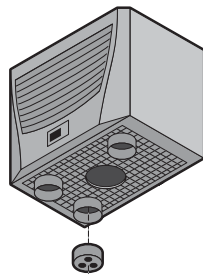
for roof-mounted cooling units and air/water heat exchangers

To cover any cold air outlets that are not required.

Material:

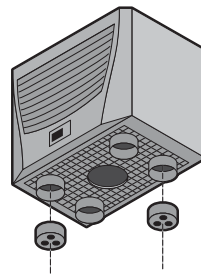
– Polyurethane foam

For units	Diameter mm	Max. no. of stoppers per unit	Packs of	Model No.
3359. . . /3382. . . .	80	1	2 pc(s).	3286.780
3209. . . /3210. . . /3273. . . / 3383. . . /3384. . . /3385. . . .	100	2	2 pc(s).	3286.880
3386. . . /3387. . . .	150	1	2 pc(s).	3286.980



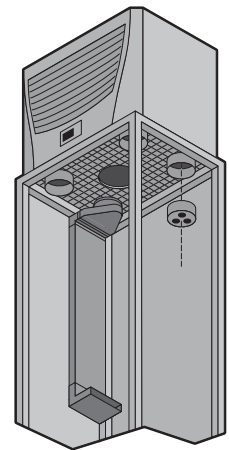
Max. 1 x

3359. . . /3382. . . /
3386. . . /3387. . . .



Max. 2 x

3209. . . /3210. . . /3383. . . /
3384. . . /3385. . . /3273. . . .



Air diverter

For use with wall-mounted cooling units, for targeted routing of cold air in a downward direction. Particularly well-suited for densely-packed electrical components in the lower section of the enclosure.

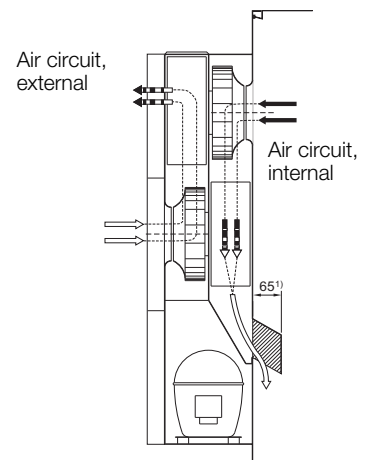
Material:

– Sheet steel

Colour:

– RAL 7035

For units	Model No.
3304. . . /3305. . . .	3213.310
3328. . . /3329. . . .	3213.320
3332. . . .	3213.330¹⁾



¹⁾ 115 mm for 3213.330

Climate control accessories

Water distribution

Electric condensate evaporator

For external mounting on enclosures. For use with all cooling units and air/water heat exchangers (wall-mounted). Suitable for international use thanks to multi-voltage support.

Evaporation performance:

- at 230 V: 3.5 l/d
- at 115 V: 3.0 l/d

Colour:

- RAL 7035

Supply includes:

- Electric condensate evaporator, ready to connect

Width mm	Rated operating voltage V, ~, Hz	Model No.
280	115 – 230, 1~, 50/60	3301.500
400	115 – 230, 1~, 50/60	3301.505

Technical details:

Available on the Internet



Condensate collecting bottle

For mounting on the enclosure. For use with all enclosure cooling units and air/water heat exchangers.

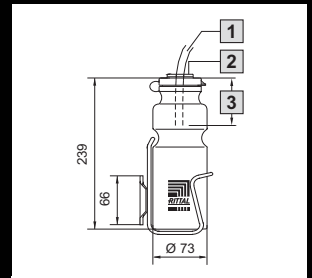
- Safety overflow at the side
- Capacity approximately 0.75 l

- 1** Condensate discharge hose
- 2** Membrane grommet
- 3** Max. 70 mm

Packs of	Model No.
1 pc(s).	3301.600

Supply includes:

- Condensate collecting bottle
- Bottle holder
- Assembly parts



Condensate hose

For discharging and transporting condensate. For connection to cooling units and air/water heat exchangers.

Material:

- PVC, transparent

For units	Hose length m	Material thickness Ø mm	Model No.
3201. . . .	5	6 x 1	3301.606
3212. . . /3302. . . /3303. . . /3361. . . .	10	10 x 1.5	3301.610
3209. . . /3210. . . /3214.100/3215.100/3216.480/3273. . . /3304. . . /3305. . . /3328. . . /3329. . . /3332. . . /3359. . . /3363. . . /3364. . . /3366. . . /3373. . . /3374. . . /3375. . . /3377. . . /3378. . . /3382. . . /3383. . . /3384. . . /3385. . . /3386. . . /3387. . . .	10	12 x 2	3301.612



Climate control accessories

Water distribution



Flow regulator valve

For use with air/water heat exchangers, particularly if more than one heat exchanger ($n > 1$) is used in the cooling water circuit. The correctly set valve then ensures the same quantity of cooling medium for all equipment. The valve is used for hydraulic balancing.

Setting range:

- 3 to 12 l/min

Material:

- Brass

Design	Packs of	Model No.
$\frac{3}{4}$ " x $\frac{1}{2}$ " for volumetric flow control	1 pc(s).	3301.930
$\frac{3}{4}$ " x $\frac{3}{4}$ " for volumetric flow control	1 pc(s).	3301.940



Fitting G $\frac{3}{8}$ "

Provides a G $\frac{3}{8}$ " internal thread for connecting fixed pipework on air/water heat exchangers on the inlet and return.

Material:

- Brass

For air/water heat exchanger	Design	Packs of	Model No.
3209. . . /3210. . . / 3363. . . /3364. . . / 3373. . . /3374. . . / 3375. . .	G $\frac{3}{8}$ " internal thread	2 pc(s).	3201.900



Cooling medium for chillers

Ready mix

Apart from chillers for oil and emulsion, all other chillers are only suitable for the cooling of water or a water/glycol mixture.

As well as protecting against frost, this cooling medium also serves to inhibit bacterial growth and provide optimum corrosion protection.

Supply includes:

- 10 l canister
- 25 l canister

Cooling medium	Antifreeze/water mixture	Container l	Model No.
Outdoor	1 : 2	10	3301.950
		25	3301.955
Standard	1 : 4	10	3301.960
		25	3301.965

Digital enclosure internal temperature display and thermostat

For installation in the enclosure door or wall.

Technical specifications:

- 2 voltage ranges for 100 – 230 V, 50/60 Hz and 24 – 60 V (DC)
- Depth: 100 mm
- Three-digit, 7-segment display
- Option of switching between °C/°F
- Temperature range: +5°C...+55°C
- Includes 1800 mm long NTC sensor
- Two relay outputs as change-over contact and normally open contact (max. contact load 230 V, 6 A)
- Freely selectable switching hysteresis
- The freely adjustable setpoint values can be set using the membrane keyboard at the front, setting range: +5°C...+55°C
- Display and switching accuracy ±2 K
- The minimum and maximum recorded temperatures are stored until it is next reset

Colour:

- RAL 7035

Packs of	Model No.
1 pc(s).	3114.200



Digital enclosure internal temperature display and thermostat

Integrated into a patch panel 1 U

Including cable attachment for connection cable and label holder.

Technical specifications:

- 2 voltage ranges for 100 – 230 V, 50/60 Hz and 24 – 60 V (DC)
- Depth: 100 mm
- Three-digit, 7-segment display
- Option of switching between °C/°F
- Temperature range: +5°C...+55°C
- Includes 1800 mm long NTC sensor
- Two relay outputs as change-over contact and normally open contact (max. contact load 230 V, 6 A)
- Freely selectable switching hysteresis
- The freely adjustable setpoint values can be set using the membrane keyboard at the front, setting range: +5°C...+55°C
- Display and switching accuracy ±2 K
- The minimum and maximum recorded temperatures are stored until it is next reset

Colour:

- RAL 7035

Packs of	Model No.
1 pc(s).	7109.035



Enclosure internal thermostat

Particularly suitable for controlling fan-and-filter units, heaters and heat exchangers, this thermostat can also be used as a signal generator for monitoring the enclosure internal temperature.

Technical specifications:

- Bi-metal controller as a temperature-sensitive element with thermal feedback
- Contact population: Single-pole change-over contact as a quick-break contact
- Permissible contact load:
Category 5 – 3 (heating)
AC 10 (4)¹⁾ A,
DC = max. 30 W
Category 5 – 4 (cooling)
AC 5 (4)¹⁾ A,
DC = max. 30 W
¹⁾ = Inductive load at cos φ = 0.6
- Setting range: +5°C...+60°C
- Weight: approx. 105 g
- Dimensions: 71 x 71 x 33.5 mm
- Switching hysteresis: approx. 1 K ± 0.8 K

Rated operating voltage V, ~	Model No.
230, 115, 1~, 60, 48, 24	3110.000
60/48/24 (DC)	

- Flexible mounting on a vertical or horizontal 35 mm support rail to EN 50 022, and snap-fastening in the TS/SE enclosure section or on the mounting plate using the supplied adaptor

Colour:

- RAL 7035



Accessories:

- Mounting plate TS with integral top-hat rail, see page 617
- Bottom-mounted adaptor, see page 380



Climate control accessories

Control/regulation



Hygrostat

The hygrostat switches on the heater and/or fan when a preset relative humidity in the enclosure is exceeded.

In this way, the relative humidity is reduced and condensation on assemblies or electronic components is avoided.

Technical specifications:

- Contact population: Single-pole change-over contact as a quick-break contact
- Permissible contact load:
AC ~ 5 (0,2)¹⁾ A
DC = max. 20 W
¹⁾ = Inductive load at $\cos \phi = 0.6$
- Setting range: 50 – 100 % relative humidity
- Weight: approx. 100 g
- Dimensions: 71 x 71 x 33.5 mm
- Switching hysteresis: approx. 4%

Rated operating voltage V, ~	Model No.
24 – 230, 1~ 12 – 75 (DC)	3118.000

- Flexible mounting on a vertical or horizontal 35 mm support rail to EN 50 022, and snap fastening in the TS/SE enclosure section or on the mounting plate using the supplied adaptor.

Colour:

- RAL 7035

Accessories:

- Mounting plate TS with integral top-hat rail, see page 617
- Bottom-mounted adaptor, see page 380



Bottom-mounted adaptor

for enclosure internal thermostat 3110.000 and hygrostat 3118.000

Bottom-mounted adaptor with mounting option for screwed cable glands, for targeted cable infeed from appropriate equipment such as fan-and-filter units and enclosure heaters. In conjunction with screwed cable glands, it also provides strain relief.

Colour:

- RAL 7035

Packs of	Model No.
1 pc(s).	3110.200



Speed control EC

Control unit

Temperature-dependent speed control for EC fan-and-filter units to reduce noise and save energy. The status of the fan can also be monitored.

- Activation and monitoring of up to 4 EC fan-and-filter units (caution: EC fan-and-filter units cannot be controlled with speed control 3120.200!)
- Rated operating voltage: 100 – 250 V
- Top-hat rail assembly
- Temperature setting range: +5°C...+55°C/
41°F...131°F
- External temperature sensor to record the ACTUAL temperature
- Status LED to display the operating status
- Alarm relay for reporting overtemperature, fan defect, cable interruption and sensor failure

For EC fan-and-filter units	Model No.
3240.500/3241.500/3243.500/ 3244.500/3245.XXX	3235.440

Supply includes:

- NTC sensor, length 1.80 m

Climate control accessories

Control/regulation

Speed control EC

Sensor for speed control

NTC sensor for temperature-dependent speed control of EC fan-and-filter units to reduce noise and save energy. Activated via an EC fan-and-filter unit.

Technical specifications:

- Rated voltage: 10 – 12 V (DC)
(supplied via EC fan-and-filter unit)
- Intake current: 1 mA
- Output current: 0.1 mA
- Operating temperature range: -25°C...+80°C
- Cable length: 3 m
- Control characteristic: fixed setpoint at 35°C, with linear control range between +35°C (maximum speed 100%) and +20°C (minimum speed 10%)

For EC fan-and-filter units	Model No.
3240.500/3241.500/3243.500/ 3244.500/3245.XXX	3235.450

Protection category IP to IEC 60 529:

- IP 40

Supply includes:

- Sensor and cable (length 3 m)



Speed control

Temperature-dependent speed control for fan-and-filter units, air/air heat exchangers, rack-mounted fans and tangential fans to reduce noise and save energy in part-load operation.

Technical specifications:

- For mounting on a 35 mm support rail
DIN EN 50 022
- Dimensions (W x H x D): 105 x 90.5 x 60.2 mm
- Rated operating voltage: 100 – 230 V (AC)
- Setting range: +20°C...+55°C
- Phase cross-over with microcontroller
- Maximum fan output 300 W or 2 A

Packs of	Model No.
1 pc(s).	3120.200

Supply includes:

- Speed control
- NTC sensor, length 1.80 m

Note:

- Only suitable for use with single-phase AC motors and equipment
- Not suitable for EC motors



Accessories:

- Mounting plate TS with integral top-hat rail, see page 617



Interface board

for equipment with e-Comfort controller

The interface board is an extension for equipment with e-Comfort controller. In this way it is possible, e.g. to monitor a master/slave combination of up to 10 cooling units. Control is achieved via standardised interfaces: RS232 (DB9) or RS485, one PLC interface (DB9). The extension board is built into a 1 U plastic housing.

A voltage supply of 24 V (DC) is required. This can be provided externally using a Kycon connector.

Packs of	Model No.
1 pc(s).	3124.200

Supply includes:

- Interface board integrated into a plastic box
W x H x D (mm): 136 x 44 (1 U) x 129
- Serial SUB-D cable, 1.5 m

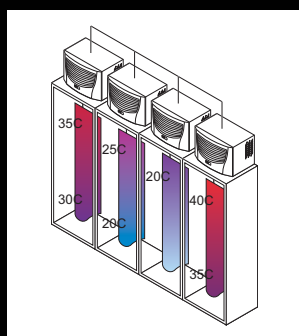
Technical details:

Available on the Internet



Climate control accessories

Control/regulation



SK BUS system

Master-slave cable

The SK Bus system allows several cooling units and air/water heat exchangers with e-Comfort controller to communicate with one another using a master/slave protocol, providing optimum operating conditions in complex bayed enclosure systems.

Technical specifications:

- The master-slave configuration facilitates common activation and deactivation via door limit switches, parallel activation and deactivation via a temperature setpoint, and common collective fault signals and temperature logging, eliminating the need for intricate wiring.

For cooling units and air/water heat exchangers	Model No.
	3124.100

Supply includes:

- 3 m shielded interface cable
- Operating instructions for programming the cooling units

Note:

- $n_B = n_K - 1$
- n_B : Number of order units (SK bus system)
- n_K : Number of cooling units to be linked

Technical details:

Available on the Internet



SK BUS system

Master/slave adaptor

Parallel operation of up to 5 thermoelectric coolers to increase cooling output or for redundant use.

Supply includes:

- Adaptor including connection cable to master
- Assembly parts

For thermoelectric cooler	Model No.
3201.200/3201.300	3201.070



Also required:

- CAN bus connection cable, 1 x RJ 45 per slave, see page 457



Toroidal transformer

Primary connection 115 V/400 V

Technical specifications:

- Output 110 VA
- Primary connection 3500 mm long
- Secondary connection 1500 mm long
- Dimensions W x H x D: 105 x 123 x 55 mm
- For mounting on a 35 mm support rail EN 50 022
- Voltage tolerance $\pm 10\%$

Supply includes:

- Assembly parts for top-hat rail mounting

For air/water heat exchanger	Primary connection V, 1~, Hz	Secondary connection V, 1~, Hz	Model No.
3363.X0X 3364.X0X 3214.100 3215.100	115, 1~, 50/60	230, 1~, 50/60	3201.970
3363.X0X 3364.X0X 3212.230 3214.100 3215.100	400, 2~, 50/60	230, 1~, 50/60	3201.960

Roof plates TS

For mounting:

- Roof-mounted cooling units
- Roof-mounted air/water heat exchangers
- Roof-mounted fan
- Vent attachment TS

The cut-out in the roof plate is such that the roof-mounted equipment is positioned centrally on the enclosure.

Material:

- Sheet steel

Colour:

- RAL 7035

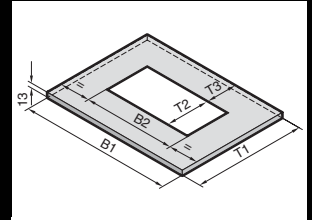
Supply includes:

- Assembly parts

For enclosures W x D mm	For mounting	B1 mm	B2 mm	T1 mm	T2 mm	T3 mm	Model No.
800 x 600	3382.../3359.../ 3149.4.../3149.8...	767.5	475	567.5	260	129.3	8801.320
600 x 600	3209.../3383.../ 3210.../3384.../ 3273.../3385.../ 8801.380	567.5	490	567.5	390	61.3	8801.310¹⁾
800 x 600		767.5	490	567.5	390	61.3	8801.330
1200 x 600		1167.5	490	567.5	390	61.3	8801.350
800 x 600	3386.../3387...	767.5	692	567.5	392	57.8	8801.340²⁾

¹⁾ When installing the roof-mounted equipment, it may interfere with the eyebolts of the enclosure; for this reason, roof fastening screws are supplied loose with the roof plates

²⁾ Attachment is from the inside using metal brackets and retaining clamps



Vent attachment TS

For passive ventilation with labyrinthine air flow routing, to match the roofs for roof-mounted cooling units.

Colour:

- RAL 7035

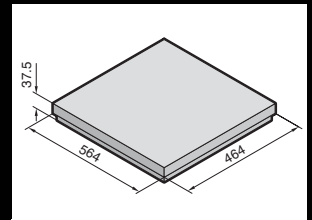
Protection category IP to IEC 60 529:

- IP 43

Supply includes:

- Assembly parts

For roof plates with cut-out mm	Model No.
490 x 390	8801.380



Trim frame

for slimline cooling units

Slimline cooling units can be internally or externally mounted on an enclosure door or wall. The trim frame presents a closed front for the cooling unit.

Material:

- Sheet steel

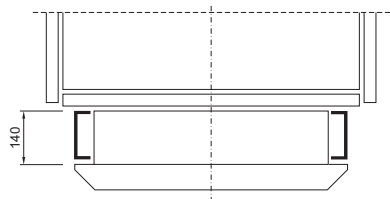
Colour:

- RAL 7035

Supply includes:

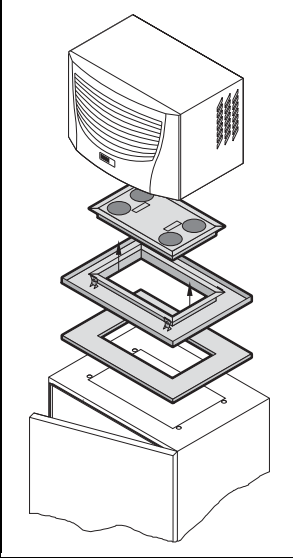
- Trim frame
- Sealing and assembly parts

For cooling unit	Model No.
3366...	3377.000



Climate control accessories

Mounting



Quick-change frame

for roof-mounted cooling units

The quick-change frame is more than just an alternate frame. Together with the seal, the lower part of the frame is screw-fastened to the enclosure. In this way, it is possible to install and remove the connector-ready cooling unit with the upper part of the alternate frame previously mounted on the cooling unit with quick-release fasteners. During servicing work, this means shorter assembly times and hence minimised downtime. What is more, the quick-change frame offers effective protection against the ingress of oil into the enclosure in oily atmospheres, thanks to its integral drainage trough.

Material:

- Sheet steel

Colour:

- RAL 7035

Supply includes:

- Quick-change frame
- Seal
- Quick-release fasteners

For roof-mounted cooling units	Model No.
3359. . . /3382. . . .	3286.700
3209. . . /3210. . . /3383. . . / 3384. . . /3385. . . .	3286.800
3386. . . . /3387. . . .	3286.900

Guide frame

for Vario rack-mounted fan

Supply includes:

- Connector and fitted connection cable (3 m)
- Mounting bracket for optional attachment to the 482.6 mm (19") system
- Assembly parts

For Vario rack-mounted fan	Model No.
3350.230/3351.230/3352.230	3355.100
3352.500	3357.100

Climate control accessories

Project planning/monitoring

Therm software

The Therm software package takes care of the complex calculation of climate control requirements. A user-friendly interface guides the operator to the most suitable, correctly dimensioned climate control component. All evaluations are closely based on the requirements of IEC/TR 60 890 AMD 1/02.95 and DIN 3168 for cooling units.

Therm is a calculation program for enclosure climate control

- Improved user prompting via tabs and simple selection menus
- Express and expert versions
- Configurator for recooling systems
- Heat loss calculator
- Internet updates
- Fast and thorough determination of the climate control requirements
- Easy calculation of the required actual cooling output, as well as any upgrades or enhancements to the switchgear
- Documentation is supplied with the calculation

Packs of	Model No.
1 pc(s).	3121.000

Supply includes:

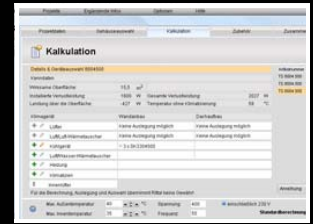
- CD-ROM, 19 languages

Note:

- A quick version of the Therm software is available as a free App

Note:

Your free 30-day trial version may be downloaded at www.rittal.com



RiDiag II

For the diagnosis, maintenance and long-term data capture of TopTherm units with e-Comfort controller. RiDiag logs equipment data and prepares an error list. RiDiag also offers the option of displaying and setting the device's operating parameters. The logging of measurement data can be tracked in real time in the form of a diagram.

Supply includes:

- CD-ROM, 6 languages
- Connection cable

Packs of	Model No.
1 pc(s).	3159.100



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ENCLOSURES

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CLIMATE CONTROL

FRIEDHELM LOH GROUP

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for data centres

Rittal opens up brand new perspectives for the IT world. Be it the standardised RiMatrix S data centre module or the efficient individual components, everything is available off the shelf with short delivery times.

Rittal – The System.

- Rittal – Mass-produced, modular and standardised data centres with RiMatrix S
- Rittal – System components for individual IT solutions



ENCLOSURES

POWER DISTRIBUTION

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nextlevel

for data centres

IT INFRASTRUCTURE

SOFTWARE & SERVICES



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IT infrastructure from the smallest to the largest

- RiMatrix S
- IT enclosure systems
- IT enclosures
- IT power
- IT cooling
- IT monitoring
- IT security solutions



ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL

FRIEDHELM LOH GROUP

- RiMatrix S – The first mass-produced data centre, tested and documented modules
- IT security rooms – Certified to ECB·S



IT INFRASTRUCTURE

SOFTWARE & SERVICES



Your benefits with RiMatrix

Unique IT system solutions from Rittal provide state-of-the-art data centre infrastructures. Flexibly select your standardised components from the RiMatrix system components IT enclosure systems/enclosures, IT power, IT cooling, IT monitoring and IT security solutions. In this way, the IT infrastructure may be tailored precisely to your requirements – leaving plenty of flexibility for future expansion.

Faster – Precise-fit data centre infrastructures with “Rittal – The System.”

Better – Standardised, coordinated system components

Everywhere – Commissioning by our 1,000 international service engineers



ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL

FRIEDHELM LOH GROUP



IT INFRASTRUCTURE

SOFTWARE & SERVICES



Your benefits with RiMatrix S

RiMatrix S is the revolutionary alternative in data centre construction. Based on pre-configured, complete data centre modules, it supports the creation of standardised data centre infrastructures. The data centre modules already contain all the essential components, such as IT enclosure systems, power back-up and distribution, cooling, monitoring and security solutions. All data centre modules are pre-manufactured, available off the shelf, and permit fast configuration of coordinated customer solutions.

Faster – Pre-configured data centre modules available off the shelf

Better – Tested and documented data centre modules with outstanding efficiency

Everywhere – Installation in system-tested security rooms, standard aisle containment or containers



ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL



IT INFRASTRUCTURE

SOFTWARE & SERVICES





RiMatrix S

RiMatrix S

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Your benefits

- Standardised data centre infrastructures based on data centre modules
- Tested and documented modules with outstanding efficiency
- Simplified planning with pre-configuration
- Available off the shelf
- Guaranteed efficiency ratings (PuE)
- Simplified service and administration processes



RiMatrix S App

Your configurator for standardised data centres for SMEs, branch concepts and flexible cloud applications. A simple user interface will guide you to your complete data centre in just five steps.

RiMatrix S at a glance



	Standard room				
	<p>Integration of RiMatrix S modules into an existing property.</p> <p>In order to achieve optimum air routing, precise-fit aisle containment is included with the supply.</p>		<p>Aisle containment is a combination of door and roof components which allow consistent separation of the hot and cold air.</p> <ul style="list-style-type: none"> - Enhanced energy efficiency - Superior output density, due to guaranteed cold air supply - Dust- and water-tight in the protected area above the raised floor, IP 20 to IEC 60 529 		
	Single 6	Double 6	Single 9	Double 9	
Model No.	7998.106	7998.107	7998.406	7998.407	
Fire protection			-		
Burglar resistance			-		
Acrid gas-tightness			-		
Dust and water protection			-		
Early fire detection			■		
Room extinguisher system			Optional		
Humidification and dehumidification system			Optional		
External dimensions					
Width mm	2828	4854	2828	4854	
Height mm	2750	2750	2750	2750	
Depth mm	7080	7080	7080	7080	
Rack configuration					
Server enclosure (600 x 2000 x 1200 mm)	6 pc(s).	12 pc(s).	8 pc(s).	16 pc(s).	
Combined network server enclosure (800 x 2000 x 1200 mm)	1 pc(s).	2 pc(s).	1 pc(s).	2 pc(s).	
Uninterruptible power supply (Partner product, see note on page 407)	60 kW + 20 kW	2 x (60 kW + 20 kW)	-	-	

RiMatrix S at a glance



Security rooms				Container	
Standard security room – Fire protection category EI 90 to EN 1363/F90 to DIN 4102 – Protection from unauthorised access – Resistance category II to DIN V ENV 1630 – Basic EMC protection – Acrid gas-tightness based on DIN 18 095 – Impact test with 3,000 Nm energy after 30 min. flame impingement over uniform temperature curve – Dust and water protection to IP 56 to IEC 60 529		Construction of the standard security room – Element core made from thermally effective insulating material – Robust, encapsulated sheet steel cassettes – Innovative connection system using patented profile technology – Use of temperature- and humidity-resistant seals – Use of climate control valves with electro-magnetic drive – Dismantling and reassembly are possible at any time		Standard container Robust sheet steel container specifically designed for IT applications. The reinforced frame structure allows optimum weight distribution. Encapsulated interior wall structure with thermal insulating materials. – Vandal-proof interior in accordance with Resistance Class II to DIN EN 1630 – Fire protection category EI 30 to EN 1363 – Basic EMC protection – Dust and water protection to IP 55 to IEC 60 529	
Single 6	Double 6	Single 9	Double 9	Single 6	Single 9
7998.306	7998.307	7998.606	7998.607	7998.206	7998.506
	EI 90/F90				EI 30
	WK II				RC II
	■				–
	IP 56				IP 55
	■				■
	Optional				Optional
	Optional				Optional
2950	4974	2950	4974	3000	3000
2800	2800	2800	2800	3000	3000
7500	7500	7500	7500	7250	7250
6 pc(s).	12 pc(s).	8 pc(s).	16 pc(s).	6 pc(s).	8 pc(s).
1 pc(s).	2 pc(s).	1 pc(s).	2 pc(s).	1 pc(s).	1 pc(s).
60 kW + 20 kW	2 x (60 kW + 20 kW)	–	–	60 kW + 20 kW	–

RiMatrix S



RiMatrix S Single 6/Double 6

- 6 server enclosures, 1 network enclosure
- Two separate, optimised climate zones for server and technology zones
- UPS, battery case and distribution enclosure
- Space-saving climate control in the raised floor

- Consistent separation of cold air intake and warm exhaust air integrated into the mechanical concept
- Cable routing above the racks
- In the Double 6, the second module is a mirror image with integral cold aisle

RiMatrix S Single 9/Double 9

- 8 server enclosures, 1 network enclosure
- 1 climate zone for server sector
- When using a pre-existing UPS
- Distribution enclosures
- Space-saving climate control in the raised floor

- Consistent separation of cold air intake and warm exhaust air integrated into the mechanical concept
- Cable routing above the racks
- In the Double 9, the second module is a mirror image with integral cold aisle

Standard room

		Single 6	Double 6	Single 9	Double 9
External dimensions mm	Width	2828	4854	2828	4854
	Height	2750	2750	2750	2750
	Depth	7080	7080	7080	7080
Internal dimensions mm	Width	2750	4774	2750	4774
	Height	2700	2700	2700	2700
	Depth	7000	7000	7000	7000
Model No.		7998.106	7998.107	7998.406	7998.407
Physical security					
Fire protection		-			
Burglar resistance		-			
Acrid gas-tightness		-			
Dust and water protection		-			
Early fire detection		■			
Room extinguisher system		Optional			
Humidification and dehumidification system		Optional			
Infrastructure					
Server enclosure (600 x 2000 x 1200 mm)		6 pc(s).	12 pc(s).	8 pc(s).	16 pc(s).
Combined network-server enclosure (800 x 2000 x 1200 mm)		1 pc(s).	2 pc(s).	1 pc(s).	2 pc(s).
Uninterruptible power supply (Partner product, see note on page 407)		60 kW + 20 kW	2 x (60 kW + 20 kW)	-	-
Redundancy		1 x 20 kW	2 x 20 kW	-	-
Min. autonomy		13 minutes			
Low-voltage main distributor		1 pc(s).	2 pc(s).	1 pc(s).	2 pc(s).
PDU Basic		14 pc(s).	28 pc(s).	18 pc(s).	36 pc(s).
Climate control (ZUCS)		60 kW + 10 kW	120 kW + 20 kW	90 kW + 10 kW	180 kW + 20 kW
Redundancy		n+1	n+2	n+1	n+2



RiMatrix S Single 6/Double 6

- 6 server enclosures, 1 network enclosure
- Two separate, optimised climate zones for server and technology zones
- UPS, battery case and distribution enclosure
- Space-saving climate control in the raised floor

- Consistent separation of cold air intake and warm exhaust air integrated into the mechanical concept
- Cable routing above the racks
- In the Double 6, the second module is a mirror image with integral cold aisle

RiMatrix S Single 9/Double 9

- 8 server enclosures, 1 network enclosure
- 1 climate zone for server sector
- When using a pre-existing UPS
- Distribution enclosures
- Space-saving climate control in the raised floor

- Consistent separation of cold air intake and warm exhaust air integrated into the mechanical concept
- Cable routing above the racks
- In the Double 9, the second module is a mirror image with integral cold aisle

Standard security room

		Single 6	Double 6	Single 9	Double 9
External dimensions mm	Width	2950	4974	2950	4974
	Height	2800	2800	2800	2800
	Depth	7500	7500	7500	7500
Internal dimensions mm	Width	2750	4774	2750	4774
	Height	2700	2700	2700	2700
	Depth	7300	7300	7300	7300
Model No.		7998.306	7998.307	7998.606	7998.607
Physical security					
Fire protection		EI 90/F90			
Burglar resistance		WK II			
Acrid gas-tightness		■			
Dust and water protection		IP 56			
Early fire detection		■			
Room extinguisher system		Optional			
Humidification and dehumidification system		Optional			
Infrastructure					
Server enclosure (600 x 2000 x 1200 mm)		6 pc(s).	12 pc(s).	8 pc(s).	16 pc(s).
Combined network-server enclosure (800 x 2000 x 1200 mm)		1 pc(s).	2 pc(s).	1 pc(s).	2 pc(s).
Uninterruptible power supply (Partner product, see note on page 407)		60 kW + 20 kW	2 x (60 kW + 20 kW)	-	-
Redundancy		1 x 20 kW	2 x 20 kW	-	-
Min. autonomy		13 minutes			
Low-voltage main distributor		1 pc(s).	2 pc(s).	1 pc(s).	2 pc(s).
PDU Basic		14 pc(s).	28 pc(s).	18 pc(s).	36 pc(s).
Climate control (ZUCS)		60 kW + 10 kW	120 kW + 20 kW	90 kW + 10 kW	180 kW + 20 kW
Redundancy		n+1	n+2	n+1	n+2

RiMatrix S



RiMatrix S Single 6/Single 9

The RiMatrix S solution is assembled in the container, then commissioned and tested in accordance with our guidelines.

Our services include:

- Advice and ROI calculation
- Delivery and integration into the customer infrastructure
- Commissioning and handover
- Documentation, training, instruction
- Hotline and service/service agreements

Supply includes:

- Complete technical documentation of all components and works, together with the relevant user manuals

Standard container

		Single 6	Single 9
External dimensions mm	Width	3000	3000
	Height	3000	3000
	Depth	7250	7250
Internal dimensions mm	Width	2750	2750
	Height	2685	2685
	Depth	7000	7000
Model No.		7998.206	7998.506
Physical security			
Fire protection		EI 30	
Burglar resistance		RC II	
Acrid gas-tightness		–	
Dust and water protection		IP 55	
Early fire detection		■	
Room extinguisher system		Optional	
Humidification and dehumidification system		Optional	
Infrastructure			
Server enclosure (600 x 2000 x 1200 mm)		6 pc(s).	8 pc(s).
Combined network-server enclosure (800 x 2000 x 1200 mm)		1 pc(s).	1 pc(s).
Uninterruptible power supply (Partner product, see note on page 407)		60 kW + 20 kW	–
Redundancy		1 x 20 kW	–
Min. autonomy		13 minutes	
Low-voltage main distributor		1 pc(s).	2 pc(s).
PDU Basic		14 pc(s).	18 pc(s).
Climate control (ZUCS)		60 kW + 10 kW	90 kW+ 10 kW
Redundancy		n+1	n+1

Rittal – The System.

Faster – better – everywhere.

The first mass-produced data centre. Simply plug in and it's ready to use.



RiMatrix S Selector

Your solution is configured on the basis of standardised data centre modules.

- The planning phase, delivery and commissioning times are significantly shortened
- A precise efficiency calculation (including consumption figures) is always included as part of our consulting service, based on the data sheet
- Standardisation leads to significant potential savings
- The data centre modules are complete functional units (including electricity, cooling supply and monitoring)
- The modules are comprehensively measured and have a data sheet, and can therefore be ordered off the shelf using a model number



RiMatrix S App

Your configurator for standardised data centres for SMEs, sector concepts and flexible cloud applications.

An intuitive user interface will guide you to your complete data centre in five easy steps:

1. Requirements and peripheral conditions
2. Technical specifications
3. Standardised module selection
4. Optional packages
5. Your RiMatrix S solution



ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL

IT INFRASTRUCTURE

SOFTWARE & SERVICES



Rittal – The System.

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IT enclosure systems/housings



Network/server enclosures TS IT

TS IT with vented door for room climate control.....	90
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IT housings

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Wall-mounted enclosure EL, 3-part, pre-configured with mounting angles.....	100
Wall-mounted enclosure EL, 3-part, pre-configured with punched rails and mounting angles	101
Wall-mounted enclosure EL, 3-part, with mounting plate and mounting angles	102
Wall-mounted enclosure AE with 482.6 mm (19") mounting angles	104
Small fibre-optic distributor with mounting plate and splicing cassette accommodation	105

Your benefits

Network/server enclosures

- Individually usable for stand-alone siting and data centres
- Complete system solutions for small to large networks
- Maximum configuration diversity and protection for installed equipment
- Investment protection and flexibility thanks to simple conversions and use of our extensive modular system

Wall-mounted enclosures

- Choose from an extensive range of products – the right enclosure to suit all applications – up to protection category IP 66
- Wide choice of sizes available from 3 U to 21 U
- Wide choice of accessories with “Rittal – The System.”
- Fast assembly, conversion and simple installation based on the modular principle

Sample applications

- 1 Wall-mounted enclosures EL, see page 100
- 2 VerticalBox, see page 97
- 3 Wall-mounted enclosures AE with 482.6 mm (19") mounting angles, see page 104
- 4 TS IT with glazed door for rack climate control, see page 92
Base/plinth and installation accessories, see page 507
- 5 TS IT with vented door for room cooling, see page 90
Bayed with base/plinth and installation accessories, see page 507
- 6 Small fibre-optic distributor, see page 105

Rittal – The System.

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IT power

Power Distribution Rack

Power Distribution Rack PDR	408
Power Distribution Module PDM	408

Power System Module

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Power Distribution Unit

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Power supply

Socket strips	422
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Your benefits

- Holistic, systematic energy management concepts
- Comprehensive, complete solutions for power distribution and back-up, consistently modular, and flexibly extendible at any time
- Optimum energy and cost efficiency with maximum availability of the entire system
- Reduced installation, administration and manpower costs
- High level of investment security
- All from a single partner

Sample applications

- 1 Power Distribution Rack PDR, see page 408
- 2 Power Distribution Module PDM, see page 408
- 3 Power System Module PSM, see page 409
- 4 Power distribution, see page 197
- 5 UPS (partner product)

Please note:

Rittal has decided to stop offering its own single-phase and three-phase **UPS systems**. Instead, from now on, we are collaborating with a few selected product partners and recommending them for use in system solutions and IT projects.

The advantages for our customers are as follows:

- Independent selection of the best UPS systems from a technical and financial perspective, depending on the technical requirements and regional framework conditions
- Clear regulation of the customer/supplier relationship in terms of procurement, installation, commissioning and services
- Clear regulation of warranties and product liability

For our chosen product partners, Rittal provides key basic information (such as technical properties, ordering instructions, contact addresses and other details, where applicable). Further details can be found on our website at www.rittal.com.



Power Distribution Rack



Power Distribution Rack PDR

- To accommodate a maximum of 8 PDM
- Height 1.20 m for 4 PDM and 2 m height for 8 PDM
- PDM may be retrofitted whilst operational
- A maximum of 32 racks may be fitted to the sub-distributor
- Fully shock hazard-protected
- Master switch in various configurations:
 - Isolator switch
 - Fuse-switch disconnecter
 - Air circuit-breaker
 - RC circuit-breaker
- Low-voltage distribution up to 250 A

Material:

- Sheet steel

Surface finish:

- Enclosure frame: Dipcoat-primed
- Doors, roof and base/plinth: Dipcoat-primed, powder-coated
- Gland plates, punched sections with mounting flanges and mounting angles: Zinc-plated, clear chromated

Colour:

- RAL 7035

Supply includes:

- Enclosure frame with door (without tubular door frame)
- Rear panel
- Side panels and roof plate
- Levelling feet incl. base/plinth adaptor
- Earthing of all enclosure panels
- Busbars shock-hazard-protected
- Integral master switch

Note:

- Observe the standards of the local electricity supply companies

Approvals:

- VDE

Technical details:

Available on the Internet

Power Distribution Module PDM

- Mechanically latchable in the PDR
- Scalable
- RC circuit-breaker, optional

Supply includes:

- 482.6 mm/19" module, 3 U
- Master switch
- 4 fused 3-phase outlets to the rack
- 3 x 230 V/16 A per outlet
- Connected load 400 V, 3 AC, max. 63 A

Photo shows a configuration example with equipment not included in the scope of supply

Power Distribution Rack PDR

	Packs of		
Possible number of PDM modules		4	8
Width mm		800	800
Height mm		1200	2000
Depth mm		500	500
Model No.	1 pc(s).	7857.310	7857.300
Accessories			
Flex-Block base/plinth system			see page 510
TS base/plinth			see page 512

Power Distribution Module PDM

	Packs of		
U			3
Configuration			4 outlets per 10 kW
Width mm			482.6 (19")
Height mm			133.4
Depth mm			350
Model No.	1 pc(s).		7857.320
Also required			
Plug and play connection cable for PSM busbar to the server enclosures	Length 3 m	1 pc(s).	7857.130
	Length 5 m	1 pc(s).	7857.150
	Length 9 m	1 pc(s).	7857.190

Power System Module

PSM busbars

PSM busbars + PSM socket modules

PSM busbars

The modular system facilitates basic configuration of the racks, thanks to a vertical support rail with single-/3-phase infeed.

The various socket modules to supply the active components may be snap-fitted into the support rail. This can even be done whilst the system is operational, because the support section is shock hazard-protected.

PSM socket modules

The various modules, earthing pins, IEC320 etc. may be inserted into the support rail in any combination. This is easily achieved, even by non-electricians, thanks to the shock-hazard-protected plug & play system.

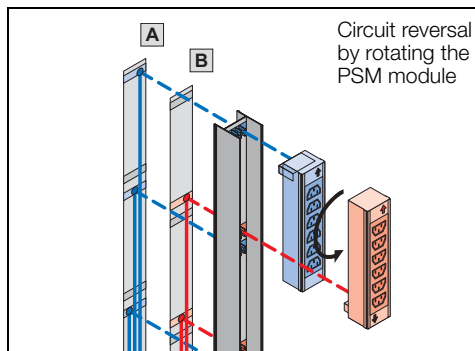
Approvals:

Available on the Internet

Photo shows a configuration example with equipment not included in the scope of supply

Technical specifications/benefits:

- Each socket module picks off a phase on the support rail, either from infeed **A** or from the redundant infeed **B**, depending on the direction of connection
- Single-/3-phase construction with a maximum current of 2 x (3 x 16 A)
- 3-phase redundant infeed supported
- The redundant circuit is completely separate from the 3 phases of the support rail
- Modules may be retrofitted whilst operational
- Modules may be equipped with integral overcurrent protection, so that only the affected module is deactivated in the event of an excessively high current; the other modules remain operational
- Overvoltage protection may be integrated into the supply line
- Various modules also available with current measurement and switchable outputs



PSM busbars

For enclosure height mm	Phases per infeed	No. of infeeds	Input current (A)	Max. no. of module slots	Connection, connector type	Circuit breaker 16 A	Packs of	Model No.
1 With measurement of voltage, current and power (consumption) via CMC, remote-controllable								
2000	3	2	16	6	Wago X-COM	–	1 pc(s).	7859.050
2000	1	1	32	6	CEE	2	1 pc(s).	7859.053
2 With 2 infeeds (jack), 3-phase redundancy								
1200	3	2	16	4	Wago X-COM	–	1 pc(s).	7856.010
2000	3	2	16	7	Wago X-COM	–	1 pc(s).	7856.020
2200	3	2	16	8	Wago X-COM	–	1 pc(s).	7856.008
3 With 3 m connection cable (connector type CEE/EN 60 309)								
2000	3	1	16	7	CEE	–	1 pc(s).	7856.005
2000	3	2	16	7	CEE	–	1 pc(s).	7856.006
4 With 3 m connection cable (connector type CEE/EN 60 309)								
2000	1	1	32	6	CEE	2	1 pc(s).	7856.321
2000	3	1	32	6	CEE	6	1 pc(s).	7856.323

! Also required:

- PSM socket modules, see page 411

+ Accessories:

- Mounting kit for PSM busbars, see page 413
- Connection cables, see page 413
- Cable lock, see page 413
- Overvoltage protection, see page 413



Power System Module

PSM measurement bar



PSM measurement bar for CMC III

Measurement bars for direct connection to the CMC III system. With a PSM mounting kit, the measurement bar may be vertically mounted in a 2000 mm high TS 8 or in the TS IT rack. Display and monitoring of all major output parameters is supported, separated by phase and infeed. An integral display provides a local on-site display in the rack.

Remote administration and network connectivity are created via the CMC III system.

Benefits:

- Modular extendible system
- For 16 A and 32 A phase current
- Various PSM connection modules (pin patterns)
- PSM modules may be connected with the system operational
- VDE-tested, shock hazard-protected system
- Easy to assemble
- CAN bus for connection to CMC III system
- Extensive management and monitoring functions (via CMC III)
- High-MTBF and measurement accuracy of 1%
- Energy-efficient electric design – minimal inherent power consumption
- High-quality aluminium housing, for flexible mounting

Measurement functions:

- Voltage (V), current (A), frequency (Hz)
- Active power (kW), active energy (kWh), apparent power (VA), apparent energy (kVAh)
- Power factor (cos phi)
- Zero conductor measurement/load imbalance detection
- Measurement per phase or infeed
- Measurement accuracy 1% (kWh) to IEC 50 430-1

Material:

- Extruded aluminium section, anodised

Protection category IP to IEC 60 529:

- IP 20

Standards:

- EN 60 950
- EN 61 000-6-1
- EN 61 000-6-2
- EN 55 022

Safety directive:

- 2006/95/EC

EMC directive:

- 2004/108/EC

Approvals:

Available on the Internet

Photograph shows a configuration example with equipment not included in the scope of supply

Model No.	7859.050	7859.053	Page
Version/rated current A (per phase)	16	32	
No. of infeeds (3-phase, 16 A/single-phase, 32 A)	2	1	
Connection cable, plug-in, various configurations	■	–	
Connection cable, static, 3 m, with CEE connector, 32 A, single-phase (IEC 60 309)	–	■	
Electromagnetic circuit-breaker (2 x 16 A, type C)	–	■	
Input voltage 230 V/400 V (50/60 Hz)	■	■	
Power supply via CMC III system (24 V DC)	■	■	
CAN bus for direct connection to CMC III system (RJ 45, 2 x socket)	■	■	
Maximum no. of systems that may be connected to one CMC-PU III	8	8	
Ambient conditions			
Operating temperature	0°C...+45°C		
Storage temperature	-25°C...+70°C		
Ambient humidity % (non-condensing)	10 – 95		
Accessories			
PSM connection cable, 3-phase, with CEE connectors (IEC 60 309), length 3 m (2 x required when using both infeeds)	7856.025	Fixed installation	413
PSM mounting kit for mounting on the TS IT enclosure frame, height 2000 mm	7856.029	7856.029	413
PSM module 4 x earthing-pin, black	7856.100	7856.100	411
PSM module 4 x earthing-pin, red	7856.240	7856.240	411
PSM module 6 x C13	7856.080	7856.080	411
PSM module 4 x C19	7856.230	7856.230	411
Other PSM socket modules	see page 411		

Power System Module

PSM socket modules

PSM socket modules

Required module slots in PSM busbar	Connector pattern	Slots	Thermal overcurrent protection	Packs of	Model No.
1 Standard socket modules/non-switchable					
1	C13	6	–	1 pc(s).	7856.080
1	C13	6	■	1 pc(s).	7856.070
1	C13	4	■/per output	1 pc(s).	7856.220
1	Earthing-pin 320/CEE 7/4	4	–	1 pc(s).	7856.100
1	Earthing-pin 320/CEE 7/4	4	■	1 pc(s).	7856.090
1	C19	4	–	1 pc(s).	7856.230
1	C13 red	6	–	1 pc(s).	7856.082
1	Earthing-pin, red	4	–	1 pc(s).	7856.240
2 Socket modules, international					
1	France/Belgium/CEE 7/5	4	–	1 pc(s).	7856.120
1	Switzerland	5	–	1 pc(s).	7856.190
3 Socket modules with LED display/current measurement per module					
1	C13	6	–	1 pc(s).	7859.120
1	C19	4	–	1 pc(s).	7859.130
4 Socket modules with switchable slot/aggregate current measurement per module					
2	C13	8	■	1 pc(s).	7856.201
2	Earthing-pin 320/CEE 7/4/C13	4/2	■	1 pc(s).	7856.203
2	C19/C13	4/2	■	1 pc(s).	7856.204
5 Socket modules with switchable slot/individual current measurement per slot					
2	Earthing-pin 320/CEE 7/4/C13	4/2	■	1 pc(s).	7859.212
2	C13	8	■	1 pc(s).	7859.222
2	C19/C13	4/2	■	1 pc(s).	7859.232

Approvals:

Available on the Internet



Power System Module

PCU Power Control Unit



Power Control Unit (PCU)

PSM modules, active

Socket modules, IP-compatible via CMC III, 1 U

There are various PCU/module versions available for installation in the 482.6 mm (19") level of an IT rack and for use with PSM busbars. For each PCU/PSM module there is a choice of 6 or 8 slots with different pin patterns. Each output slot may be switched individually or in groups via the CMC III. Alarm limits may be configured via the integral 2-digit, red 7-segment display and the latest aggregate current can be read during normal operation. Following a power failure, the individual slots are switched on sequentially (i.e. individually, one after the other) in order to avoid current spikes.

For the versions with individual current measurement, 2 LEDs for each outgoing slot indicate when individual limits are exceeded. For each slot, individual current limits may be defined via the CMC III. For operation, a control voltage of 24 V (DC)/approx. 0.2 A is required for each PCU/module, which may be provided via the CMC III. If used without the CMC III, an external power pack 24 V (DC) is required. For each power pack, up to 4 PCU/PSM modules may be connected. In such cases, the network/switch functions cannot be used.

Operate PCU and PSM module with CMC III (network function – switchable outputs)

For connection to the CMC III, in addition to the PU, the CAN bus unit for 2 channels is also required.

Up to 4 PCU/PSM modules of the same type may then be connected to each channel. In such cases, the current and alarm messages may be forwarded to DCIM software (such as RiZone) via the network (SNMP) and slots switched via remote access.

Description of functions:

- 2-digit local LED 7-segment current display
 - Legibility rotates according to the installation position
 - LED display per slot/overload detection (only with individual current measurement)
- Measuring and monitoring of the current per module and outgoing slot
 - Adjustable min/max limits
 - Measurement range: 0 – 16 A
- Alarm notifications via a flashing display
- Selective activation on voltage return
- In conjunction with the CMC III, the 6/8 individual current outlets may be activated and deactivated individually via HTTP and SNMP
- Remote administration of the power supply, editing and monitoring of remote limits, SNMP trap messages in case of alarm
- User administration via CMC III

Technical specifications:

- Rated operating voltage: 250 V
- Rated current: 16 A
- Switching load: 4000 VA per slot
- Operating temperature +5°C...+45°C
- Ambient humidity 50 – 95% rel. humidity, non-condensing

Dimensions:

- Width: 465 mm (19")
- Height: 44.5 mm (1 U)
- Depth: Refer to order table

Preset current limits for PCU/PSM modules with individual current measurement (may be edited via CMC III):

- LED green: 0 – 7 A
- LED amber: 7 – 13 A
- LED red: over 13 A

Material:

- Aluminium section with plastic cover

Protection category IP to IEC 60 529:

- IP 20

Supply includes:

- 1 socket strip PCU/PSM 1U
- 1 bus/infeed cable 24 V (DC)
- 1 connector for power supply (PCU versions only)
- 1 connector for power supply
- 1 connection cable 0.3 m with Wieland connector (7200.001 only)

Approvals:

- CE
- RoHS

Description	Type	Input connector	Number of slots			Switchable outputs	Current measurement per output slot	Enclosure depth mm	Model No.
			C13	C19	Earthing-pin				
PCU	19"	Wieland GST18	8	–	–	■	– (aggregate current)	60	7200.001
PCU	19"	C20	8	–	–	■	■	160	7859.225
PCU	19"	C20	2	4	–	■	■	160	7859.235
PSM	Module	PSM busbar	8	–	–	■	– (aggregate current)	45	7856.201
PSM	Module	PSM busbar	2	–	4	■	– (aggregate current)	45	7856.203
PSM	Module	PSM busbar	2	4	–	■	– (aggregate current)	45	7856.204
PSM	Module	PSM busbar	2	–	4	■	■	45	7859.212
PSM	Module	PSM busbar	8	–	–	■	■	45	7859.222
PSM	Module	PSM busbar	2	4	–	■	■	45	7859.232

! Also required:

- Use with CMC III: Processing Unit 7030.000/7030.010, and CAN bus unit 7030.030, see page 450/456
- "Stand-alone" use: Power pack 7201.210

Mounting kit

for PSM busbars

Without cable routing

For		Model No.
TS	For static installation	7856.011
TS IT	Plug and play compatibility system	7856.029

With cable routing

For		Model No.
TS	For static installation	7856.022
	Adjustable, for freely accessible 482.6 mm (19") level	7856.023



Connection cable

for PSM busbar

Connection cable, 3-phase			
	Length m	Packs of	Model No.
CEE-conforming 5-pole/16 A	3	1 pc(s).	7856.025
Connection cable, single-phase			
CEE-conforming 3-pole/16 A	3	1 pc(s).	7856.026
Connection cable, UPS, single-phase			
C14/X-COM 10 A/UPS, 1 – 2 kVA	3	1 pc(s).	7856.027
C20/X-COM 16 A/UPS, 3 kVA	3	1 pc(s).	7856.030
Connection cable C19/C20			
16 A	2	1 pc(s).	7200.217
Connection cable C13/C14			
16 A	0.5	2 pc(s).	7856.014



Cable lock PSM

for all modules with EN 60 320 C13 connector configurations

All terminal connection cables are therefore protected against unintentional disconnection of the power supply. Two bars are needed for two cables.

Version	Packs of	Model No.
Bar	20 pc(s).	7856.013

+ Accessories:

- Optimum locking function is only available with connection cable 7856.014, see page 413



Overvoltage protection PSM

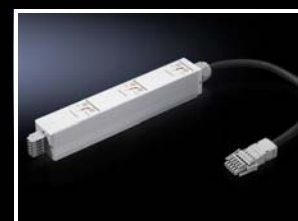
Connected upstream of the busbar.

- Fine fuse
- Connection:
 - Socket Wago X-COM
 - Connector Wago X-COM

Overvoltage protection	Packs of	Model No.
With adaptor connector	1 pc(s).	7856.170

Note:

- One overvoltage protection is required for each infeed



Power Distribution Unit



Simple assembly

- Compact design
- Tool-free clip attachment in the TS IT
- Flexible mounting at the required height in the zero-U space
- Also suitable for individual installation on the enclosure frame
- Reliable protection against unauthorised access by covering any outputs that are not required
- Securely fitted connectors, thanks to connector lock

Versatile function

- Measurement of power, current, active and apparent power and power factor
- Measurement of energy consumption and zero conductor current (with 3-phase PDUs)
- Measurement for any output is supported, depending on the PDU version
- Bistable relays ensure minimum inherent power consumption by the PDU
- Connection options for CMC III sensors (temperature, humidity, access)

Professional monitoring

- Powerful CPU and Linux Web server
- TCP/IP v4 and v6 plus SNMP
- Configuration of limits
- User administration, e-mail sent in case of alarm
- Easily connected to DCIM software (e.g. RiZone)



Power Distribution Unit



Configuration Page 419

Benefits:

- With the compact PDU, any IT rack may be easily equipped with a professional power distribution system
- With the TS IT rack, assembly is even tool-free
- Compact design
- Easy to assemble
- Power-saving design, minimal inherent consumption by the PDU itself, thanks to the use of bistable relays and OLED display with power-saving function
- Integral Web server for direct network connection with extensive user administration (not PDU basic/slave PDU)
- Redundant power supply from all 3 phases and additionally via an existing PoE (Power over Ethernet) network
- Extensive range of management and monitoring functions
- High-MTBF and measurement accuracy of 1%
- CAN bus for connecting slave PDUs (not PDU basic)
- Ambient monitoring with up to 4 CMC III sensors (temperature, humidity, access, vandalism)

PDU design variants:

PDU basic

Robust, compact basic power distributor for the IT environment

PDU metered

Energy measurement per phase, i.e. output requirement of an entire IT rack

PDU switched

Measurement function per phase and individually switchable output slots

PDU managed

High-end IT rack, power distribution with energy measurement and monitoring functions for each individual output slot

Material:

- Extruded aluminium section, anodised

Protection category IP to IEC 60 529:

- IP 20

Standards:

- EN 60 950
- EN 61 000-4
- EN 61 000-6
- EN 55 022

Safety directive:

- 2006/95/EC

EMC directive:

- 2004/108/EC

Photo shows a configuration example with equipment not included in the scope of supply

PDU international, basic version

Power		Pin patterns			Dimensions		Model No.
No. of phases	Phase current A	Input	Outputs C13	Outputs C19	PDU length mm	Minimum enclosure height mm	
1	16	CEE	24	4	970	1200	7955.110
1	32	CEE	24	4	1115	1400	7955.111
3	16	CEE	18	3	845	1200	7955.131
3	16	CEE	24	6	1145	1400	7955.132
3	32	CEE	24	6	1365	1800	7955.133
3	32	CEE	36	6	1710	2000	7955.134
3	16	CEE	42	–	1405	1800	7955.135

Power Distribution Unit

PDU international, metered version

Power		Pin patterns			Dimensions		Model No.
No. of phases	Phase current A	Input	Outputs C13	Outputs C19	PDU length mm	Minimum enclosure height mm	
1	16	C20	12	–	710	800	7955.201
1	16	CEE	24	4	1225	1400	7955.210
1	32	CEE	24	4	1370	1800	7955.211
3	16	CEE	18	3	1100	1400	7955.231
3	16	CEE	24	6	1395	1800	7955.232
3	32	CEE	24	6	1620	2000	7955.233
3	32	CEE	36	6	1960	2200	7955.234
3	16	CEE	42	–	1665	2000	7955.235
3	32	CEE	48	–	2050	2200	7955.236
3	63	CEE	12	12	482.6 mm (19) / 3 U	1200	7955.238

PDU international, switched version

Power		Pin patterns			Dimensions		Model No.
No. of phases	Phase current A	Input	Outputs C13	Outputs C19	PDU length mm	Minimum enclosure height mm	
1	16	C20	12	–	710	800	7955.301
1	16	CEE	24	4	1225	1400	7955.310
1	32	CEE	24	4	1370	1800	7955.311
3	16	CEE	18	3	1100	1400	7955.331
3	16	CEE	24	6	1395	1800	7955.332
3	32	CEE	24	6	1620	2000	7955.333
3	32	CEE	36	6	1960	2200	7955.334
3	16	CEE	42	–	1665	2000	7955.335
3	32	CEE	48	–	2050	2200	7955.336

PDU international, managed version

Power		Pin patterns			Dimensions		Model No.
No. of phases	Phase current A	Input	Outputs C13	Outputs C19	PDU length mm	Minimum enclosure height mm	
1	16	C20	12	–	710	800	7955.401
1	16	CEE	24	4	1225	1400	7955.410
1	32	CEE	24	4	1370	1800	7955.411
3	16	CEE	18	3	1100	1400	7955.431
3	16	CEE	24	6	1395	1800	7955.432
3	32	CEE	24	6	1620	2000	7955.433
3	32	CEE	36	6	1960	2200	7955.434
3	16	CEE	42	–	1665	2000	7955.435
3	32	CEE	48	–	2050	2200	7955.436

Slave PDU international, managed version

Power		Pin patterns			Dimensions		Model No.
No. of phases	Phase current A	Input	Outputs C13	Outputs C19	PDU length mm	Minimum enclosure height mm	
1	16	C20	12	–	710	800	7955.901
1	16	CEE	24	4	1225	1400	7955.910
1	32	CEE	24	4	1370	1800	7955.911
3	16	CEE	18	3	1100	1400	7955.931
3	16	CEE	24	6	1395	1800	7955.932
3	32	CEE	24	6	1620	2000	7955.933

Power Distribution Unit

PDU UK, basic version

Power		Pin patterns			Dimensions		Model No.
No. of phases	Phase current A	Input	Outputs UK connector	Outputs C19	PDU length mm	Minimum enclosure height mm	
1	13	UK	6	–	440	600	7955.510
1	13	UK	8	–	535	800	7955.511
1	13	UK	10	–	640	800	7955.512
1	13	UK	12	–	745	1000	7955.513

PDU UK, metered version

Power		Pin patterns			Dimensions		Model No.
No. of phases	Phase current A	Input	Outputs UK connector	Outputs C19	PDU length mm	Minimum enclosure height mm	
1	13	UK	16	–	1210	1400	7955.520
1	16	CEE	20	4	1695	2000	7955.521
1	32	CEE	20	4	1955	2200	7955.522

PDU UK, switched version

Power		Pin patterns			Dimensions		Model No.
No. of phases	Phase current A	Input	Outputs UK connector	Outputs C19	PDU length mm	Minimum enclosure height mm	
1	13	UK	16	–	1210	1400	7955.530
1	16	CEE	16	4	1380	1800	7955.531
1	32	CEE	16	4	1520	1800	7955.532

PDU UK, managed version

Power		Pin patterns			Dimensions		Model No.
No. of phases	Phase current A	Input	Outputs UK connector	Outputs C19	PDU length mm	Minimum enclosure height mm	
1	13	UK	16	–	1210	1400	7955.540
1	16	CEE	16	4	1380	1800	7955.541
1	32	CEE	16	4	1525	1800	7955.542

Slave PDU UK, managed version

Power		Pin patterns			Dimensions		Model No.
No. of phases	Phase current A	Input	Outputs UK connector	Outputs C19	PDU length mm	Minimum enclosure height mm	
1	13	UK	16	–	1210	1400	7955.940
1	16	CEE	16	4	1380	1800	7955.941
1	32	CEE	16	4	1525	1800	7955.942

PDU accessories

	Packs of	Model No.	Page
Covers for C13 slot, lockable	10 pc(s).	7955.010	
Covers for C19 slot, lockable	10 pc(s).	7955.015	
Connector, universal lock for C14/C20 connector	20 pc(s).	7955.020	
Connection cable D/C19, 1.8 m	1 pc(s).	7200.216	457
Connection cable C19/C20, 1.8 m	1 pc(s).	7200.217	457

CMC III sensors (max. 4 sensors per PDU)

CMC III/PDU sensor type	Packs of	Model No.	Page
Temperature sensor	1 pc(s).	7030.110	454
Temperature/humidity sensor (combi-sensor)	1 pc(s).	7030.111	454
Infrared access sensor	1 pc(s).	7030.120	454
Vandalism sensor	1 pc(s).	7030.130	454
CMC III CAN bus connection cable RJ 45, length 0.5 – 10 m	1 pc(s).	see page 457	

Configuration

PDU version	managed/ managed slave ¹⁾	switched	metered	basic
Mechanical				
May be fitted in the zero-U space in the 600 mm wide TS IT, tool-free	■	■	■	■
Colour coding of phases and fuse circuits (depending on PDU version)	■	■	■	■
Connection cable, static, 3 m, with CEE connector (IEC 60 309) or C20	■	■	■	■
Connector lock for C13 and C19 pin patterns (optional)	■	■	■	■
Lockable cover for slots that are not needed (for C13/C19)	■	■	-	-
PDU slave version without display and Ethernet connection for use with PDU master and CMC III	■	-	-	-
Electrical				
Power supply 110 V – 230 V/400 V, inherent power consumption approx. 15 W	■	■	■	-
Rated current 16/32 A, single-phase/3-phase	■	■	■	■
Version additionally 63 A/3-phase (blade PDU, no Zero-U)	-	-	■	-
Electromagnetic circuit-breaker, 16 A, type C (only with 32/63 A PDU versions)	■	■	■	■
PDU self-supplied, no external power supply required	■	■	■	-
PDU power supply redundant across all phases (with 3-phase PDUs)	■	■	■	-
Emergency power supply to PDU web server via PoE (Power over Ethernet), remains accessible even in the event of a mains failure	■	■	-	-
Switching function per output slot	■	■	-	-
Sequential activation of the outputs once the power is resumed (avoids overload peaks)	■	■	-	-
Switching states are saved even in the event of a power failure	■	■	-	-
Bistable relays/minimal power consumption	■	■	-	-
Grouping (joint switching of several outputs)	■	■	-	-
Measurement functions				
Voltage (V), current (A), frequency (Hz)	■	■	■	-
Active power (kW), active energy (kWh), apparent power (kVA), apparent energy (kVAh)	■	■	■	-
Power factor (cos phi)	■	■	■	-
Zero conductor measurement/load imbalance detection	■	■	■	-
Fuse monitoring (with 32/63 A versions)	■	■	■	-
Measurement per phase or infeed	-	■	■	-
Measurement per output slot	■	-	-	-
Measurement accuracy +/-1% (kWh) to IEC 50 430-1	■	■	■	-
Connectivity/management functions				
Powerful 400 MHz CPU and Linux operating system (not with slave versions)	■	■	■	-
Graphic OLED display 128 x 128 pixels (RGB) with back-lighting and energy-saving mode (display of output data and basic IP configuration)	■	■	■	-
Position sensor for display rotation (and correct visualisation in the DCIM software RiZone)	■	■	■	-
Multi-colour LEDs (green/red) to indicate switching states and limits per phase or infeed	-	■	-	-
Multi-colour LEDs (green/red) to indicate switching states and limits per individual output slot	■	-	-	-
Settable limits (warning/alarm)	■	■	■	-
Operating hours meter, total and cyclical (resettable)	■	■	■	-
Ethernet connection (RJ 45)	■	■	■	-
USB A-port for firmware update and data logging functions	■	■	■	-
CAN bus interface (RJ 45)	■	■	■	-
Web server (HTTP, HTTPS, SSL, SSH) NTP, Telnet	■	■	■	-
TCP/IP v4 and v6, DHCP	■	■	■	-
SNMP v1, v2c and v3	■	■	■	-
FTP/SFTP (update/file transfer)	■	■	■	-
E-mail forwarding in case of alarm (SMTP)	■	■	■	-
User administration including rights management	■	■	■	-
LDAP(S)/Radius/Active Directory connection	■	■	■	-
Syslog server connection (max. 4 servers)	■	■	■	-
Plug & play drivers in the Rittal RiZone DCIM software	■	■	■	-
MIB for linking into 3rd party software	■	■	■	-
Suitable for connection to Rittal CMC III system	■	■	■	-
CMC III CAN bus sensors may be connected for ambient monitoring (max. 4 sensors)	■	■	■	-
CMC III sensors that may be used: Temperature sensor, temperature/humidity sensor, infrared access sensor, vandalism sensor	■	■	■	-
Ambient conditions				
Operating temperature	0°C...+45°C	0°C...+45°C	0°C...+45°C	0°C...+45°C
Storage temperature	-25°C...+70°C	-25°C...+70°C	-25°C...+70°C	-25°C...+70°C
Ambient humidity % (non-condensing)	10 – 95	10 – 95	10 – 95	10 – 95
Protection category IP to IEC 60 529	IP 20	IP 20	IP 20	IP 20

¹⁾ Managed slave without display/network

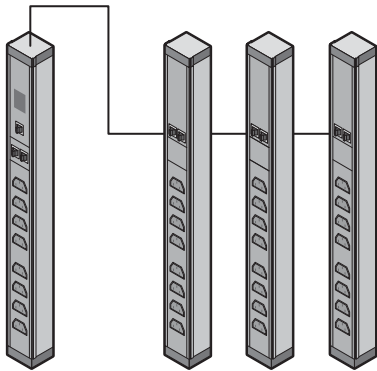
Power Distribution Unit

Sample applications

Master/slave principle

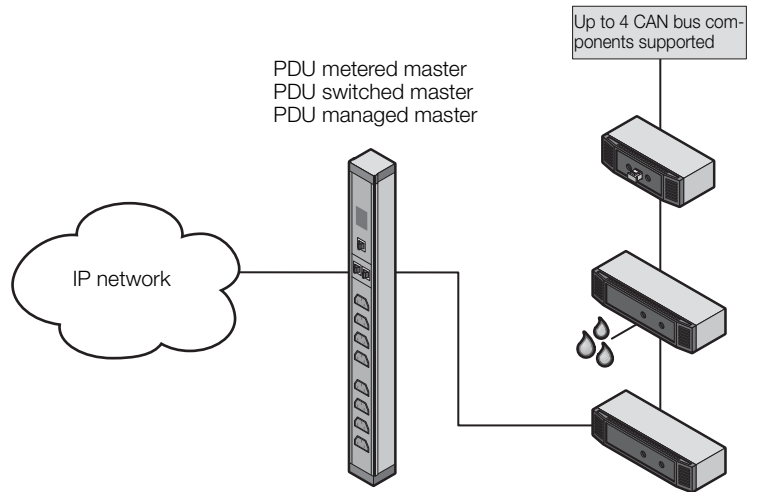
Up to 3 slave PDUs may be connected to one PDU.

PDU metered master managed slave
 PDU switched master (without display)
 PDU managed master



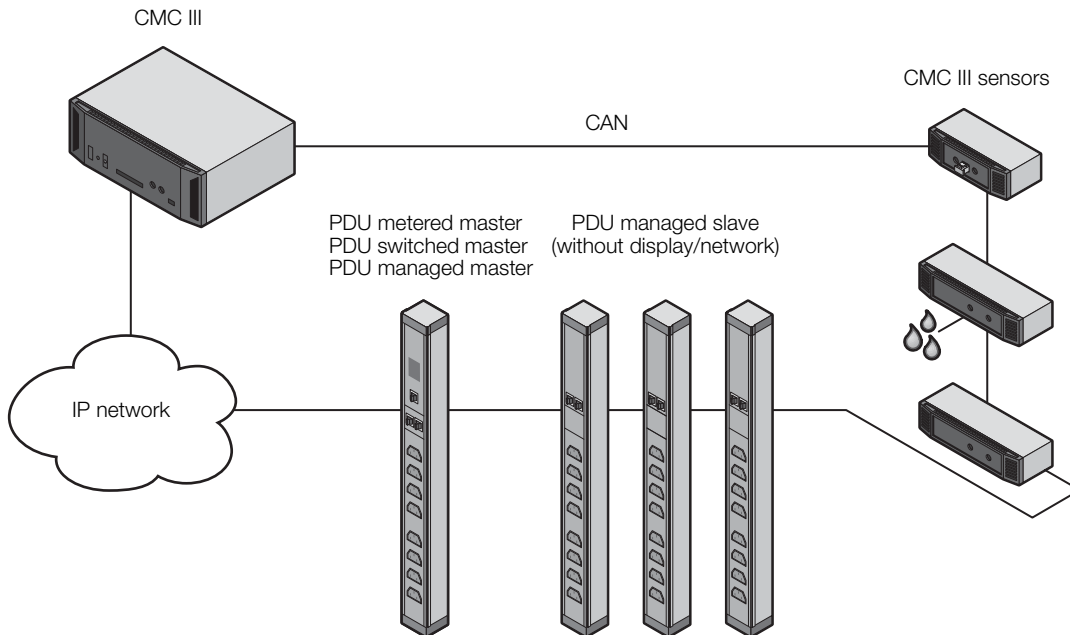
Connection of CAN bus sensors

Additionally, up to 4 CMC III CAN bus sensors may be connected to the PDU master for ambient monitoring (temperature, humidity, access).



Configuration example of a redundant network infrastructure

Monitoring via 2 separate networks. The leading system is configurable.





CMC III monitoring system Page 446

For upgrading existing installations or for measuring individual 16 A/32 A equipment, the PSM 1 U MID measurement modules may be used. These are readily integrated into the 482.6 mm (19") level or into the zero-U space of the rack, and connected using suitable connection cables. These measurement modules have an MID-compliant active energy meter and are therefore suitable for energy billing purposes. MID stands for "Measurement Instruments Directive" and regulates 10 types of measurement equipment based on EU Directive 2004/22/EC. MID-approved equipment is authorised for use throughout the EU.

Benefits:

- For 16 A and 32 A phase current
- Easy to assemble
- Billable MID measurement units
- CAN bus for connection to CMC III system
- Extensive management and monitoring functions (via CMC III)
- High-MTBF and measurement accuracy of +/-1%
- Energy-efficient electric design – minimal inherent power consumption
- 1 U, 482.6 mm (19") sheet steel enclosure, for flexible mounting

Measurement functions:

- Voltage (V), current (A), frequency (Hz)
- Active power (kW), active energy (kWh), apparent power (kVA), apparent energy (kVAh)
- Power factor (cos phi)
- Zero conductor measurement/load imbalance detection
- Measurement per phase or infeed
- Measurement accuracy +/-1% (kWh) to IEC 50 430-1
- MID certification of the active energy meter, suitable for energy billing purposes

Material:

- Enclosure: Sheet steel

Colour:

- RAL 9005

Protection category IP to IEC 60 529:

- IP 51

Standards:

- EN 60 950
- EN 61 000-6-1
- EN 61 000-6-2
- EN 55 022

Safety directive:

- 2006/95/EC

EMC directive:

- 2004/108/EC

Photo shows a configuration example with equipment not included in the scope of supply

MID measurement module for CMC III

Model No.	7859.312	7859.332
Version	16 A	32 A
Sheet steel enclosure 1 U for 482.6 mm (19") mounting, approx. 200 mm deep	■	■
Assembly parts	■	■
Connection cable, plug-in, various versions	■	■
Input voltage 230 V/400 V (50/60 Hz)	■	■
No. of infeeds (each 3-phase)	2	2
Rated current A (per phase)	16	32
Power supply across all 3 phases (internal power pack)	■	■
Maximum no. of systems that may be connected to one CMC-PU III	8	8
Ambient conditions		
Operating temperature	-25°C...+55°C	-25°C...+55°C
Storage temperature	-25°C...+70°C	-25°C...+70°C
Ambient humidity % (non-condensing)	10 – 95	10 – 95
Accessories		
Connection cables, set: 1 x input 2 m/1 x output 2 m CEE (IEC 60 309, jack) (2 x required when using both infeeds)	7859.315	7859.335
Connection cables for PSM busbars: Input cable 3 m/output cable 1.2 m (with Wago X-COM connector) (2 x required when using both infeeds)	7859.316	–

Power supply

Socket strips



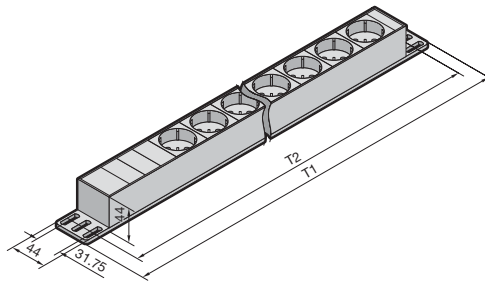
Socket strips

in an aluminium duct

The socket strips in the aluminium duct are available in various lengths with different functional elements. Special attention has been devoted to practical, universal fastening:

Variable attachment facilities have been created with an angle bracket which may be inserted in four positions. Hence, for example, the 482 mm long socket strip may optionally be mounted on 482.6 mm (19') mounting angles, the 482.6 mm (19') mounting frame, the enclosure frame, or in the rear section of the wall-mounted distributor. Without additional mounting accessories, the socket strip may be inserted into all sections with a 25 mm pitch pattern. This makes selection much easier, as well as providing additional flexibility and saving on warehousing. Provision has also been made for cable routing of the infeed, and when mounting in the 482.6 mm (19') section there is adequate space to route the infeed between the socket strip and the mounting angle without kinks.

The arrangement of the IEC 320 sockets at a 45° angle allows unrestricted use of angular connectors.



Technical specifications:

Earthing-pin socket strips:

- Connector type F (CEE 7/4)
- Rated operating voltage: 250 V
- Connection cable: 2 m long H05VV-F3G1.5 without connector, [5] with connector

Belgium/France (B/F) socket strips:

- Connector type E (CEE 7/5)
- Rated operating voltage: 250 V
- Connection cable: 2 m long H05VV-F3G1.5 with wire end ferrules

Equipment connector strips (IEC 60 320-1/C13)

Socket strips:

- Rated operating voltage: 250 V
- Connector input: C14 or cable H05VV-F3G1.0, depending on the version

Material:

- Aluminium section: Natural anodised
- Socket inserts: Polycarbonate

Supply includes:

- Socket strip
- Two mounting brackets
- Assembly parts

Standards:

- Earthing-pin socket: DIN 49 440
- IEC 320 socket: EN 60 320-2-2
- Overvoltage protection: DIN EN 61 643-11 (VDE 0675 Part 6-11)

Approvals:

- CE
- RoHS

Note:

- Depending on the application, we recommend use of a charging current reserve to prevent incorrect activation due to starting-current spikes

Technical details:

Available on the Internet

Connector type earthing-pin

Version	Rated current A	Con-nection	No. of sockets	Attachment			Length (T1) mm	Mounting dimension (T2) mm ¹⁾	Model No.
				Frame	Wall-mounted distributor, horizontal	482.6 mm (19') level			
[1] Without rocker switch	16	Cable	3	■	-	-	262.6	232.5	7240.110
			7	■	■	■	482.6	452.5	7240.210
			12	■	-	-	658.6	628.5	7240.310
[2] With rocker switch	16	Cable	3	■	■	-	306.6	276.5	7240.120
			7	■	■	■	482.6	452.5	7240.220
[3] Overvoltage protection, type 3 and interference suppressor filter	16	Cable	5	■	■	■	482.6	452.5	7240.230
			9	■	-	-	658.6	628.5	7240.330
[4] Circuit-breaker, type B, 16 A, 2-pole	16	Cable	5	■	■	■	482.6	452.5	7240.240
[5] UPS strip, connection cable with 10 A IEC 320 connector type E, with 10 A G-fuse	10	C14	7	■	■	■	482.6	452.5	7240.260
[6] FI switch, 0.03 A, 2-pole, type A	16	Cable	5	■	■	■	482.6	452.5	7240.280
B/F sockets, type E with earthing pin (Belgium/France)	16	Cable	7	■	■	■	482.6	452.5	7240.510

¹⁾ Variable attachment distance within a range of 25 mm, the dimension given is hole centre - hole centre of the mounting bracket

Connector type C13

Version	Rated current A	Con-nection	No. of sockets	Attachment			Length (T1) mm	Mounting dimension (T2) mm ¹⁾	Model No.
				Frame	Wall-mounted distributor, horizontal	482.6 mm (19') level			
For IEC 320 connectors	10	Cable	12	■	■	■	482.6	452.5	7240.200
For IEC 320 connectors with IEC 320 input	10	C14	9	■	■	■	482.6	452.5	7240.201

¹⁾ Variable attachment distance within a range of 25 mm, the dimension given is hole centre - hole centre of the mounting bracket

Socket strip

Earthing-pin, with plastic housing

Robust 8-way earthing-pin socket strip in a plastic housing. The strip may be mounted vertically on the enclosure frame or in the 482.6 mm (19") section. 2.5 U are required for 482.6 mm (19") installation. The earthing-pin inserts are arranged at an angle of 45° so that angular connectors are also easily used. The connection cable is attached to a terminal connection (behind a removable cover) in the socket strip. The socket strip has a terminal for an external earthing connection.

Technical specifications:

- Connector type F (CEE 7/4)
- Rated operating voltage: 230 V
- Rated current: 16 A
- Connection cable: Type H05VV-F3G1.5 (black) with wire end ferrules
- Length: 2 m
- Dimensions:
W x H x D: 483 x 74 x 45 mm

Socket strip	Model No.
8-way, earthing-pin	7000.630

Supply includes:

- 1 socket strip
- Assembly parts

Material:

- Plastic (grey/black)

Approvals:

- CE
- RoHS



Socket strip

Earthing-pin, with ammeter

The socket strip with ammeter measures the active power of the connected equipment. The 482.6 mm (19") long socket strip may optionally be mounted on the 482.6 mm (19") mounting angles, on the 482.6 mm (19") mounting frame, on the enclosure frame or in the rear section of wall-mounted distributors. The installation bracket may be mounted in four different positions for variable mounting. Without additional mounting accessories, the socket strip may be inserted into all sections with a 25 mm pitch pattern.

Technical specifications:

- Rated operating voltage: 250 V
- Rated current: 16 A
- Connection cable: Type H05VV-F3G1.5 (black) with wire end ferrules
- Length: 3 m
- Dimensions:
W x H x D: 480 x 45 x 50 mm

Material:

- Aluminium section: Natural anodised
- Socket inserts: Polycarbonate

Display colour:

- Blue, luminescent

Supply includes:

- 1 socket strip
- 2 installation brackets
- Assembly parts
- 3 m connection cable with wire end ferrules

Approvals:

- CE
- RoHS



Version	No. of sockets	Attachment			Length mm	Mounting dimensions mm ¹⁾	Model No.
		Frame	Wall-mounted distributor, horizontal	482.6 mm (19") level			
IEC 320/CEE 7/4	7	■	■	■	482.6	464.1	7240.300

¹⁾ Variable attachment distance within a range of 25 mm, the dimension given is hole centre – hole centre of the mounting bracket

Power supply

Socket strips



Junction box

with multi-functional bracket

The angle bracket can be installed in all network enclosures in a system-compatible design. The junction box serves as a transfer point for the power supply to all equipment (fans, lights and socket strips). As well as being used as a junction box or transfer point, the bracket can also accommodate the enclosure internal thermostat 3110.000 or the hygrostat 3118.000, due to its integral holes.

Material:

- Sheet steel

Colour:

- RAL 7035

Supply includes:

- 1 junction box
- 1 bracket
- 6 m connection cable 3 x 1.5 mm² (flexible)

Packs of	Model No.
1 set(s)	7280.035



Socket

- For mounting on support rails TS 35/7.5 and TS 35/15 to EN 60 715
- Uniform screw terminals from one side
- Enclosure width 45 mm

Technical specifications:

- Rated voltage: 250 V
- Rated current: 16 A

Material:

- Polyamide

Colour:

- Grey

Standards:

- DIN VDE 0620-1
- DIN 49 440-1

Version	Packs of	Model No.
Earthing-pin/CEE 7/4	2 pc(s).	2506.100



Service socket

for enclosure frame attachment/16 A

Integration of a service socket within a separate supply circuit, independently of the IT network and UPS.

Simple installation via an angle bracket for attaching to the enclosure frame.

Type: Earthing contact/CEE 7/4

Material:

- Angle bracket: Sheet steel
- Socket: Plastic

Surface finish:

- Angle bracket: Zinc-plated

Supply includes:

- 1 angle bracket
- 1 damp-proof socket (IP 44)
- Assembly parts

Packs of	Model No.
1 set(s)	7280.100



Power supply

Socket strips

Energy-Box, 3 U, 482.6 mm (19')

Technical specifications:

- Depth-adjustable top hat rail for installed equipment to DIN 43 880, sizes 1 – 3 (e.g. to accommodate built-in sockets, circuit-breakers etc.).
- Cable clamping rear, one N and one PE rail on insulated base/plinth
- Plastic hood including extension cover (UL 94-V0)
- Maximum accommodation capacity of 22 HP (22 x 18 mm = 396 mm)
- Enclosure height: 3 U
- Enclosure depth: 155 mm
- Overall installation depth with C rail: 155 mm
- Dimensions:
W x H x D: 483 x 132.5 x 155 mm

Colour:

- RAL 7035

Supply includes:

- 1 Energy-Box with fitted N and PE rails and brush strip
- 4 connection clamps, 35 mm²
- 18 connection clamps, 16 mm²
- 2 blanking covers
- 12 clips for cable strain relief
- Identification strips, self-adhesive

Packs of	U	Model No.
1 pc(s).	3	7480.035

Photograph shows a configuration example with equipment not included in the scope of supply



Energy-Box, 3 U, 482.6 mm (19')

Pull-out

Technical specifications:

- Depth-adjustable top hat rail for snap-in attachment of installed equipment to DIN 43 880 in sizes 1 – 3 (e.g. to accommodate built-in sockets, circuit-breakers etc.) or entire installation assemblies
- Cable clamping at rear
- Two power distribution rails with connection clamps on insulated base/plinth
- Plastic hood including extension cover
- Maximum accommodation capacity of 22 HP (22 x 18 mm = 396 mm)
- Enclosure height: 3 U
- Enclosure depth: 223 mm
- Maximum extension: 220 mm
- Dimensions:
W x H x D: 483.5 x 132 x 223 mm

Colour:

- RAL 7035

Supply includes:

- 1 Energy-Box with fitted N and PE rails and brush strip
- 4 connection clamps, 35 mm²
- 18 connection clamps, 16 mm²
- 2 blanking covers
- 12 clips for cable strain relief
- Identification strips, self-adhesive

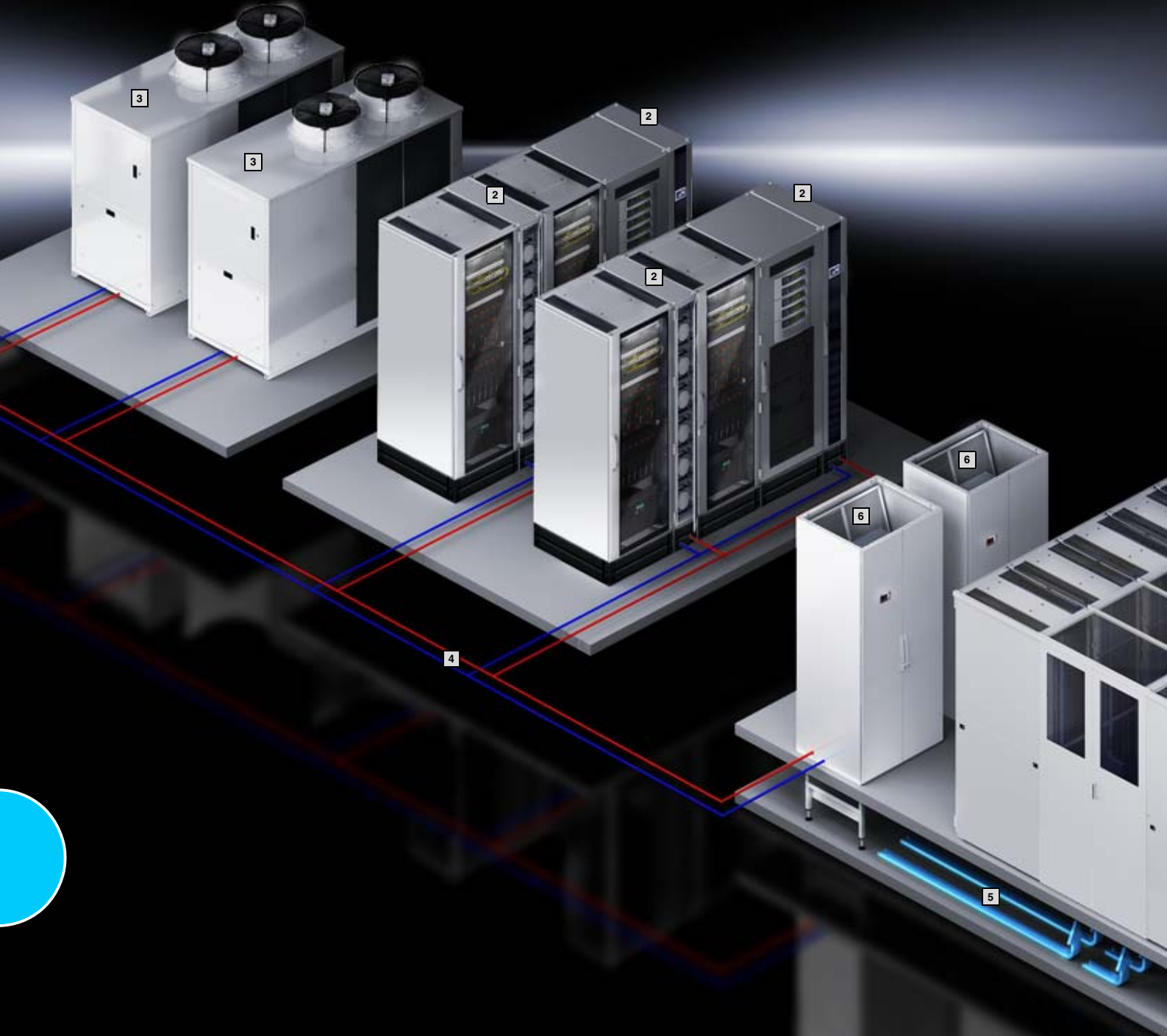
U	Model No.
3	7480.300

Photograph shows a configuration example with equipment not included in the scope of supply



Rittal – The System.

Faster – better – everywhere.



IT cooling

Liquid Cooling Package

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Aisle containment	435
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Chillers for IT cooling

Overall cooling output 15 – 481 kW	441
--	-----

Your benefits

- State-of-the-art climate control technology, from cooling single racks to complete data centres
- Individual climate control concepts for rack, suite and room cooling
- Enhanced security plus superior energy and cost efficiency
- Optimisation with aisle containment and cross-system control concepts
- Energy-efficient cooling with IT chillers
- Minimisation of operating costs with free cooling
- Environmentally friendly, thanks to resource and CO₂ savings
- Planning, assembly, commissioning and servicing – all from a single supplier!

Sample applications

- 1 Aisle containment, see page 435
- 2 Liquid Cooling Package LCP, see page 428
- 3 IT chiller with integral free cooling, see page 441
- 4 Pipework
- 5 Raised floor for cold air supply
- 6 CRAC system (partner product)

Please note:

Rittal no longer sells its own **CRAC systems**; instead, from now on, we are collaborating with a few selected product partners and recommending them for use in system solutions and IT projects.

The advantages for our customers are as follows:

- Independent selection of the best CRAC systems from a technical and financial perspective, depending on the technical requirements and regional framework conditions
- Clear regulation of the customer/supplier relationship in terms of procurement, installation, commissioning and services
- Clear regulation of warranties and product liability

For our chosen product partners, Rittal provides key basic information (such as technical properties, ordering instructions, contact addresses and other details, where applicable). Further details can be found on our website at www.rittal.com.



Liquid Cooling Package



Accessories for LCP Page 433 Chillers for IT cooling Page 441 Network/server enclosures TS IT Page 92

Benefits:

- Maximum energy efficiency thanks to EC fan technology and IT-based control
- Minimal pressure loss at the air end, which in turn minimises the power consumption of the fans
- Control of the server inlet temperature
- With redundant temperature sensor integrated at the air end as standard
- Optimum adaptability thanks to dynamic, continuous control of the cold water volume flow
- By using high water inlet temperatures, the proportion of indirect free cooling is increased, which in turn reduces operating costs

- Targeted cooling output thanks to modular fan units
- Fan modules configurable as n+1 redundancy
- Standard 3-phase connection for electrical redundancy
- The separation of cooling and rack prevents water from entering the server enclosure
- Up to 55 kW cooling output on a footprint of just 0.36 m²
- Minimal area load due to low weight

Functions:

The LCP draws in the air at the sides at the rear of the server enclosures, cools it using high-performance compact impellers, and blows the cooled air back into the front part of the server enclosure at the sides

Monitoring:

- Monitoring of all system-relevant parameters such as server air intake temperature, server waste air temperature, water inlet/return temperature, water flow, cooling output, fan speed, leakage
- Direct connection of the unit via SNMP over Ethernet

Temperature control:

- Linear fan control
- Two-way control valve

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 20

Cooling medium:

- Water

Optional:

- Fully integrated fire detection and extinguisher system
- Automatic server enclosure door opening
- Various sensors
- Racks 2200 mm high

Technical details:

Available on the Internet

Photo shows a configuration example with equipment not included in the scope of supply

LCP Rack CW

Model No.	Packs of	3311.130	3311.230	3311.260	Page
Total cooling output/Number of fan modules required kW		10 / 1 20 / 2 30 / 3	10 / 1 20 / 2 30 / 3	40 / 4 45 / 5 55 / 6	
Number of fan modules in supplied state		1	1	4	
Width mm		300	300	300	
Height mm		2000	2000	2000	
Depth mm		1000	1200	1200	
Installation in bayed enclosure suite		Flush	Flush	Flush	
Rated operating voltage V, ~, Hz		230, 1~, 50/60 400, 3~, 50/60	230, 1~, 50/60 400, 3~, 50/60	230, 1~, 50/60 400, 3~, 50/60	
Type of electrical connection		Connector	Connector	Connector	
Air throughput at max. cooling output m ³ /h		4800	4800	8000	
Fans may be exchanged with the system operational		■	■	■	
EC fan		■	■	■	
Water inlet temperature °C		15	15	15	
Permissible operating pressure (p. max.) bar		6	6	6	
Duty cycle %		100	100	100	
Water connection		1½" external thread	1½" external thread	1½" external thread	
Weight as delivered kg		214.0	214.0	235.0	
Accessories					
Fan module	1 pc(s).	3311.011	3311.011	3311.011	434
Touchscreen display, colour	1 pc(s).	3311.030	3311.030	3311.030	433
Connection hose, bottom and top	2 pc(s).	3311.040	3311.040	3311.040	433

Liquid Cooling Package



Accessories for LCP Page 433 Chillers for IT cooling Page 441 Network/server enclosures TS IT Page 92

Benefits:

- Maximum energy efficiency thanks to EC fan technology and IT-based control
- Minimal pressure loss at the air end, which in turn minimises the power consumption of the fans
- Optimum adaptability due to dynamic, continuous control of the cold water volume flow
- By using high water inlet temperatures, the proportion of indirect free cooling is increased, which in turn reduces operating costs
- Targeted cooling output thanks to modular fan units
- Fan modules configurable as n+1 redundancy
- Standard 3-phase connection for electrical redundancy

- With redundant temperature sensor integrated at the air end as standard
- The separation of cooling and rack prevents the ingress of water into the server enclosure
- Up to 55 kW cooling output on a footprint of just 0.36 m²
- Minimal area load due to low weight

Functions:

The hot air is drawn in from the room or hot aisle at the rear of the device and expelled at the front into the cold aisle after cooling. The LCP achieves maximum performance and efficiency in conjunction with Rittal cold aisle containment. With this product, a raised floor is not necessary.

Monitoring:

- Monitoring of all system-relevant parameters such as server air intake temperature, server waste air temperature, water inlet/return temperature, water flow, cooling output, fan speed, leakage
- Direct connection of the unit via SNMP over Ethernet
- Integration into RiZone

Temperature control:

- Linear fan control
- Two-way control valve

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 20

Cooling medium:

- Water

Optional:

- Various sensors
- Racks 2200 mm high

Technical details:

Available on the Internet

Photo shows a configuration example with equipment not included in the scope of supply

LCP Inline CW

Model No.	Packs of	3311.530	3311.540	3311.560	Page
Total cooling output/Number of fan modules required kW		10 / 1 20 / 2 30 / 3	18 / 2 27 / 3 30 / 4	40 / 4 45 / 5 55 / 6	
Number of fan modules in supplied state		1	2	4	
Width mm		300	300	300	
Height mm		2000	2000	2000	
Depth mm		1200	1200	1200	
Installation in bayed enclosure suite		Set forward	Flush	Set forward	
Rated operating voltage V, ~, Hz		230, 1~, 50/60 400, 3~, 50/60	230, 1~, 50/60 400, 3~, 50/60	230, 1~, 50/60 400, 3~, 50/60	
Type of electrical connection		Connector	Connector	Connector	
Air throughput at max. cooling output m ³ /h		4800	4800	8000	
Fans may be exchanged with the system operational		■	■	■	
EC fan		■	■	■	
Permissible operating pressure (p. max.) bar		6	6	6	
Duty cycle %		100	100	100	
Water connection		1½" external thread	1½" external thread	1½" external thread	
Water inlet temperature °C		15	15	15	
Weight as delivered kg		214.0	221.0	235.0	

Accessories

Fan module	1 pc(s).	3311.011	3311.011	3311.011	434
Touchscreen display, colour	1 pc(s).	3311.030	3311.030	3311.030	433
Connection hose, bottom and top	2 pc(s).	3311.040	3311.040	3311.040	433
Rear adaptor	1 pc(s).	3311.080	–	3311.080	433

Liquid Cooling Package



Accessories for LCP Page 433 Chillers for IT cooling Page 441 Network/server enclosures TS IT Page 92

Benefits:

- Error-tolerant, efficient cooling of server racks with high thermal loads
- Fully redundant – two active cooling circuits and two switchable power circuits ensure optimum fail-safeness
- The built-in controllers are capable of adapting all device parameters automatically to preserve the required cooling outputs
- A separate decentralised intelligence which automatically recognises emergency situations and responds appropriately with the "auto-load balancing" and "auto-recovery" functions

- Interfaces which facilitate user-friendly operation and monitoring via the network or BSM systems

Functions:

The LCP draws in the air at the sides at the rear of the server enclosures, cools it using high-performance compact impellers, and blows the cooled air back into the front part of the server enclosure at the sides

Monitoring:

- Monitoring of all system-relevant parameters such as server air intake temperature, server waste air temperature, water inlet/return temperature, water flow, cooling output, fan speed, leakage

Temperature control:

- Linear fan control
- Two-way control valve

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 20

Cooling medium:

- Water

Optional:

- Fully integrated fire detection and extinguisher system
- Automatic server enclosure door opening
- Various sensors

Photo shows a configuration example with equipment not included in the scope of supply

LCP T3+ CW

Model No.	3300.239	Page
Total cooling output kW	20	
Width mm	300	
Height mm	2200	
Depth mm	1200	
Rated operating voltage V, ~, Hz	230, 1~, 50/60	
Type of electrical connection	C19/C20	
Fans may be exchanged with the system operational	■	
EC fan	■	
Duty cycle %	100	
Weight as delivered kg	215.0	

Liquid Cooling Package



Accessories for LCP Page 433 Chillers for IT cooling Page 441 Network/server enclosures TS IT Page 92

Benefits:

- Maximum energy efficiency due to EC fan technology and IT-based control
- Minimal pressure loss at the air end, which in turn minimises the power consumption of the fans
- Control of the server inlet temperature
- Due to the speed-regulated compressor, the cooling output is ideally adapted to actual requirements

- With redundant temperature sensor integrated at the air end as standard
- Specific maintenance of the LCP DX due to separation of cooling and server rack
- Absorbed thermal energy is emitted to the ambient air at the external condenser location, without heating up the installation room
- Ideal for IT cooling of small and medium-sized locations
- One or two racks can be cooled separately

Functions:

The LCP draws in the air at the sides at the rear of the server enclosures, cools it using high-performance compact impellers, and blows the cooled air back into the front part of the server enclosure at the sides

Temperature control:

- Linear fan control
- Inverter-regulated compressor

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 20

Cooling medium: R410a

Optional:

- Humidifier, reheater or condensate pump
- Higher cooling output

Photo shows a configuration example with equipment not included in the scope of supply

LCP Rack DX

Model No.	Packs of	3311.410	3311.420	Page
Total cooling output/Number of fan modules required kW		12 / 4	12 / 4	
Width mm		300	300	
Height mm		2000	2000	
Depth mm		1000	1200	
Installation in bayed enclosure suite		Flush	Flush	
Rated operating voltage V, ~, Hz		380, 3~, 50/60 480, 3~, 50/60	380, 3~, 50/60 480, 3~, 50/60	
Type of electrical connection		Connection clamp	Connection clamp	
Air throughput at max. cooling output m ³ /h		4800	4800	
Fans may be exchanged with the system operational		■	■	
EC fan		■	■	
Duty cycle %		100	100	
Weight as delivered kg		181.0	181.0	
Accessories				
SNMP card	1 pc(s).	3311.320	3311.320	434
Condenser unit	1 pc(s).	3311.360	3311.360	433

Liquid Cooling Package



Accessories for LCP Page 433 Chillers for IT cooling Page 441 Network/server enclosures TS IT Page 92

Benefits:

- Maximum energy efficiency due to EC fan technology and IT-based control
- Minimal pressure loss at the air end, which in turn minimises the power consumption of the fans
- Temperature monitoring and control
- Due to the speed-regulated compressor, the cooling output is ideally adapted to actual requirements
- With redundant temperature sensor integrated at the air end as standard

- Minimal area load due to low weight
- Specific maintenance of the LCP DX due to separation of cooling and server rack
- Absorbed thermal energy is emitted to the ambient air at the external condenser location, without heating up the installation room
- Ideal for IT cooling of small and medium-sized locations
- One or two racks can be cooled separately

Functions:

The LCP is designed for siting within a bayed enclosure suite. Hot air is drawn in from the aisle at the rear of the device, cooled by the high-capacity compact impellers, and blown back into the room or cold aisle after cooling

Temperature control:

- Linear fan control
- Inverter-regulated compressor

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 20

Cooling medium:

- R410a

Optional:

- Humidifier, reheater or condensate pump
- Higher cooling output

Photo shows a configuration example with equipment not included in the scope of supply

LCP Inline DX

Model No.	Packs of	3311.430	3311.440	Page
Total cooling output/Number of fan modules required kW		12 / 4	12 / 4	
Width mm		300	300	
Height mm		2000	2000	
Depth mm		1000	1200	
Installation in bayed enclosure suite		Flush	Flush	
Rated operating voltage V, ~, Hz		380, 3~, 50/60 480, 3~, 50/60	380, 3~, 50/60 480, 3~, 50/60	
Type of electrical connection		Connection clamp	Connection clamp	
Air throughput at max. cooling output m ³ /h		4800	4800	
Fans may be exchanged with the system operational		■	■	
EC fan		■	■	
Duty cycle %		100	100	
Weight as delivered kg		181.0	181.0	
Accessories				
SNMP card	1 pc(s).	3311.320	3311.320	434
Condenser unit	1 pc(s).	3311.360	3311.360	433

Liquid Cooling Package

Accessories for LCP CW/DX

Touchscreen display

for LCP Rack, Inline, CW

The colour display offers the opportunity of directly monitoring key LCP functions and implementing settings.

For LCP CW	Packs of	Model No.
3311.130 3311.230 3311.260 3311.530 3311.540 3311.560	1 pc(s).	3311.030



Condenser unit

The condenser unit is needed to operate the refrigerant-based LCPs, and comprises the external condenser and fan.

Refrigerant:

- R410a

For LCP DX	Packs of	Model No.
3311.410 3311.420 3311.430 3311.440	1 pc(s).	3311.360

Note:

- The pipework between the LCP DX and the condenser is not included with the supply.



Vertical shielding

for enclosure height 2000 mm

To block the airflow on the left and right of the 482.6 mm (19") level.

Length: 1900 mm

Material:

- Cellular PU foam
- Flame-inhibiting to UL 94 (HF1)
- Self-adhesive on one side

For sealing between	For enclosure width mm	Packs of	Model No.
Side panel and 482.6 mm (19") level	600	1 pc(s).	3301.380
	800	1 pc(s).	3301.390
LCP and 482.6 mm (19") level	600	1 pc(s).	3301.370
	800	1 pc(s).	3301.320



Connection hose

bottom and top

Flexible connection hose, may be cut to required length, including union nuts on both sides for connecting the LCP to existing pipework.

For LCP CW	Thread	Water connection from	Packs of	Model No.
3311.130 3311.230 3311.260 3311.530 3311.540 3311.560	1 1/2"	bottom/top	2 pc(s).	3311.040



Rear adaptor

for LCP Inline CW

May be positioned to the rear of the set forward LCP Inline to close the existing gap in the rear section.

For LCP Inline CW	Packs of	Model No.
3311.530 3311.560	1 pc(s).	3311.080



Liquid Cooling Package

Accessories for LCP CW/DX

SNMP card

For connecting LCP Rack/Inline DX units to the network.

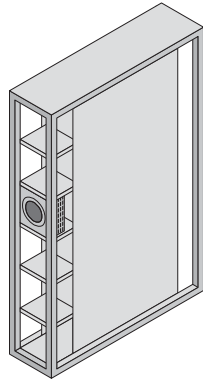
For LCP DX	Packs of	Model No.
3311.410 3311.420 3311.430 3311.440	1 pc(s).	3311.320



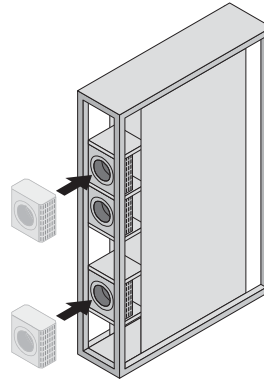
Fan module for LCP

To increase the cooling output, individual fan modules may be retro-fitted into the LCPs. This can also achieve redundancy or reduce the electric power consumption of the LCP.

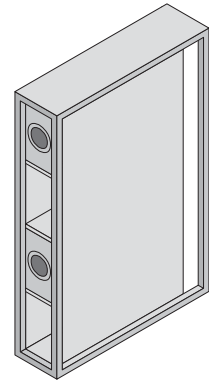
For LCP	Packs of	Model No.
3311.130, 3311.230, 3311.260, 3311.530, 3311.540, 3311.560	1 pc(s).	3311.011



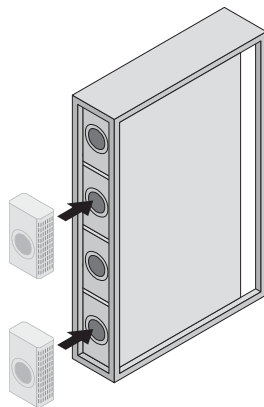
The LCP 3311.130/.230/.530 (max. 30 kW) is supplied with one fan module as standard.



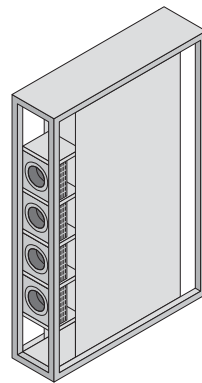
To achieve the max. cooling output of 30 kW, the customer/service should install two additional fan modules.



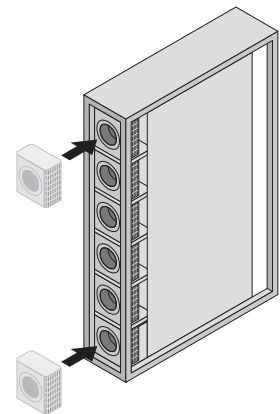
The LCP 3311.540 (max. 30 kW) is supplied with two fan modules as standard.



To achieve the max. cooling output of 30 kW, the customer/service should install two additional fan modules.



The LCP 3311.260/.560 (max. 55 kW) is supplied with four fan modules as standard.



To achieve the max. cooling output of 55 kW, the customer/service should install two additional fan modules.



Liquid Cooling Package Page 428 **Network/server enclosures TS IT** Page 90

Slimline door element with viewing window and sliding door. Stable roof elements in a composite metal with a high level of light permeability. Where required, safety glass may also be used.

Applications:

- Depending on the application, aisle containment may be used with CRAC systems or LCP Inline as hot or cold aisle containment.

Benefits:

- Increased energy efficiency and performance capability of climate control.
- Superior output density is facilitated, thanks to targeted cold air supply.
- Easily installed and retrofitted, as it is fully compatible with the TS 8 enclosure system.
- An inexpensive way to boost the performance of your existing plant, lengthening the investment cycle until a replacement needs to be purchased.

Functions:

Aisle containment is a combination of door and roof components which facilitate consistent separation of the hot and cold air in the data centre. Such separation is pivotal to saving energy and increasing the efficiency of the available climate control technology.

Note:

- Individual project planning only
- Photo shows a configuration example with equipment not included in the scope of supply

Model No.		7999.922	Page
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Roof-mounted cooling units



Climate control accessories Page 369

Temperature control:

- Control of the server air infeed temperature

Material:

- Sheet steel

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- External circuit IP 34
- Internal circuit IP 54

Supply includes:

- Nano-coated condenser
- Integral electric condensate evaporation
- Fully wired ready for connection
- Drilling template
- Assembly parts

Note:

- A roof plate with cut-out to match the enclosure dimensions is required

for cooling IT equipment

Model No.	Packs of	3301.800	Page
Total cooling output L25 L35 W		3000	
Total cooling output L35 L45 W		3200	
Width mm		597	
Height mm		417	
Depth mm		895	
Rated operating voltage V, ~, Hz		230, 1~, 50	
Type of electrical connection		Plug-in terminal strip	
Pre-fuse (T) A		16	
Start-up current max. A		36	
Rated current max. A		9.2	
Refrigerant		R134a	
Permissible operating pressure (p. max.) bar		25	
Duty cycle %		100	
Operating temperature range		+10°C...+45°C	
Setting range		+20°C...+25°C	
Weight as delivered kg		72.0	
Accessories			
Condensate hose	1 pc(s).	3301.612	377
Door-operated switch	1 pc(s).	4127.010	639
Air baffle plates		see page	692
Filter mats	3 pc(s).	3286.500	369

Small cooling units

Roof-mounted fans

for TS, TS IT in the office sector

This roof ventilation concept offers a wealth of performance, assembly and cost benefits associated with the use of integrated ventilation systems. This roof-mounted fan may be ordered with and without a roof plate. Another outstanding feature is the enormous volumetric flow in proportion to exceptionally low noise levels, making it ideal for use in sensitive office areas.

Technical specifications:

- With 3164.620 pre-configured on the roof plate, solid, based on TS
- Easy assembly; no need to make mounting cut-outs
- Radial fan

Colour:

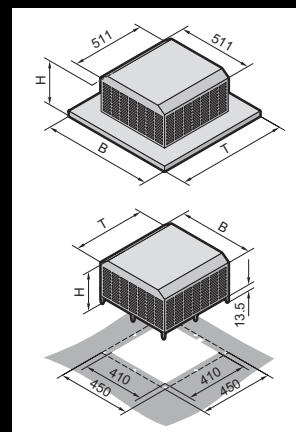
- RAL 7035

Supply includes:

- Fully wired ready for connection
- Assembly parts

Technical details:

Available on the Internet



Model No.	3164.620	3164.230	Page
Rated operating voltage V, ~, Hz:	230, 1~, 50/60	230, 1~, 50/60	
Air throughput, unimpeded airflow m ³ /h	1500 ¹⁾	1500 ¹⁾	
Version	with roof plate	without roof plate	
Width (B) mm	800	511	
Height (H) mm	240	227	
Depth (T) mm	800	511	
Power consumption W	68/81	68/81	
Rated current A	0.3/0.35	0.3/0.35	
Noise level dB (A)	40	40	
Operating temperature range	+20°C...+55°C	+20 °C ... +55 °C	
Accessories			
Temperature display in 1 U patch panel	7109.035	7109.035	379
Digital enclosure internal temperature display and thermostat	3114.200	3114.200	379
Enclosure internal thermostat	3110.000	3110.000	379

¹⁾ 800 m³/h at 40 Pa counterpressure using two vented base/plinth trim panels 8100.802 in the Flex-Block base/plinth system

Fan mounting plate

for TS IT

For active ventilation. For use in the cut-out integrated into the roof plate. The unit may optionally be extended with additional fans.

Technical specifications for one fan:

- Fan expansion kit 7980.000, see page 438

Technical specifications of thermostat:

- Rated operating voltage: 250 V
- Temperature range: +5°C...+55°C

Colour:

- RAL 7035

Supply includes:

- 1 fan unit
- 2 fans
- 1 thermostat
- 1 connection cable, top
- Assembly parts

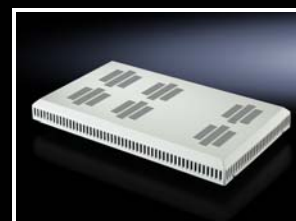
Note:

- Connection via distributor box or country-specific connector



Accessories:

- Fan expansion kit, see page 438



W x D mm	No. of prewired fans	No. of fans supported	Model No.
800 x 600, 600 x 1000, 600 x 1200	2	3	5502.010
800 x 800, 800 x 1000, 800 x 1200	2	6	5502.020

Small cooling units



Fan mounting plate

For upgrading existing DK-TS applications.

The fan mounting plate may be retro-fitted in all DK-TS network enclosures from above. The plate is mounted at the front of the enclosure, whilst the rear section is left free for cable entry. A rubber cable clamp strip is supplied loose for optional sealing at the rear.

The following combinations are also possible:

- Solid roof plate raised with 20 or 50 mm roof spacers
- Roof plate for cable entry raised with 20 or 50 mm roof spacers
- Vented roof plate for cable entry

In conjunction with the large swing frame, usage is only possible from an enclosure depth of 800 mm, in conjunction with a roof plate for cable entry from 1000 mm.

Technical specifications for one fan:

- Rated operating voltage: 230 V
- Power consumption: 15/14 W at 50/60 Hz
- Air throughput (unimpeded air flow): 160/180 m³/h, 50/60 Hz
- Operating temperature range: -10°C...+55°C

Technical specifications of thermostat:

- Rated operating voltage: 250 V
- Operating temperature range: +5°C...+55°C

Colour:

- RAL 7035

Supply includes:

- 2 fans
- 2/4 cut-outs to extend to 4/6 fans
- Thermostat
- Rubber cable clamp strip
- Thermostat and fan fully wired to connection cable (3.5 m)

Note:

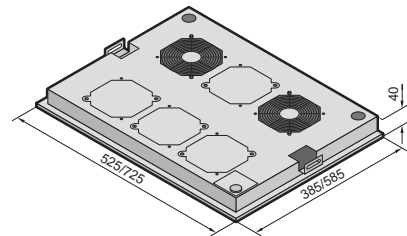
- Not suitable for crane transportation
- Not suitable for combination with 482.6 mm (19") mounting frame

For enclosures		Number of fans	Max. number of fans	Model No.
Width mm	Depth mm			
600	600	2 pc(s).	4 pc(s).	7966.035
600	800 1000 1200	2 pc(s).	6 pc(s).	7968.035
800	600	2 pc(s).	6 pc(s).	7986.035
800	800 1000 1200	2 pc(s).	6 pc(s).	7988.035

The air throughput can be increased with the fan expansion kit 7980.000.

+ Accessories:

- Fan expansion kit, see page 438
- Foam rubber cable clamp strip 2573.000 for sealing at the sides and targeted air routing when bayed, see page 652



Fan expansion kit

For retro-fitting various fan units or to supplement the fan mounting plate.

Technical specifications 7980.000:

- Rated operating voltage: 230 V~
- Power consumption: 15/14 W at 50/60 Hz
- Air throughput (unimpeded air flow): 160/180 m³/h, 50/60 Hz
- Noise level (unimpeded air flow): 37 dB (A)
- Operating temperature range: -10°C...+55°C

Technical specifications 7980.100:

- Rated operating voltage: 230 V~
- Power consumption: 14/12 W at 50/60 Hz
- Air throughput (unimpeded air flow): 108/120 m³/h, 50/60 Hz
- Noise level (unimpeded air flow): 34 dB (A)
- Operating temperature range: -20°C...+70°C

Technical specifications 7980.148:

- Rated operating voltage: 48 V (DC)
- Power consumption: 7.7 W
- Air throughput (unimpeded air flow): 184 m³/h
- Noise level (unimpeded air flow): 43 dB (A)
- Operating temperature range: -20°C...+70°C

Dimensions W x H x D mm	Packs of	Model No.
119 x 119 x 38	1 set(s)	7980.000
119 x 119 x 25	1 set(s)	7980.100
119 x 119 x 38	1 set(s)	7980.148

Supply includes:

- 1 fan expansion kit
- Assembly parts
- 1 connection cable (0.61 m)

Small cooling units

Fan cross member

For upgrading existing DK-TS applications.

Specifically for installing in one-piece perforated sheet steel doors

Given the growing packaging density in data communications and network enclosures, active, direct ventilation of the enclosure is essential. The fan cross member, which is attached to the tubular door frame of the rear or front door, supports horizontal air routing via the servers and therefore facilitates faster heat dissipation from active components.

Technical specifications:

- Standard cross member with two fans
- Air throughput, unimpeded airflow 600 m³/h
- By adding two fan expansion kits, the air throughput is increased to 1200 m³/h
- The direction of air flow is easily reversed by rotating the fan
- Several cross members may be positioned in a cascade arrangement
- Simple mounting on the tubular door frame

Supply includes:

- Fully wired ready for connection
- Connection cable 2.5 m
- Assembly parts

Note:

- Only for mounting on the tubular door frame

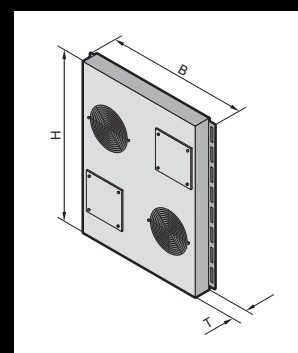


Accessories:

- Fan expansion kit, see page 438

Technical details:

Available on the Internet



For doors with width 600 mm

Model No.	3165.630	Page
Rated operating voltage V, ~, Hz:	230, 1~, 50/60	
Air throughput (unimpeded airflow) m³/h	600	
Power consumption for two fans W	70/70	
Rated current fan A	0.38/0.36	
Width (B) mm	493	
Height (H) mm	606	
Depth (T) mm	64.5	
Noise level dB (A)	55	
Temperature range	+20°C...+55°C	
Colour	RAL 7035	
Accessories		
Digital enclosure internal temperature display and thermostat	3114.200	379
Enclosure internal thermostat	3110.000	379

For doors with width 800 mm

Model No.	3165.830	Page
Rated operating voltage V, ~, Hz:	230, 1~, 50/60	
Air throughput (unimpeded airflow) m³/h	600	
Power consumption for two fans W	70/70	
Rated current fan A	0.38/0.36	
Width (B) mm	693	
Height (H) mm	606	
Depth (T) mm	64.5	
For doors with width (mm)	800	
Noise level dB (A)	55	
Temperature range	+20°C...+55°C	
Colour	RAL 7035	
Accessories		
Digital enclosure internal temperature display and thermostat	3114.200	379
Enclosure internal thermostat	3110.000	379

Fan expansion kit

for fan cross member

To increase the air throughput of the fan cross member.

To fit fan cross member	Model No.
3165.630, 3165.830	3165.230



Small cooling units



Cover plates for fan panels

for FlatBox

To cover unused fan panels when using fan motors in the FlatBox.

Material:

- Sheet steel

Surface finish:

- Powder-coated

Packs of	Model No.
6 pc(s).	7507.760

Colour:

- RAL 7035

Supply includes:

- Assembly parts



Vent cover

The ideal addition for incorporating sealed racks into an existing central climate control system. The stepped connection is suitable for standard pipe diameters 150 mm and 200 mm, thereby ensuring effective cooling thanks to targeted air exchange inside the rack.

Design:

- Diameter of hose connection: 150 mm/200 mm
- Maximum cut-out on roof plate: 380 mm x 230 mm

Material:

- PET-G, transparent

Supply includes:

- Assembly parts

Width mm	Height mm	Depth mm	Packs of	Model No.
450	144	300	1 pc(s).	7826.750





Applications:

- Especially for cooling IT applications, such as LCP or air/water heat exchangers. Safety-relevant features such as redundant speed-controlled pumps, compressors or buffer stores are the distinguishing features of these atmospherically sealed systems

Technical specifications:

- Compact design with control components in the front and air intake via both side panels, air outlet upwards
- Pressure-sealed system
- Digital thermostat for temperature control with setpoint and actual value display
- Monitoring interface with SNMP supported
- Integral bypass

Temperature control:

- Electronic control with digital display (factory setting +15°C)

Protection category IP to IEC 60 529:

- IP 54

Supply includes:

- Chiller wired ready for connection
- Multi-lingual documentation
- Functional diagram and wiring plans

Optional:

- Free cooling may be integrated from 15 kW. Please follow the instructions
- Buffer store for separate siting
- Emergency cooling with mains water infeed
- Special voltages

Note:

- Technical deviations in terms of cooling output, dimensions or weight are possible for unit types with free cooling
- The performance data varies according to the option package chosen, and should be taken from the IT chiller configurator. We reserve the right to make technical modifications
- Pump and tank are available as options with IT chillers. If these configuration options are required, the technical data applies

Technical details:

Available on the Internet

Total cooling output 15 – 67 kW

Model No.	Packs of	3232.701	3232.711	3232.721	3232.731	3232.741	Page
Total cooling output kW		15	24	36	48	67	
Width mm		810	810	810	1000	1100	
Height mm		1542	1542	1542	1780	1606	
Depth mm		1800	1800	1800	2300	3240	
Rated operating voltage V, ~, Hz		400, 3~, 50	400, 3~, 50	400, 3~, 50	400, 3~, 50	400, 3~, 50	
Air throughput at max. cooling output m ³ /h		10880	10880	14000	18000	22000	
Power consumption kW		6.9	9.7	14.6	21	21	
Rated current max. A		23	25	37	46.5	52.2	
Refrigerant		R407c	R407c	R407c	R407c	R410a	
Permissible operating pressure (p. max.) bar		28	28	28	28	45	
Operating temperature range		-20°C...+43°C	-20°C...+43°C	-20°C...+43°C	-20°C...+43°C	-20°C...+43°C	
Temperature of liquid		+5°C...+15°C	+5°C...+15°C	+5°C...+15°C	+5°C...+15°C	+5°C...+15°C	
Pump capacity l/min		60	60	120	120	240	
Pump pressure bar		2.5	2.5	2.5	2.5	2.5	
Number of cooling circuits		1	1	1	1	2	
Steel tank, with 10 mm condensate insulation		■	■	■	■	■	
Tank capacity l		48	48	48	100	200	
Water connection		1½" internal thread	1½" internal thread	1½" internal thread	1½" internal thread	2½" internal thread	
Weight as delivered kg		400.0	415.0	505.0	710.0	896.0	
Operating weight kg		448.0	463.0	553.0	810.0	1096.0	
Colour		RAL 7035	RAL 7035	RAL 7035	RAL 7035	RAL 9002	

Chillers for IT cooling

Total cooling output 77 – 124 kW

Model No.	Packs of	3232.751	3232.761	3232.771	3232.781	3232.791	Page
Total cooling output kW		77	88	99	117	124	
Width mm		1100	1100	1100	1100	1100	
Height mm		1606	1606	1606	1875	1875	
Depth mm		3240	3240	3240	3240	3240	
Rated operating voltage V, ~, Hz		400, 3~, 50	400, 3~, 50	400, 3~, 50	400, 3~, 50	400, 3~, 50	
Air throughput at max. cooling output m³/h		22000	27000	27000	34100	34100	
Power consumption kW		24	26	29	36	41	
Rated current max. A		59.2	64.2	69.2	84.1	89.1	
Refrigerant		R410a	R410a	R410a	R410a	R410a	
Permissible operating pressure (p. max.) bar		45	45	45	45	45	
Operating temperature range		-20°C...+43°C	-20°C...+43°C	-20°C...+43°C	-20°C...+43°C	-20°C...+43°C	
Temperature of liquid		+5°C...+15°C	+5°C...+15°C	+5°C...+15°C	+5°C...+15°C	+5°C...+15°C	
Pump capacity l/min		240	240	240	470	470	
Pump pressure bar		2.5	2.5	2.5	2.5	2.5	
Number of cooling circuits		2	2	2	2	2	
Steel tank, with 10 mm condensate insulation		■	■	■	■	■	
Tank capacity l		200	200	200	300	300	
Water connection		2½" internal thread	2½" internal thread	2½" internal thread	2½" internal thread	2½" internal thread	
Weight as delivered kg		896.0	906.0	912.0	1000.0	1000.0	
Operating weight kg		1096.0	1106.0	1112.0	1300.0	1300.0	
Colour		RAL 9002	RAL 9002	RAL 9002	RAL 9005	RAL 9005	

Total cooling output 155 – 261 kW

Model No.	Packs of	3232.801	3232.811	3232.821	3232.891	3232.831	Page
Total cooling output kW		155	172	196	235	261	
Width mm		1100	1100	1100	1500	2200	
Height mm		1875	1875	1875	1975	2450	
Depth mm		3240	3240	4240	4350	3400	
Rated operating voltage V, ~, Hz		400, 3~, 50	400, 3~, 50	400, 3~, 50	400, 3~, 50	400, 3~, 50	
Air throughput at max. cooling output m³/h		32600	32600	50000	49000	72800	
Power consumption kW		47	52	60	70	80	
Rated current max. A		108	120	127	149	181	
Refrigerant		R410a	R410a	R410a	R410a	R410a	
Permissible operating pressure (p. max.) bar		45	45	45	45	45	
Operating temperature range		-20°C...+43°C	-20°C...+43°C	-20°C...+43°C	-20°C...+43°C	-20°C...+43°C	
Temperature of liquid		+5°C...+15°C	+5°C...+15°C	+5°C...+15°C	+5°C...+15°C	+5°C...+15°C	
Pump capacity l/min		500	500	500	500	810	
Pump pressure bar		2.5	2.5	2.5	2.5	2.5	
Number of cooling circuits		2	2	2	2	2	
Steel tank, with 10 mm condensate insulation		■	■	■	■	■	
Tank capacity l		300	300	300	300	700	
Water connection		2½" internal thread	2½" internal thread	2½" internal thread	2½" internal thread	3" internal thread	
Weight as delivered kg		1000.0	1000.0	1000.0	1900.0	2500.0	
Operating weight kg		1300.0	1300.0	1300.0	2200.0	3200.0	
Colour		RAL 9002	RAL 9002	RAL 9002	RAL 9002	RAL 9002	

Chillers for IT cooling

Total cooling output 291 – 481 kW

Model No.	Packs of	3232.841	3232.851	3232.861	3232.871	3232.881	Page
Total cooling output kW		291	326	387	430	481	
Width mm		2200	2200	2200	2200	2200	
Height mm		2450	2450	2450	2450	2450	
Depth mm		3400	3400	4250	4250	4250	
Rated operating voltage V, ~, Hz		400, 3~, 50	400, 3~, 50	400, 3~, 50	400, 3~, 50	400, 3~, 50	
Air throughput at max. cooling output m³/h		71500	70200	106200	104100	102000	
Power consumption kW		93	106	121	141	159	
Rated current max. A		203	225	293	307	336	
Refrigerant		R410a	R410a	R410a	R410a	R410a	
Permissible operating pressure (p. max.) bar		45	45	45	45	45	
Operating temperature range		-20°C...+43°C	-20°C...+43°C	-20°C...+43°C	-20°C...+43°C	-20°C...+43°C	
Temperature of liquid		+5°C...+15°C	+5°C...+15°C	+5°C...+15°C	+5°C...+15°C	+5°C...+15°C	
Pump capacity l/min		810	810	1200	1200	1200	
Pump pressure bar		2.5	2.5	2.5	2.5	2.5	
Number of cooling circuits		2	2	2	2	2	
Steel tank, with 10 mm condensate insulation		■	■	■	■	■	
Tank capacity l		700	700	700	700	700	
Water connection		3" internal thread	3" internal thread	4" internal thread	4" internal thread	4" internal thread	
Weight as delivered kg		2700.0	2800.0	3100.0	3000.0	3600.0	
Operating weight kg		3400.0	3500.0	3800.0	3700.0	4300.0	
Colour		RAL 9002	RAL 9002	RAL 9002	RAL 9002	RAL 9002	



Rittal – The System.

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IT monitoring

CMC III – Monitoring system

CMC III system representation	446
CMC III system overview	448
CMC III Processing Unit/Compact	450

CMC III sensors/accessories

CMC III control units/CMC III sensors	451
Interface for CMC II sensors	451
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Interface for PSM, PCU	452
PSM and slave PDU for direct connection	453

CMC III accessories

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CAN bus connection cable	457
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Mounting unit	458

Door control system

Door control system	459
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Monitor/keyboard unit

Monitor/keyboard unit, 1 U	461
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Dynamic Rack Control

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CMC III CAN bus DRC	462

Management software

RiZone	463
Server shutdown software	463

Your benefits

- A better overview of your IT infrastructure
- Enhanced security
- Automated processes
- Exceptional cost efficiency
- High energy savings
- Simple project management
- Fast installation
- Flexible, individual solutions with standard products from Rittal
- High standard of quality with coordinated standard products

Sample applications

- 1 CMC III, see page 449
- 2 Liquid Cooling Package LCP, see page 428
- 3 Monitor/keyboard unit, see page 461
- 4 Electric comfort handle TS 8, see page 460

CMC III – Monitoring system

Computer Multi Control (CMC) is an alarm system for network and server enclosures, cases, containers and rooms.

- It monitors temperatures, humidity, access, smoke, energy and many other physical ambient parameters.
- It is a modular system that can be flexibly adapted to meet the customer's specific monitoring requirements.
- User benefits plus exceptional savings are achieved, thanks to monitoring via the network and the automation of security processes.

Further information can be found at: www.rittal.com

1 CMC III Processing Unit



2

3

12



4

7



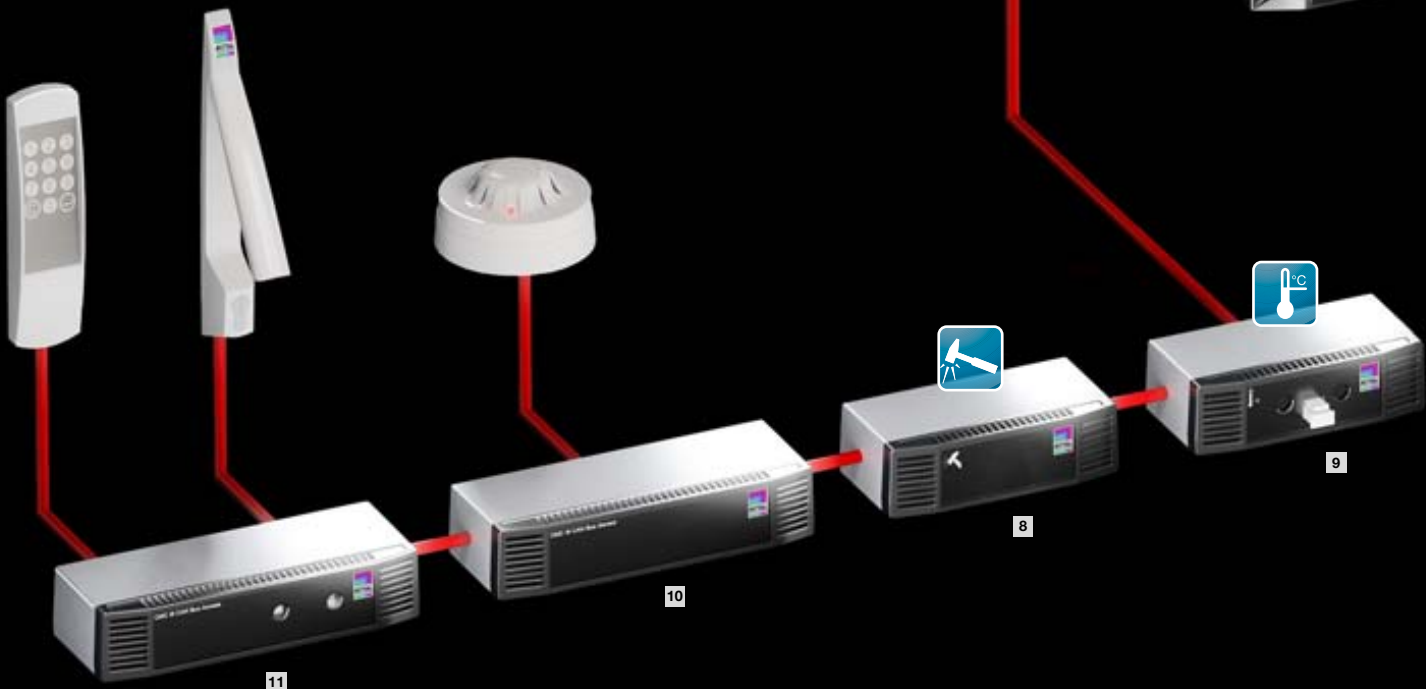
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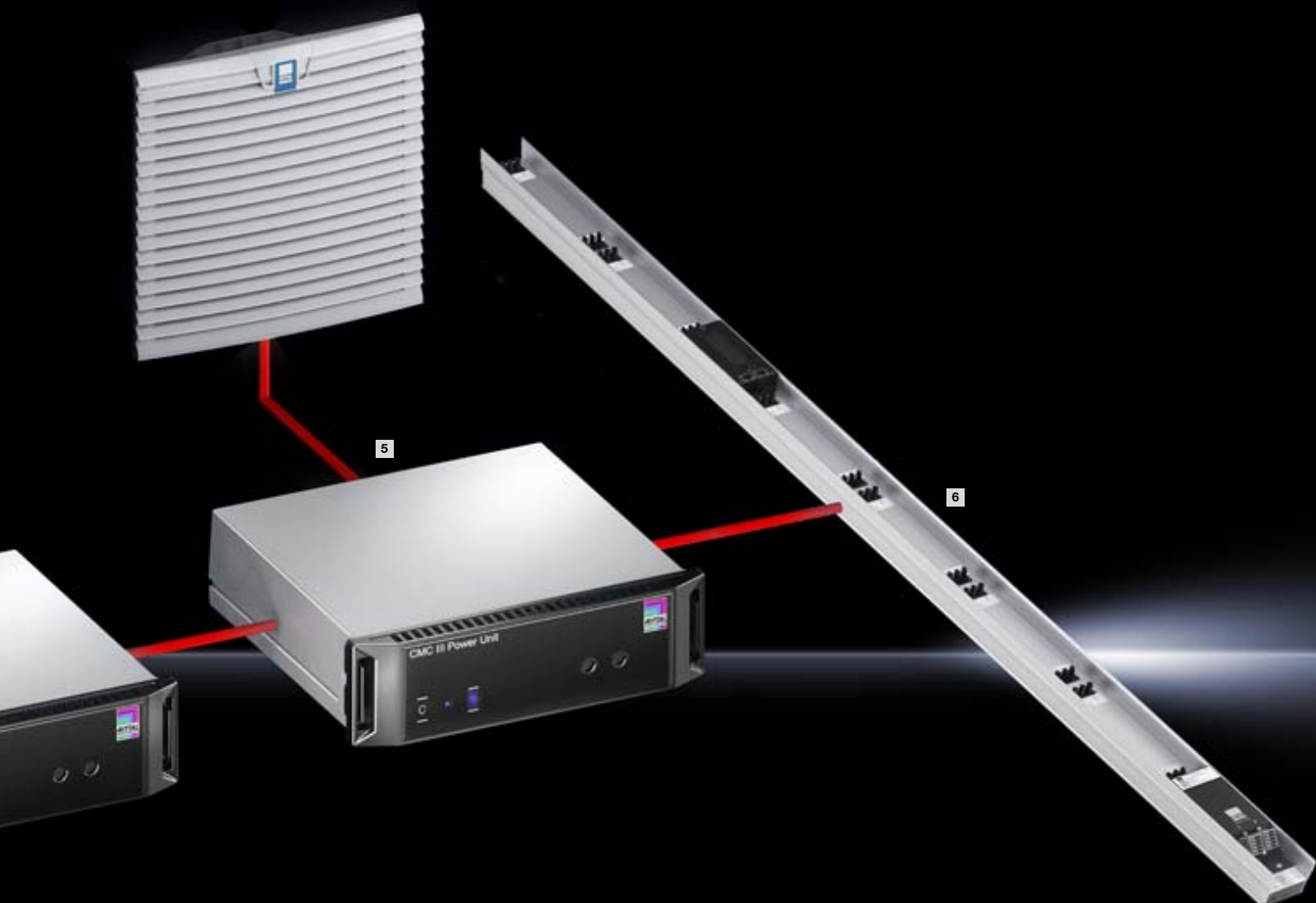


8

10

11





- 1 CMC III Processing Unit**, see page 449
- 2** Power supply
- 3** Redundant power supply
- 4** CMC III I/O unit
- 5** CMC III power unit
- 6** CMC III PSM measuring bar for direct connection
- 7** Up to 16 CAN bus systems may be connected
- 8** CMC III vandalism sensor
- 9** CMC III temperature sensor
- 10** CAN bus sensor for connection of CMC II sensors
- 11** CMC III CAN bus access
- 12** Up to 16 CAN bus systems may be connected

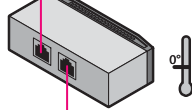
CMC III Processing Unit Compact

System overview

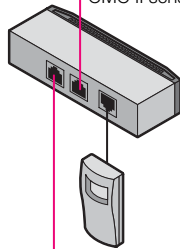


Up to 4 CAN bus components are supported¹⁾

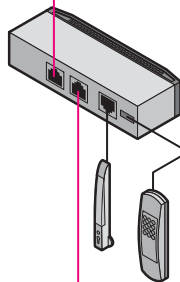
CMC III sensors
for direct connection



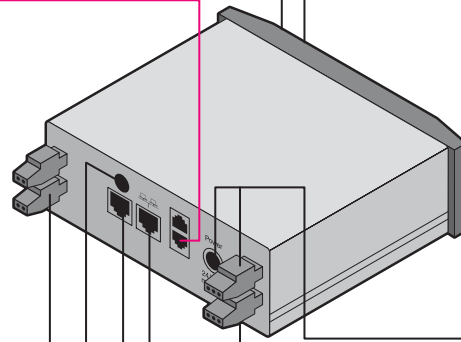
CMC III CAN bus sensor
as adaptor for CMC II sensors



CMC III CAN bus access
with integral IR access sensor



CAN bus 1



CMC III Processing Unit Compact

Mini USB:

Programming cable 7030.080 is required for programming, see page 457

Internal infrared access sensor

Voltage supply 24 V (DC) and Redundant voltage supply 24 V (DC)
Power packs, see page 457

Alarm relay output:
Changeover contact for safety extra-low voltage

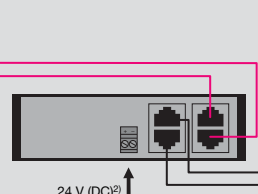
Ethernet 10/100 BaseT RJ 45 with PoE:
Ethernet interface to IEEE 802.3
Over 10/100 BaseT full duplex 10/100 Mbit/s

RJ 12/RS232 accessory modules:
Display unit, ISDN unit, GSM unit

External temperature sensor
(included in the supply of PUC)

Two integral digital inputs

CMC III CAN bus unit



Interfaces unit for connecting CMC II accessories

Connection for other products,
see page 452

²⁾ External 24 V (DC) supply via 7030.060 required

	Model No.
CMC III CAN bus unit	7030.030

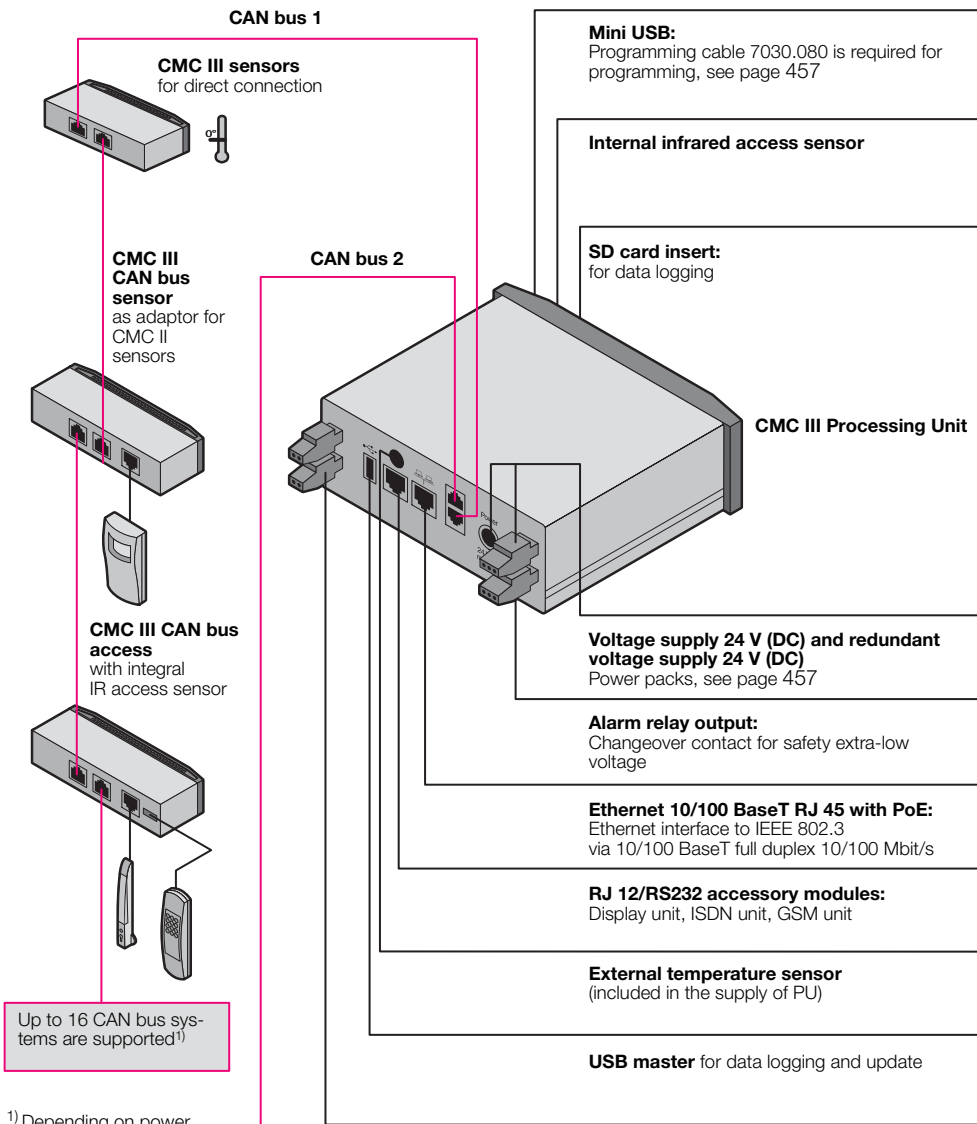
Note:

Server shutdown software for CMC III is required to shut down the server, see page 463

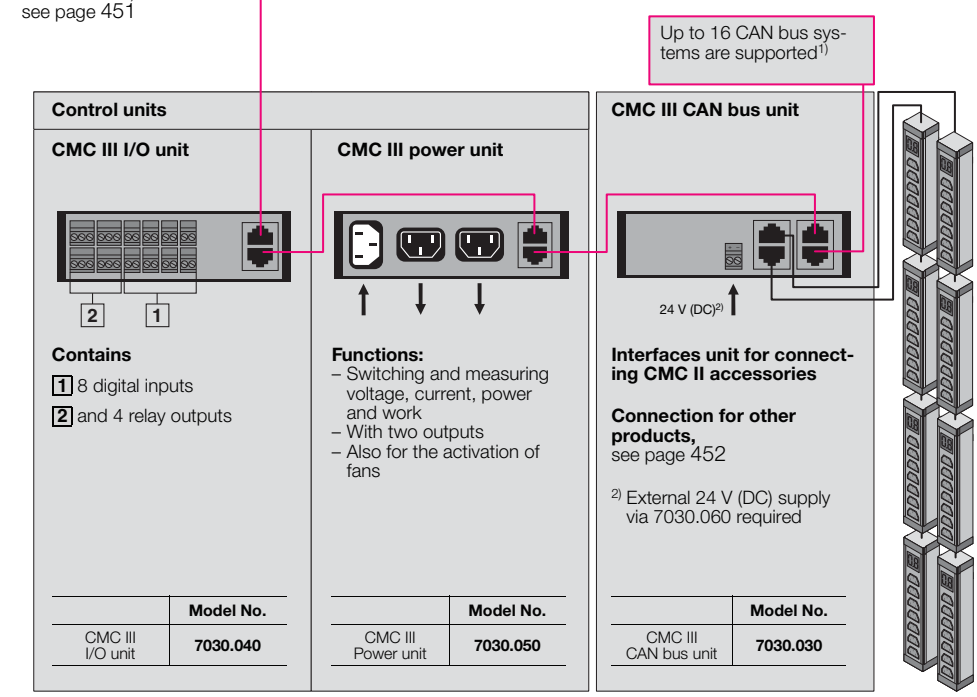
¹⁾ Depending on power supply/ connection combinations, see page 451

CMC III Processing Unit

System overview



¹⁾ Depending on power supply/connection combinations, see page 451



CMC III Processing Unit/Compact



System overview Page 448/449 **Basic modules and connection accessories** Page 451

- Redundant voltage supply, plus Power over Ethernet (PoE)
- Simple wiring with CAN bus connection system (RJ 45)
- Connection to control room systems via OPC UA

Material:

- Plastic

Surface finish:

- Front: Smooth
- Enclosure: Textured

Colour:

- Front: RAL 9005
- Enclosure: RAL 7035

Protection category IP to IEC 60 529:

- IP 30

Supply includes:

- Basic system
- Quick-start instructions
- 4 mounting feet

Approvals:

- cULus

Photo shows a configuration example with equipment not included in the scope of supply

	CMC III Processing Unit	CMC III Processing Unit Compact	
W x H x D mm	138 x 40 (1 U) x 120 + 12 (front assembly)	138 x 40 (1 U) x 120 + 12 (front assembly)	
Operating temperature range	0°C...+45°C	0°C...+45°C	
Operating humidity range	5 – 95 % relative humidity, non-condensing	5 – 95 % relative humidity, non-condensing	
Sensors/CAN bus connection units	max. 32	max. 4	
Max. overall cable length for CAN bus	2 x 50 m	1 x 50 m	
Model No.	7030.000	7030.010	
Interfaces	Network interface (RJ 45)	Ethernet to IEEE 802.3 via 10/100BaseT with PoE	Ethernet to IEEE 802.3 via 10/100BaseT with PoE
	Front USB interface	Mini USB for system setting	Mini USB for system setting
	Rear USB interface	For USB stick for data records and SW updates up to 32 GB	-
	Front SD-HC slot	1 x up to 32 GB for data recording	-
	Rear serial RS232 (RJ 12)	1 x for the connection of display unit, GSM unit or ISDN unit	1 x for the connection of display unit, GSM unit or ISDN unit
	CAN bus (RJ 45)	2 x for max. 16 sensors each = 32 sensors in total (quantity restriction, see page 451 – 453)	1 x for max. 4 sensors (quantity restriction, see page 451 – 453)
Inputs and outputs	Digital inputs (terminal)	2	2
	Relay output (terminal)	Changeover contact max. 24 V (DC), 1 A	Changeover contact max. 24 V (DC), 1 A
Operation/ signals	Push-button	1 x acknowledgement button	1 x acknowledgement button
	Concealed reset button	1 x service button	1 x service button
	Piezo signal generator	1	1
	LED display	1 x multi-colour OK/warning/alarm	1 x multi-colour OK/warning/alarm
Protocols	Ethernet	TCP/IPv4, TCP/IPv6, SNMPv1, SNMPv2c, SNMPv3, Telnet, SSH, FTP, SFTP, HTTP, HTTPS, NTP, DHCP, DNS, SMTP, Syslog, LDAP	TCP/IPv4, TCP/IPv6, SNMPv1, SNMPv2c, SNMPv3, Telnet, SSH, FTP, SFTP, HTTP, HTTPS, NTP, DHCP, DNS, SMTP, Syslog, LDAP
	Redundant power supply	Input 24 V DC (jack)	1 x for connecting CMC III power pack
Functions	Input 24 V DC (terminals)	1 x for direct connection or for connecting CMC III power pack	1 x for direct connection or for connecting CMC III power pack
	Power over Ethernet PoE	1 x 15.4 W	1 x 15.4 W
	Time function	Real-time clock, energy-buffered (24 h) without battery/accumulator, with NTP	Real-time clock, energy-buffered (24 h) without battery/accumulator, with NTP
	User administration	LDAP	LDAP
Integral sensors	User interface	Integral WEB server	Integral WEB server
	Control room connection	Integral OPC UA server	Integral OPC UA server
	Temperature sensor	NTC sensor with cable, supplied loose	NTC sensor with cable, supplied loose
	Access sensor	Infrared technology in the enclosure front	Infrared technology in the enclosure front

Control units for CMC III Processing Unit

	Model No.	PU Compact	PU	Page
		Maximum quantity		
CMC III I/O Unit, 8 digital inputs + 4 relay outputs	7030.040	–	16	454
CMC III Power Unit, 1 input (C14) + 2 outputs (C13) 230 V, 50/60 Hz – For switching 10 A total current (fan/heater etc.) – For measuring current, voltage, power, energy	7030.050	–	16	454

! **Also required:**

- CAN bus connection cable 7030.090/.095, see page 457
- Mounting unit, 1 U, 7030.070, see page 458



CMC III sensors for direct connection

	Model No.	PU Compact	PU	Page
		Maximum quantity		
Temperature sensor with external sensor	7030.110	4	32	454
Temperature/humidity sensor	7030.111	4	32	454
Infrared access sensor	7030.120	4	32	454
Vandalism sensor	7030.130	4	32	454
Analog airflow sensor	7030.140	4	10 ¹⁾	454
Analog differential pressure sensor	7030.150	4	32	454
Universal sensor (2x digital input and 4 – 20 mA)	7030.190	4	32	454

¹⁾ Max. 5 pieces for power supply with PoE

! **Also required:**

- CAN bus connection cable 7030.090/.095, see page 457



Interface for CMC II sensors

	Model No.	PU Compact	PU	Page
		Maximum quantity		
CMC III CAN bus sensor	7030.100	4	32	–
For connecting the following products:				
5 x access sensors (packs of 2), connect a max. of 5 in series	7320.530	■	■	455
1 x smoke detector	7320.560	■	■	455
1 x motion detector	7320.570	■	■	455
1 x leakage sensor	7320.630	■	■	455
1 x leakage sensor, with sensor length 15 m	7320.631	■	■	455
1/3 x fire detector and extinguisher system DET-AC Plus with 3 messages	7338.120	■	■	473
1/3 x early fire detector system DET-AC Plus with 3 messages	7338.220	■	■	473
1/2 x door control system for one rack	7320.790	■	■	460

! **Also required:**

- CAN bus connection cable 7030.090/.095, see page 457



CMC III

Accessories



Access system

The CAN bus access is designed for one door. It has an integral IR access sensor and may be connected to one handle system and one reader unit.

	Model No.	PU Compact	PU	Page
		Maximum quantity		
CMC III CAN bus access	7030.200	2	16 ¹⁾	–
For connection to handle:				
1 x TS 8 handle with master key function	7320.721	2	16 ¹⁾	455
For connection to reader unit:				
1 x CMC III coded lock	7030.220	2	16 ¹⁾	455
1 x CMC III transponder reader	7030.230	2	16 ¹⁾	455

¹⁾ Max. 5 pieces for power supply with PoE



Also required:

- CAN bus connection cable 7030.090/.095, see page 457



Interface for PSM, PCU

The products listed may be connected to the PU/PU Compact via CAN bus unit 7030.030, see page 456.

	Model No.	PU Compact	PU	Page
		Maximum quantity		
CMC III CAN bus unit	7030.030	1	4	456
For connecting the following products:				
2 x 4 x Rittal Power Control Unit (PCU) 8-way	7200.001	■	■	412
2 x 4 x Rittal Power Control Unit (PCU) C13 LED, 8-way	7859.225	■	■	412
2 x 4 x Rittal Power Control Unit (PCU) C13/19 LED, 6-way	7859.235	■	■	412
2 x 4 x PSM socket module C13, 8-way	7856.201	■	■	411
2 x 4 x PSM socket module C13/earthing-pin, 6-way	7856.203	■	■	411
2 x 4 x PSM socket module C13/19, 6-way	7856.204	■	■	411
2 x 4 x PSM socket module C13/earthing-pin LED, 6-way	7859.212	■	■	411
2 x 4 x PSM socket module C13 LED, 8-way	7859.222	■	■	411
2 x 4 x PSM socket module C13/19 LED, 6-way	7859.232	■	■	411



Accessories:

- Power supply unit 7030.060 and connection cable 7200.210, see page 457
- CAN bus connection cable 7030.090/.095, see page 457
- Mounting unit, 1 U, 7030.070, see page 458

Note:

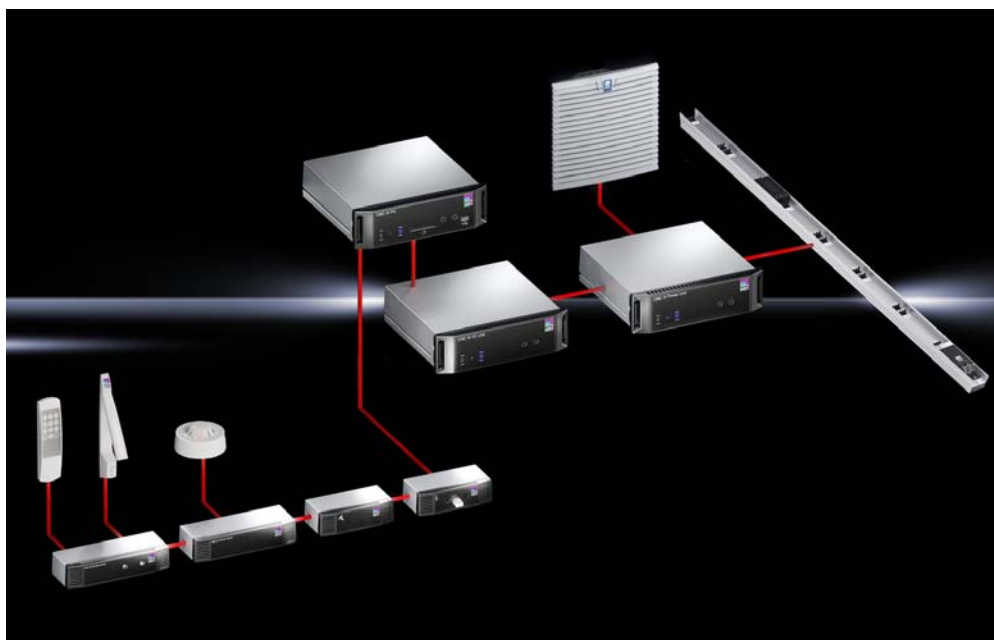
- Allow one power pack 7030.060 for every CMC III CAN bus unit

PSM and slave PDU for direct connection

	Model No.	PU	PU	Page
		Compact	Maximum quantity	
PSM measuring bars 16 A, with 2 infeeds	7859.050	4	8	410
PSM measuring bars 32 A, with 1 infeed	7859.053	4	8	410
PSM MID measuring module 16 A, with 2 infeeds	7859.312	4	8	421
PSM MID measuring module 32 A, with 2 infeeds	7859.332	4	8	421
Slave PDU international, managed, 16 A, 12 x C13	7955.901	3	6	417
Slave PDU international, managed, 16 A, 24 x C13, 4 x C19	7955.910	3	6	417
Slave PDU international, managed, 32 A, 24 x C13, 4 x C19	7955.911	3	6	417
Slave PDU international, managed, 16 A, 18 x C13, 3 x C19	7955.931	3	6	417
Slave PDU international, managed, 16 A, 24 x C13, 6 x C19	7955.932	3	6	417
Slave PDU international, managed, 32 A, 24 x C13, 6 x C19	7955.933	3	6	417
Slave PDU UK, managed, 13 A, 16 x UK	7955.940	3	6	418
Slave PDU UK, managed, 16 A, 16 x UK, 4 x C19	7955.941	3	6	418
Slave PDU UK, managed, 32 A, 16 x UK, 4 x C19	7955.942	3	6	418

Accessories:

- CAN bus connection cable 7030.090/.095, see page 457



CMC III

Accessories

CMC III control units/ CMC III sensors

Material:

- Plastic

Surface finish:

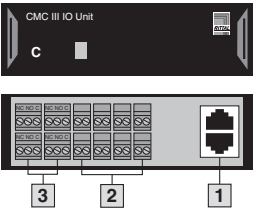
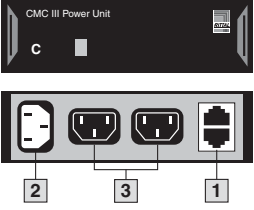






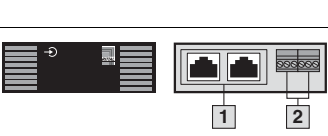
- Front: Smooth
- Enclosure: Textured

Colour:

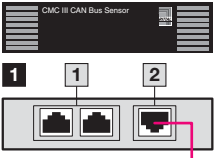
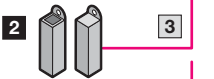
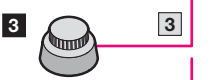
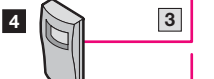

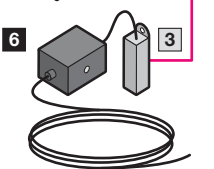
- Front: RAL 9005
- Enclosure: RAL 7035

Protection category IP to IEC 60 529:

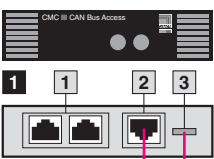
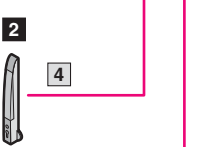
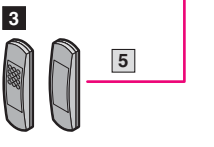
- IP 30

		1	2	3	Model No.
		Connection RJ 45 2 x CAN bus	Inputs	Outputs	
 <p>CMC III IO Unit</p>	<p>Control unit I/O unit</p> <ul style="list-style-type: none"> - Inputs for earth-free signals - Relay output (changeover contact) can handle loads of up to max. 24 V (DC)/1 A 	■	8 x digital	4 x relays	7030.040
 <p>CMC III Power Unit</p>	<p>Control unit, power unit</p> <ul style="list-style-type: none"> - Switches 2 outputs - Measures voltage, current, power, work - For controlling and switching fans, heaters, equipment 	■	1 x voltage C14 110 – 230 V 50/60 Hz	2 x current C13 Aggregate current max. 10 A	7030.050
	<p>Temperature sensor</p> <ul style="list-style-type: none"> - External NTC sensor, 2 m cable - Measurement range for external sensors: -40°C...+80°C 	■	-	-	7030.110
	<p>Temperature/humidity sensor</p> <p>Measurement range: 0°C...+55°C/ 5 % relative humidity ... 95 % relative humidity</p>	■	-	-	7030.111
	<p>Infrared access sensor</p> <p>Monitoring and reflector on the door, spacing adjustable</p>	■	-	-	7030.120
	<p>Vandalism sensor</p> <ul style="list-style-type: none"> - Axis: x, y, z - Acceleration limits: -7 – 7 g, adjustable 	■	-	-	7030.130
	<p>Analog airflow sensor</p> <ul style="list-style-type: none"> - External airflow sensor: 4 – 20 mA - Measurement range: 0.5 – 15 m/s - Application: Fan, filter, climate control devices 	■	-	-	7030.140
	<p>Analog differential pressure sensor</p> <ul style="list-style-type: none"> - 2 pressure measuring points (infeed via hose) - Measurement range: -500 m Pa – +500 m Pa - Application: Cold aisle containment, raised floor 	■	-	-	7030.150
	<p>Universal sensor</p> <p>Choice of digital inputs for an application:</p> <ul style="list-style-type: none"> - Earth-free signals - S₀ Input for energy measurement systems - 1 Wiegand interface (external access systems) 	■	2 x digital may be switched over to pulse input S ₀ or a Wiegand interface 1 x analog 4 – 20 mA	-	7030.190

Interface for CMC II sensors

	[1]	[2]	[3]	Model No.
	Connection RJ 45 2 x CAN bus	Input RJ 12	Output RJ 12	
 <p>1 CAN bus sensor For connecting one CMC II sensor</p>	■	1 x	–	7030.100
 <p>2 CMC II access sensor – Sensor: Reed contact/magnet – Max. 5 reed contacts in series – 2 m cable included with the supply</p>	–	–	1 x	7320.530
 <p>3 CMC II smoke detector Sensor: Visual 2 m cable included with the supply</p>	–	–	1 x	7320.560
 <p>4 CMC II motion detector – Sensor: Infrared – 2 m cable included with the supply</p>	–	–	1 x	7320.570
 <p>5 CMC II leakage sensor – Sensor: Point infrared sensor – 2 m cable included with the supply</p>	–	–	1 x	7320.630
 <p>6 CMC II leakage sensor 15 m – Sensor: 15 sensitive cables – 2 m cable included with the supply</p>	–	–	1 x	7320.631

Access system

	Connection		Inputs		Outputs		Model No.
	[1]	[2]	[3]	[4]	[5]		
	RJ 45 2 x CAN bus	RJ 12	Flat-pin connector	RJ 12	Flat-pin connector		
 <p>1 CAN bus access – For connecting one handle and one reader unit for door monitoring – Integral IR access sensor</p>	■	1 x	1 x	–	–	7030.200	
 <p>2 Handles – TS 8 handle with master key function – Handle monitoring – Rated voltage: 24 V (DC) – 3 m cable, 2 m extension cable included with the supply</p>	–	–	–	1 x	–	7320.721	
 <p>3 CMC III reader units – Coded lock – Transponder reader – Numerical code from 0 – 8 digits may be selected – Transponder technology: Mifare – 3 m cable included with the supply</p>	–	–	–	–	1 x	7030.220 7030.230	

CMC III

Accessories

Interface for PSM, PCU

Material:

- Plastic

Surface finish:

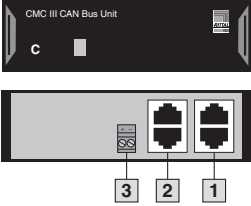
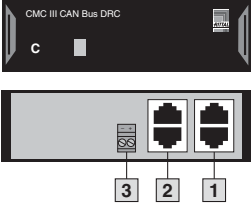
- Front: Smooth
- Enclosure: Textured

Colour:

- Front: RAL 9005
- Enclosure: RAL 7035

Protection category IP to IEC 60 529:

- IP 30

		Connection RJ 45		[3] Inputs	Model No.
		[1] 2 x CAN bus	[2]		
 <p>CMC III CAN Bus Unit</p>	<p>CAN bus unit For connecting:</p> <ul style="list-style-type: none"> - PSM socket strips - PCU 482.6 mm (19") socket strips 	■	2 x for PSM, PCU, see page 452	For operating the required connection clamp for the 24 V power pack 7030.060	7030.030
 <p>CMC III CAN Bus DRC</p>	<p>CAN bus DRC For connecting:</p> <ul style="list-style-type: none"> - RFID controller 7890.500 	■	Max. 1 x RFID controller, see page 462	Connection clamps for the 24 V power pack (optional) 7030.060	7030.550

New



PSM – MID
measuring module

see page 421

Power supply unit

for PU, PU Compact, CAN bus unit, CAN bus DRC, Door Control System.

Technical specifications:

- Input voltage: 100 – 240 V / 50/60 Hz
- Output voltage: 24 V (DC)/2.5 A
- Length of 24 V DC connection cable: 0.6 m

Supply includes:

- 4 mounting feet

Packs of	Model No.
1 pc(s).	7030.060



Also required:

- Connection cable, see page 457



Accessories:

- Mounting unit, see page 458



Programming cable

For commissioning the Processing Unit (PU) or PU Compact.

Supply includes:

- CD with driver and system description

Packs of	Model No.
1 pc(s).	7030.080



CAN bus connection cable

This can be used to connect the PU with the CAN bus sensors III, units III, control units III as a bus. Also for cabling the CAN bus sensors III, units III, control units III together.

CMC III CAN bus connection cable	Length m	Packs of	Model No.
RJ 45	0.5	1 pc(s).	7030.090
RJ 45	1	1 pc(s).	7030.091
RJ 45	1.5	1 pc(s).	7030.092
RJ 45	2	1 pc(s).	7030.093
RJ 45	3	1 pc(s).	7030.480
RJ 45	4	1 pc(s).	7030.490
RJ 45	5	1 pc(s).	7030.094
RJ 45	10	1 pc(s).	7030.095



Connection cable/extension

For connecting to:

- CMC III power pack C13
- CMC III power unit C13
- PCU C19
- PDU C19

Technical specifications:

- PVC cable, 3-pole, with IEC cable coupling (non-heating appliances) with contact protection CEE22
- Length: Minimum 1.8 m

Country Version	Voltage Volt	Packs of	Model No.
D/F/B/C13	230	1 pc(s).	7200.210
Non-heating appliance extension C13/C14	230/115	1 pc(s).	7200.215
Connection cable D/C19	230/115	1 pc(s).	7200.216
Connection cable C19/C20	230/115	1 pc(s).	7200.217



CMC III

Accessories



Extension cable RJ 12

with RJ 12 connector/jack

To extend the cable connections to CMC II sensors.

Length m	Packs of	Model No.
1	2 pc(s).	7320.814



Mounting unit, 1 U

To accommodate

- PU
- PU Compact
- Control units
- CMC III CAN bus unit
- CMC III CAN bus DRC
- CMC III power pack

Can accommodate up to 3 units and is attached to the 482.6 mm (19") frame.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- 2 blanking covers

Packs of	Model No.
1 pc(s).	7030.070



Accessories:

- Cable clamp strap 7610.000, see page 458



Cable clamp strap

For rear attachment on the mounting unit.

Material:

- Sheet steel, 2 mm

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

Packs of	Model No.
1 pc(s).	7610.000



Mounting unit

To accommodate

- PU
- PU Compact
- Control units
- CMC III CAN bus unit
- CMC III CAN bus DRC
- CMC III power pack

Can accommodate one unit and is mounted on the enclosure frame.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Packs of	Model No.
1 pc(s).	7030.071

Door control system

Door control system

- Automation adjustable via CMC
- Manual and automatic door opening
- Automatic opening in case of power failure

Note:

To be connected at rear:

- **Door kit**
2 door kits and 2 door kit extensions for LCP may be connected to one door control module
- **Door comfort handle or door switch**
Up to 2 door comfort handles/door switches may be connected for manual opening
- Automatic door opening is achieved by connecting to the PU/PU Compact. Independently of this, the doors may be opened via the door comfort handle/door switch
- In the event of a power failure, the doors will also open
- Door kit extension for LCP must be backed up with a UPS
- The front and rear door must always be opened



Also required:

- CMC III processing unit/compact, see page 450
- CAN bus sensor, see page 451



System diagram

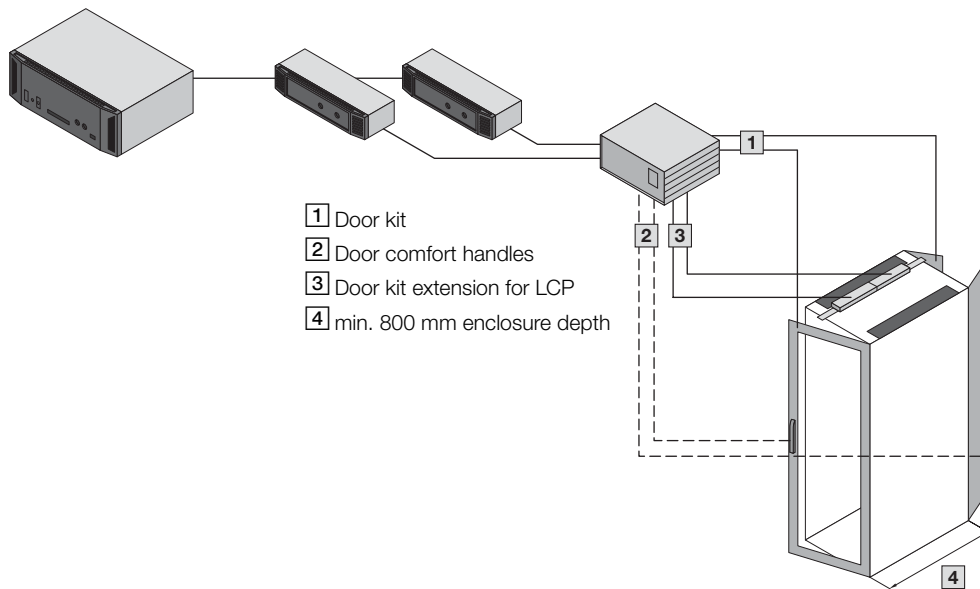
Door control system:

- A maximum of 16 door control systems per Processing Unit
- A maximum of 2 door control systems may be connected per Processing Unit Compact

CMC III
- Processing Unit
- Processing Unit Compact

CAN bus sensor

Door control module



Door control system

Accessories



Door control module

To activate up to 2 door kits and 2 door kit extensions for LCP. There is 1 control channel available per 2 door kits (magnets/spindle motor). There is optionally a normally-closed contact integrated for each door output, which is used to connect the automatic door switch, door comfort handle or a customer-specific system (e.g. room extinguisher system).

Technical specifications:

- W x H x D mm: 136 x 44 (1 U) x 129

Model No.	7320.790
Packs of	1 pc(s).
Rated voltage	24 V (DC)
Outputs door kit/ door kit extension for LCP	2 x 24 V (DC)
Ports for CMC III CAN bus sensor	2 x RJ 12
Normally closed contacts	Connection must be designed for 30 V (DC)/1 A
Operating temperature range	+5°C...+45°C
Operating humidity range	5 – 95% relative humidity, non-condensing
Protection category IP to IEC 60 529	IP 40



Also required:

- Power supply unit 230 V, 2 pc(s), see page 457
- Connection cable, 2 pc(s), see page 457
- CAN bus sensor 7030.100, 2 pc(s), see page 451



Door kit

for TS IT

To open the door in an emergency situation. Connection and activation via door control module.

- For standard door TS IT.
With gas pressure damper system. The doors are held closed by a magnet system.
- For climate control applications with Liquid Cooling Package (LCP).
With spindle motor. Due to high negative pressures, a spindle motor for every door is attached to the TS IT roof plate.



Also required:

- For 7030.250: Tubular door frame, see page 549

Version	Packs of	Model No.
TS IT, 1-piece door	1 pc(s).	7030.240
TS IT, 2-piece door	1 pc(s).	7030.250
TS IT, extension for LCP	2 pc(s).	7030.260

Supply includes:

Door kit TS IT:

- Gas pressure damper
- Cable harness
- Magnetic lock
- Assembly parts

Door kit extension for LCP

- Spindle motor
- Assembly parts



Door comfort handle

with door opener function

By actuating the lock mechanism, the door is released via the automatic door opening system. Prepared for the installation of standard commercially available semi-cylinders, 40 mm, and SZ lock and push-button inserts.
Length: 302 mm.

Technical specifications:

- Rated voltage: 24 V (DC)
- Rated current: max. 3 A
- Connection cable: Length 3 m
- Operating temperature range: +5°C...+40°C

Colour:

- RAL 7035

Packs of	Model No.
1 pc(s).	7320.794



Also required:

- Handle adaptor for mounting on glazed door 8611.080, see page 549



Accessories:

- Lock and push-button inserts, see page 565



Door switch

Switch with normally-closed contact for door control module 7320.790, for manual door opening. It is mounted on the 25 mm pitch pattern of the TS IT frame section.

Technical specifications:

- Installation: Ø 16.2 mm
- 250 V/2 A

Packs of	Model No.
1 pc(s).	7320.793

Supply includes:

- 3 m connection cable
- Mounting bracket
- Assembly parts

Monitor/keyboard unit

Accessories

Monitor/keyboard unit, 1 U with 17" TFT display and VGA/DVI connection

Benefits:

- With digital and analog interfaces, VGA, DVI-D, PS/2, USB
- Simple, one-man installation
- Optionally with integrated KVM switch for up to 8 servers

Technical design:

- 432 mm/17" TFT display
- Physical resolution: 1280 x 1024
- Format: 4 : 3
- Colours: 16.7 million
- Brightness: approx. 350 cd/m² (typ.)
- Contrast ratio: approx. 1000 : 1
- Mains voltage: 100 – 240 V/50 – 60 Hz
- Ambient temperature: +5°C...+45°C (operation)
- Max. power consumption in operation, without optional KVM system: 32 W
- Max. power consumption with closed monitor unit, without optional KVM system: < 1 W
- Rear connections:
Mains voltage, VGA, DVI, PS/2, USB,
power supply for KVM
- Lockable at the front
- Cables are safely routed in the energy chain



Accessories:

- For monitoring several servers:
KVM switch, see page 461



Width	Height U	Depth mm	Installation depth mm	Packs of	Colour	Keyboard	Model No.
482.6 mm/ 19"	1	680	680 – 850	1 pc(s).	RAL 7035	German	9055.310
						English	9055.312
					RAL 9005	German	9055.410
						English	9055.412

KVM switch

SSC view 8 USB

For rear attachment on the monitor/keyboard unit. The SSC view 8 USB may be operated with up to 8 servers. It is operated via the monitor/keyboard unit with an OSD menu or hotkeys.

Technical specifications:

- Server/console connections
Video: VGA/HD15
Keyboard/mouse: PS/2 or USB
- Max. video resolution: 1280 x 1024 at 85 Hz
- Bandwidth: 200 MHz
- Power consumption: 10 W
- W x H x D: 482.6 x 44 x 140 mm
- Voltage supply: 12 V (DC) via monitor/keyboard unit

Protection category IP to IEC 60 529:

- IP 20

Colour:

- RAL 9006

	Packs of	Model No.
SSC view 8 USB	1 pc(s).	7552.002

Connection cable for server/VGA	Length m	Packs of	Model No.
PS/2	2	1 pc(s).	7552.120
PS/2	4	1 pc(s).	7552.140
USB	2	1 pc(s).	7552.122
USB	5	1 pc(s).	7552.142



Also required:

- Monitor/keyboard unit, see page 461



Dynamic Rack Control

Accessories



RFID aerial

for TS IT

For insertion into the 482.6 mm (19') section of the TS IT.

Position detection of the components is accurate to within 1/3 U, therefore there are 3 aerial elements and signalling LEDs integrated into each U. Reading and writing of the RFID tags is likewise signalled by one LED in each case.

Supply includes:

- Assembly parts

U	Packs of	Model No.
42	1 pc(s).	7890.242
47	1 pc(s).	7890.247



Also required:

- RFID controller 7890.500, see page 462
- RFID tags 7890.020, see page 462



RFID tags

1 RFID tag is required for each component. Each tag has a "Unique ID" (UID, not sequential), which cannot be altered; all other data is stored on the tag in conformity with ISO 15693. The tag is stuck to the inside right of the 482.6 mm (19') mounting bracket using its adhesive surface. The component is later screw-fastened to the 482.6 mm (19') level, including the tag.

Technical specifications:

- Type: passive, writable
- Frequency: 13.56 MHz

Packs of	Model No.
20 pc(s).	7890.020



RFID controller

Connects the RFID aerial to the CAN bus DRC. In this way, the CMC is able to notify automatic changes, graphically depict the enclosure with the built-in components, and list capacity management. One RFID controller is required per rack/aerial.

Connections:

- RJ 45 jack for a maximum of one CAN bus DRC
- Mini-DIN for a maximum of one RFID aerial

Supply includes:

- Nylon loop tapes for attachment

Packs of	Model No.
1 pc(s).	7890.500



Also required:

- CAN bus cable, see page 457
- CMC III, CAN bus DRC, see page 462
- Attachment



CMC III CAN bus DRC

For connecting an RFID controller 7890.500 to the PU/PU Compact.

4 CAN bus DRCs may be connected to the processing unit, or 2 to the processing unit compact.

Packs of	Model No.
1 pc(s).	7030.550



Also required:

- CAN bus connection cable, see page 457
- Mounting unit, 1 U, 7030.070, see page 458

IT management software

RiZone Appliance Standard

RiZone is supplied as a hardware or software appliance.

As a hardware appliance, RiZone is supplied with global support, installed on a powerful 1 U server. The software appliance is available as a virtual server which can easily be used on existing hardware in the data centre.

Note:

- Both appliances support communication with Rittal devices and devices from third-party manufacturers via an integral MIB browser



Also required:

- RiZone Appliance IP node licence according to the number of IP nodes available.

Standard version	Model No.		
Hardware appliance ¹⁾	Server with Windows	RiZone software	RiZone graphics tool
	7990.101	7990.201	7990.301
Software appliance ¹⁾	Hard drive + Windows	RiZone software	RiZone graphics tool
	7990.103	7990.203	7990.303

¹⁾ All Model Nos. on the same line belong together, and must always be ordered together



RiZone Appliance IP node licence

The flexible RiZone licence model allows optimum adaptation to any project size, while at the same time allowing the opportunity to grow with the data centre.

The volume licences for the IP nodes are graduated from 25 to 100 nodes and may be adapted precisely to the size of the data centre. For each active component or other SNMP-compatible component to be covered, one node licence is required.

For number of IP nodes ¹⁾	Console licences included	Model No.	
		RiZone software	RiZone graphics tool
25	4	7990.206	7990.306
100	8	7990.208	7990.308

¹⁾ All Model Nos. on the same line belong together, and must always be ordered together



Server shutdown software for CMC III

Client software to control the server shutdown via CMC III. The software supports all common operating systems and versions (e.g. Windows 7, VISTA, XP, Server 2003/2008, UNIX/LINUX and VMWARE Sphere/ESX Server, CITRIX XEN etc). One licence is required for each server to be shut down on an event-controlled basis.

Licences	Model No.
Single licence	7857.421

Note:

- Software updates and a complete list of currently supported operating systems may be found at www.rittal.com



Rittal – The System.

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1

2

IT security solutions

Micro Data Centre

Level E	466
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Outdoor split cooling solution with inverter technology	471

Data Centre Container

Data Centre Container DCC	472
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Fire alarm and extinguisher system

Fire alarm and extinguisher system DET-AC/EFD Plus	473
--	-----

Security rooms

Security rooms	474
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Your benefits

- Simple, flexible integration into existing building structures
- Extendible for permanent cost-effectiveness and future-proofing
- Optimum space utilisation, due to the flexible modular system
- System-tested protection from potential physical threats
- Compatible with cross-plant IT infrastructures



Sample applications

- 1 Micro Data Centre, Level E with climate control, see page 466
- 2 Micro Data Centre, Level A, see page 468
- 3 Micro Data Centre, Level B as compact data centre, see page 467

Micro Data Centre



System accessories Page 507

Applications:

- A high level of protection against potential physical threats for IT
- Targeted configuration components complete it to a Micro Data Centre

Benefits:

- As well as facilitating installation in poorly accessible sites, the modular design also makes it possible to retrospectively enclose existing IT structures
- Extensibility, dismantling and re-assembly mean targeted, future-safe investments
- Tested security – testing has been carried out by accredited institutes and confirmed with test reports

Protection standards:

- Fire protection category F 90 to DIN 4102 Part 2
- Compliance with limits $\Delta T < 50$ K, rel. humidity $< 85\%$, over 30 minutes
- Burglar resistance WK II, III and IV, tool attack analogous to DIN V ENV 1630/1999-04/ WK II
- Smoke protection based on DIN 18 095-2: 1991-03

Material:

- Sheet steel, coated

Colour:

- Enclosure and service door: RAL 7035
- Operator door: RAL 9005

Protection category IP to IEC 60 529:

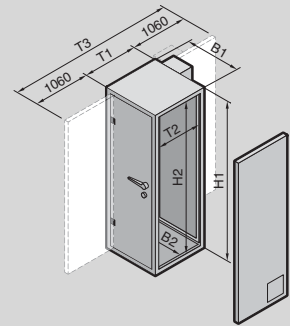
- IP 56

Supply includes:

- Micro Data Centre with operator door and service door
- Cable entry in both side elements
- Both doors with key lock

Optional:

- Choice of door hinges
- Bifold doors
- Different cable entry systems
- Cable entry additionally in the top or base unit
- Different lock variants
- Supporting structure



Note:

- The Micro Data Centre is configured on a project-specific basis

Technical details:

Available on the Internet

Level E

Units U		42	47	42	47	Page
External dimensions mm	Width (B1)	1100	1100	1100	1100	
	Height (H1)	2210	2410	2210	2410	
	Depth (T1)	1200	1200	1400	1400	
	Depth (T3)	3320	3320	3520	3520	
Internal dimensions mm	Width (B2)	920	920	920	920	
	Height (H2)	2030	2230	2030	2230	
	Depth (T2)	1000	1000	1200	1200	
Model No.		7999.009	7999.009	7999.009	7999.009	
Empty weight excluding cooling unit and excluding rack approx. kg		660	700	730	800	
Accessories						
Network/server enclosures TS IT		see page	see page	see page	see page	86
Fire alarm and extinguisher system DET-AC/EFD Plus		see page	see page	see page	see page	473
CMC monitoring system		see page	see page	see page	see page	446
PSM – Power System Module busbar		see page	see page	see page	see page	409
PDU – Power Distribution Unit		see page	see page	see page	see page	416
Climate control for micro data centre		from page	from page	from page	from page	469
LCP – Liquid Cooling Package, rack depth 1000 mm		see page	see page	see page	see page	428

Standard protection from:



Fire



Extinguishing water



Corrosive gases



Vandalism



Unauthorised access



Dust



Theft/burglary



System accessories Page 507

Applications:

- Basic protection against potential physical threats for IT components. Targeted configuration components complete it to a Micro Data Centre

Benefits:

- Modular layout for installation in hard-to-access locations
- Lower weight than the Level E
- Tested security – testing has been carried out by accredited institutes and confirmed with test reports

Protection standards:

- Fire protection – fire resistance class EI 90/F 90 to DIN EN 1363-1: 1999 based on DIN 4102-2: 1977
- Burglar resistance RC 2, tool attack analogous to DIN EN 1630/2011-09/RC 2
- Smoke protection based on DIN EN 18 1634-3: 2005-01

Material:

- Sheet steel, coated

Colour:

- Enclosure and rear door: RAL 7035
- Operator door: RAL 9005

Protection category IP to IEC 60 529:

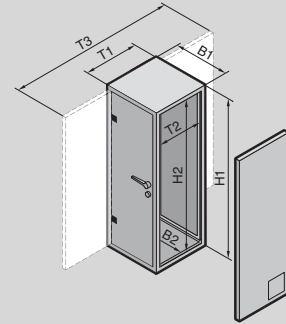
- IP 56

Supply includes:

- Micro Data Centre with integral TS 8 frame
- Front and rear 482.6 mm (19) level
- Adjusted air baffle plates
- Every side element is prepared for one cable entry at the bottom and one cable entry at the top
- Operator and service door with swing-lever handle and semi-cylinder

Optional:

- Choice of door hinges
- Bifold doors
- Different cable entry systems
- Cable entry additionally in the top and base element
- Different lock variants
- Supporting structure with fire protection



Note:

- The Micro Data Centre is configured on a project-specific basis

Technical details:

Available on the Internet

Level B

Units U		42	47	42	47	Page
External dimensions mm	Width (B1)	1115	1115	1115	1115	
	Height (H1)	2205	2405	2205	2405	
	Depth (T1)	1377	1377	1577	1577	
	Depth (T3)	3274	3274	3474	3474	
Internal dimensions mm	Width (B2)	905	905	905	905	
	Height (H2)	2000	2200	2000	2200	
	Depth (T2)	1060	1060	1260	1260	
Model No.		7999.709	7999.709	7999.709	7999.709	
Empty weight excluding cooling unit approx. kg		595	630	660	700	
Accessories						
Fire alarm and extinguisher system DET-AC/EFD Plus		see page	see page	see page	see page	473
CMC monitoring system		see page	see page	see page	see page	446
PSM – Power System Module busbar		see page	see page	see page	see page	409
PDU – Power Distribution Unit		see page	see page	see page	see page	416
Climate control for micro data centre		from page	from page	from page	from page	469
LCP – Liquid Cooling Package, rack depth 1000 mm		see page	see page	see page	see page	428

Standard protection from:



Fire



Extinguishing water



Corrosive gases



Vandalism



Unauthorised access



Dust



Theft/burglary

Micro Data Centre



System accessories Page 507

Applications:

- Protection for server and storage applications
- Protection for business-critical data
- Storage of personal data, e.g. doctors' surgeries or tax advisors

Benefits:

- Complete system with built-in cooling and 482.6 mm (19") rack
- High level of operational and service-friendliness thanks to the two-door system
- Compatibility with other infrastructure elements
- Tested security – testing has been carried out by accredited institutes and confirmed with test reports

Protection standards:

- Fire protection category F 90 to DIN 4102 Part 2, compliance with limits $\Delta T < 50$ K, rel. humidity < 85 % over 10 minutes
- Burglar protection WK II, tool attack analogous to DIN V ENV 1630/1999-04/WK II

Material:

- Sheet steel, coated

Colour:

- Enclosure and service door: RAL 7035
- Operator door: RAL 9005

Protection category IP to IEC 60 529:

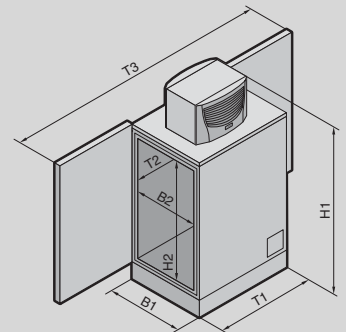
- IP 55

Supply includes:

- Security enclosure with operating and service doors (three-point locking)
- Cable entry in both side elements
- Cooling 2.4 kW designed as a split unit

Technical details:

Available on the Internet



Level A

Units U		15	Page
Cooling output W		2400	
External dimensions mm	Width (B1)	806	
	Height (H1)	1699	
	Depth (T1)	1270	
	Depth (T3)	2746	
Internal dimensions mm	Width (B2)	620	
	Height (H2)	827	
	Depth (T2)	1024	
Weight excluding internal fittings, including climate control unit approx. kg		360	
Model No. Micro data centre with built-in 482.6 mm (19") rack		7999.999	
Model No. Micro data centre without built-in 482.6 mm (19") rack		7999.898	
Accessories			
482.6 mm (19") rack, 15 U, depth 1000 mm		7995.992	
Fire alarm and extinguisher system DET-AC/EFD Plus		see page	473
CMC monitoring system		see page	446
PDU – Power Distribution Unit		see page	416

Standard protection from:



Fire



Extinguishing water



Vandalism



Unauthorised access



Dust

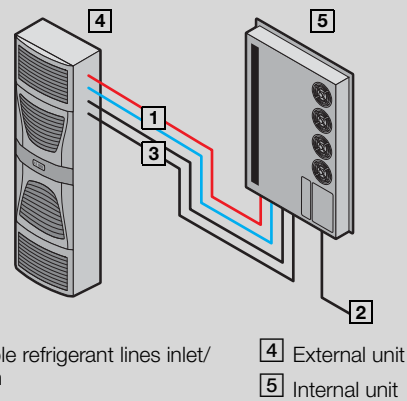


Theft/burglary



System accessories Page 507 Micro Data Centre Page 466/467

- Separate, hermetically sealed internal and external circuits
 - Dust and flue gases are unable to ingress
 - The internal and external unit are connected to one another via refrigerant lines and control cables and shielded for fire protection
 - Air routing in the Micro Data Centre is horizontal. Modified air baffle plates ensure targeted air routing. By separating the "cold side" from the "hot side", air short-circuits are avoided, and the efficiency of cooling is enhanced.
 - Suitable for use in rooms with climate control in the building or adequate ventilation, and low or no noise level requirements. The evaporator coil is fastened to the side panel on the inside of the Micro Data Centre, and the external device on the service door.
- Colour:**
– RAL 7035
- Protection category IP to IEC 60 529:**
– External circuit IP 54
– Internal circuit IP 24
- Supply includes:**
– Internal unit
– External unit
– Refrigerant lines
– Data and supply lines



- 1 Flexible refrigerant lines inlet/return
- 2 Power supply
- 3 Data cable
- 4 External unit
- 5 Internal unit

Compact split cooling solution

Model No.		3126.230	3126.240
Rated operating voltage V, ~, Hz		400/460, 3~, 50/60	400/460, 3~, 50/60
External unit	Width mm	500	500
	Height mm	1580	1580
	Depth mm	231	231
Internal unit	Width mm	804	804
	Height mm	1544	1544
	Depth mm	100	100
Cooling output 50/60 Hz L35 L35 W		2500/3090	4000/4010
Cooling output 50/60 Hz L35 L50 W		2070/2300	3020/3250
Rated max. current A		3.3/3.5	4.1/4.8
Start-up current A		14.2/14.7	15.2/15.8
Pre-fuse A		6.3 – 10.0	6.3 – 10.0
Motor circuit-breaker		■	■
Power consumption P _{el} 50/60 Hz L35 L35 W		1275/1615	1620/2125
Power consumption P _{el} 50/60 Hz L35 L50 W		1525/1920	1825/2835
Refrigeration factor ε = Q _k /P _{el} L35 L35		2.0	2.5
Refrigerant g		R134a, 1500	R134a, 2900
Permissible operating pressure (p. max.) bar		28	25
Temperature range		+20°C...+55°C	+20°C...+55°C
Setting range		+20°C...+55°C	+20°C...+55°C
Noise level dB (A)		< 70	< 72
Weight kg	External unit	65	65
	Internal unit	70	70
Temperature control		Comfort controller (factory setting +25°C)	

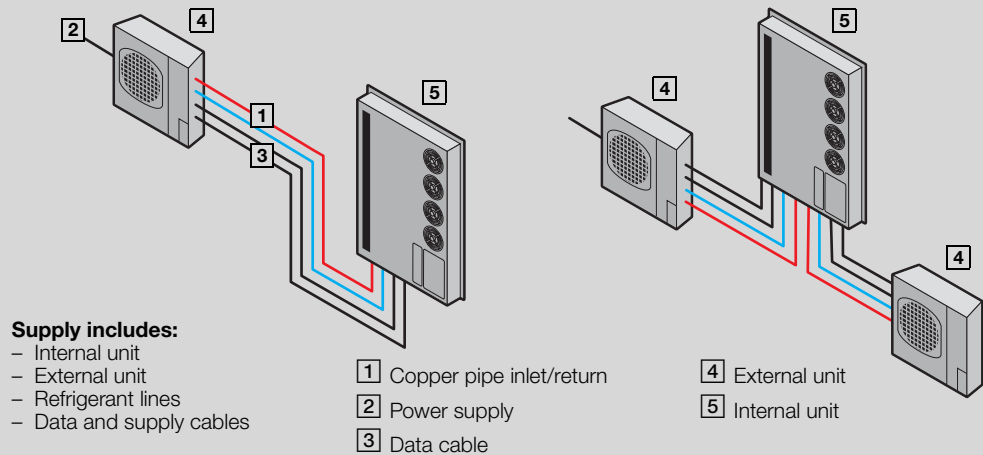
Micro Data Centre



System accessories Page 507 Micro Data Centre Page 466/467

- The internal circuit of the cooling unit is secured to the side panel inside the Micro Data Centre. The external unit is positioned outside of the building. The internal and external units are connected to one another via refrigerant lines and control cables.
- The hot air from the servers is drawn in at the rear, and the cooled air is expelled in front of the 482.6 mm (19") level. The waste heat is routed directly to the outside. As a result, room ventilation or air-conditioning is not necessary.

Colour:
- RAL 7035



Outdoor split cooling solution

Model No.	7999.963	7999.965	7999.964	7999.966
Redundancy	-	-	■	■
Rated operating voltage V, ~, Hz	230, 50, 1~	400, 50, 3~	230, 50, 1~ (2 x)	400, 50, 3~ (2 x)
External unit	Width mm	795	900	795
	Height mm	610	680	610
	Depth mm	290	340	260
Internal unit	Width mm	1020	1020	1020
	Height mm	1500	1500	1500
	Depth mm	100	100	100
Cooling output 50/60 Hz L35 L35 W	2400	5000	2400	5000
Rated current per unit, max. A	3.8	4.1	3.8	4.1
Start-up current per unit A	19.5	35	19.5	35
Pre-fuse A	16	3 x 16	16 (2 x)	3 x 16 (2 x)
Refrigerant	R410a	R410a	R410a	R410a
Temperature range	-15°C...+35°C	-15°C...+35°C	-15°C...+35°C	-15°C...+35°C
Weight kg	External unit	38	74	2 x 38
	Internal unit	59	59	63

Accessories	7999.961	-	7999.961	-
Refrigerant line incl. electric control cable for 2400 W, length 20 m	7999.961	-	7999.961	-
Refrigerant line incl. electric control cable for 5000 W, length 20 m	-	7999.962	-	7999.962



System accessories Page 507 **Micro Data Centre** Page 466/467

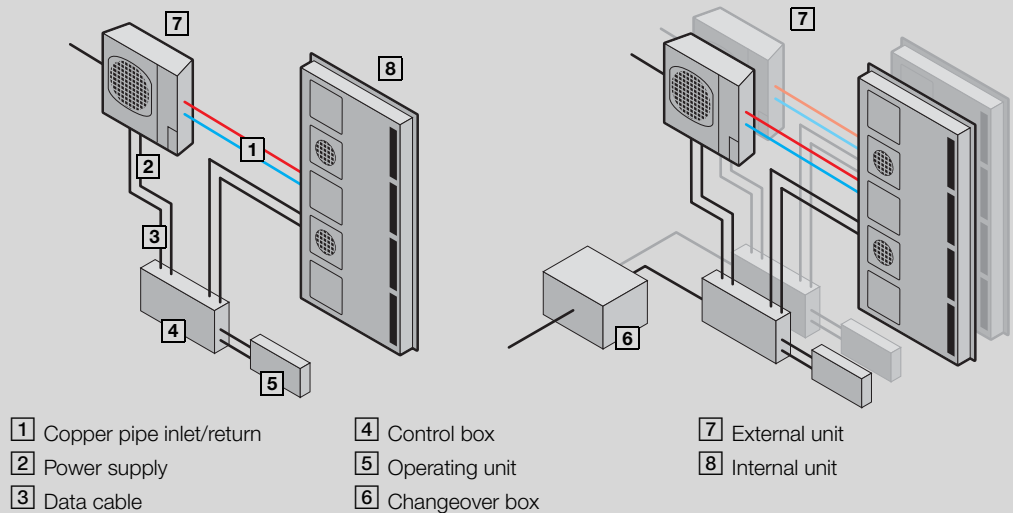
- Demand-based speed control of the compressor. The refrigerant volume is regulated via the electronic expansion valve.
- Energy savings of up to 40%. The cold air is expelled in front of the 482.6 mm (19") level by the internal unit (evaporator coil), while the hot air is drawn in at the rear.

Colour:

– RAL 7035

Supply includes:

- Internal unit
- External unit
- Refrigerant lines
- Data and supply cables



Split outdoor cooling solution with inverter technology

Model No.		7999.991	7999.992
Redundancy		–	■
Rated operating voltage V, ~, Hz		230, 50, 1~	230, 50, 1~ (2 x)
External unit	Width mm	900	900
	Height mm	795	795
	Depth mm	320	320 (2 x)
Internal unit	Width mm	804	804
	Height mm	1544	1544
	Depth mm	100	100
Cooling output 50 Hz L18¹⁾ L35 W		7850	7850
Cooling output 50 Hz L18 L43 W		7030	7030
Rated max. current A		13.9	13.9 (2 x)
Start-up current A		36	36 (2 x)
Pre-fuse A		25	25 (2 x)
Refrigerant		R410a	R410a
Temperature range		-15°C...+43°C	-15°C...+43°C
Noise level dB (A)		48...49	48...49
Weight kg	External unit	63	63 (2 x)
	Internal unit	70	70 (2 x)
Also required			
Heat exchanger (evaporator coil)		3126.270	3126.270²⁾

¹⁾ Server inlet temperature

²⁾ 2 heat exchangers are required

Data Centre Container



System accessories Page 507

Fire protection:

- Fire protection, internal panels: F30, optionally F90 based on DIN 4102/EN1363, component-tested

Duct system:

- Type: Hard duct DN200
- Dimensions of packing space: 120 x 120 mm
- Protected cable/tube entries

Raised floor:

- Optimised load distribution
- Equipped with cable/tube routing
- Variable ventilation panels with DFC

Climate control:

- Customised climate control variants
- Targeted cooling via aisle containment
- Energy-efficient DFC cooling (direct free cooling), with no additional external units
- Powerful LCP cooling (liquid cooling package), with minimal space requirements

Power distribution:

- Infeed: CEE connector 125 A, 3-phase/N/PE, 400 V/50 Hz
- Busbar system for rack-based power distribution

Customised solutions:

- Interlinked containers, other climate control variants

Optional:

- Up to seven TS IT racks with power supply
- Fire alarm/extinguisher system (Novec 1230)
- Access systems, access door (keyboard, code card)
- Monitoring and management (CMC, RiZone) for monitoring alarm, maintenance messages and customer-specific parameters

Note:

- Standard range of models with pre-configured data centre types
- The Data Centre Container is configured on a project-specific basis

Technical details:

Available on the Internet

Photo shows a configuration example with equipment not included in the scope of supply

Type	1	2	3	4	5	6	7	8	9
Width mm	3000								
Height mm	3250								
Depth mm	6058	8000	10000	11500	6058	8000	10000	11500	9500
Useful area m ²	15.2	20.4	25.7	29.7	15.2	20.4	25.7	29.7	20.4
Model No.	7857.998								
Climate control, Direct Free Cooling/Liquid Cooling Packages	DFC	DFC	DFC	DFC	LCP	LCP	LCP	LCP	LCP
Max. cooling output kW	20	20	50	50	20	40	80	100	40
Redundancy cooling	n+1	n+1	n+1	n+1	n+1	n+1	n+1	n+1	n+1
Heavy-duty raised floor	■	■	■	■	■	■	■	■	■
Plug-and-play power distribution	■	■	■	■	■	■	■	■	■
Hard ducts DN200	3	3	4	4	4	5	5	5	5
Security door, resistance class 2	■	■	■	■	■	■	■	■	■
Optional fittings									
DET-AC XL fire alarm/extinguisher system	■	■	■	■	□	□	□	□	□
UPS (uninterruptible power supply)	□	□	□	□	□	□	□	□	□
Max. no. of racks 42 U (600 mm wide) without UPS	6	9	10	12	6	8	11	13	8
Max. no. of racks 42 U (800 mm wide) without UPS	4	6	7	9	4	6	8	9	6
Higher racks (47 U)	□	□	□	□	□	□	□	□	□
Rack power supply	□	□	□	□	□	□	□	□	□
Monitoring package (CMC III)	□	□	□	□	□	□	□	□	□
RiZone package	□	□	□	□	□	□	□	□	□
Security door, resistance class 3	□	□	□	□	□	□	□	□	□
Additional hard ducts for cable/pipe entry	□	□	□	□	□	□	□	□	□
Metal sun shade	□	□	□	□	□	□	□	□	□

■ Standard □ Option

Fire alarm and extinguisher system DET-AC/EFD Plus



System accessories Page 507 Network/server enclosures Page 90

Benefits:

- Early fire detection
- Automatic extinguishing
 - Innovative extinguisher gas NOVEC 1230
 - Eco-friendly
 - Uncritical for IT components
- 482.6 mm (19") rack mount with just 1 U

Colour:

- RAL 7035

DET-AC Plus

Compact fire alarm and active extinguisher system with smoke extraction system, built into one height unit. The detection system is identical to that used in the EFD Plus system. Fire extinguishing with the extinguisher gas NOVEC 1230 is automatically activated when a main alarm is triggered. With the extinguisher gas supply provided, a volume of up to 3 m³ can be extinguished. The collective fault signal and the alarms may be forwarded to the CMC.

DET-AC Plus slave

In conjunction with the DET-AC Plus slave system, up to five bayed enclosures may be extinguished. In addition to the DET-AC Plus unit, each additional enclosure requires a DET-AC Plus slave unit, which contains the extinguisher gas for one enclosure. The pipework from the DET-AC Plus system is laid in all enclosures to facilitate detection.

EFD Plus

Compact early fire detection system with active smoke extraction system.

The integral fan continuously extracts the air from the enclosure, and passes it over two smoke detectors. The first smoke detector is extremely sensitive and triggers a pre-alarm. The second smoke detector triggers the main alarm.

Photo shows a configuration example with equipment not included in the scope of supply.

	Fire alarm and extinguisher system DET-AC Plus	Additional unit DET-AC Plus slave	Early fire detection system EFD Plus	
Width mm	482.6 (19" rack mount)	482.6 (19" rack mount)	482.6 (19" rack mount)	
Height mm	44 (1 U)	44 (1 U)	44 (1 U)	
Depth mm	640	570	500	
Weight, approx. kg	15	12	8	
Model No.	7338.120	7338.320	7338.220	
Protection category IP to IEC 60 529	IP 20	IP 20	IP 20	
Ambient temperature (operation)	+10°C...+35°C	+10°C...+35°C	+10°C...+35°C	
Battery storage	-15°C...+40°C	-15°C...+40°C	-15°C...+40°C	
Rated operating voltage V, ~, Hz	100/240, 1~, 50/60	24 (DC)	100/240, 1~, 50/60	
Uninterruptible mains electricity operation	2 x 12 V; 2.2 A/approx. 4 h	2 x 12 V; 2.2 A/approx. 4 h	2 x 12 V; 2.2 A/approx. 4 h	
Connections	3 x RJ 12, alternatively 3 x relays, max. 24 V DC/0.5 A	3 x RJ 12, alternatively 3 x relays, max. 24 V DC/0.5 A	3 x RJ 12, alternatively 3 x relays, max. 24 V DC/0.5 A	
Sensors	2 different scattered-light sensors	–	2 different scattered-light sensors	
Display	LCD display with plain text information	–	LCD display with plain text information	
No. of slave modules	max. 4	–	max. 5	
No. of monitored enclosures	max. 5	–	max. 5	
Extinguisher gas	NOVEC 1230	NOVEC 1230	–	
Extinguisher gas fill volume kg	3.2	3.2	–	
Admissible max. protection volume m ³	3	3	–	
Also required				
Pipe kit	7338.130	7338.130	7338.130	Page
RJ 12 cable for alarm relaying to CMC, packs of 2	7320.814 ¹⁾	7320.814 ¹⁾	7320.814 ¹⁾	458
Access sensors	7320.530	7320.530	–	455
Depth-variable slide rails	–	–	5501.480	687

¹⁾ 2 packs are required.

Security rooms





System accessories Page 507 **Network/server enclosures** Page 90

The basic protection room

The basic protection room provides a high-quality, system-tested solution. It is an optimum, modular room-within-a-room solution for protecting IT/infrastructure components such as extinguisher systems, uninterruptible power supplies and climate control. The flexible modular system means that it can be extended whilst the IT systems are operational.

Benefits:

- System-tested protection levels
- Multi-functional risk coverage
- Dust- and noise-reduced installation
- Dismantling and reassembly plus extendibility = investment security
- May be adapted for use in other room systems, such as the High Availability room

Criterion	Standards	
System testing	 Testing the following standards as a complete system or construction	
Fire protection	 ECB-S certification to EN 1047-2, 50 K temperature increase and 85% rel. humidity for up to 24 hours (reheating period), flame impingement time 60 minutes	
	50 K temperature increase and 85% rel. humidity without reheating period, flame impingement time 30 minutes	
	F 120 to DIN 4102 F 90 to DIN 4102	
Corrosive fire gases	Acrid gas-tightness based on DIN 18 095	
Falling debris	Impact test at 200 kg	
Water	IP X6 to IEC 60 529 Protection from standing water	
Dust	IP 5X to IEC 60 529	
Unauthorised access	WK IV to DIN V ENV 1630, door system only	
	WK III to DIN V ENV 1630, or DIN V 18 103 (ET2)	
	WK II to DIN V ENV 1630	
Explosion	Detonation test	
EMC	Protection from high-frequency irradiation and radiation	

System-tested structures are tested as a complete construction, comprising the cell structure and built-in modules such as doors, cable shields or ventilation units. By contrast, generic component testing only refers to individual parts.

Conventional construction methods refer to room structures made of plasterboard, concrete and other standard construction materials which do not offer sufficient protection for data centre applications. Conventional construction methods are generally unsuitable for use as a fire wall and are therefore only subjected to component testing.



System accessories Page 507 **Network/server enclosures** Page 90

The High Availability room

The High Availability room offers maximum physical protection for data centres and IT system locations. The system was certified by ECB (European Certification Body GmbH) to ECB-S regulations. This certification confirms that the High Availability room meets the requirements of EN 1047-2 without restriction. Moreover, the construction of the security room is subject to continuous quality monitoring by an independent agent.

Benefits:

- System-tested High Availability protection
- Multi-functional risk coverage
- Dust- and noise-reduced installation
- Dismantling and reassembly plus extendibility = investment security
- ECB-S certification
- Independent quality monitoring
- May be adapted for use in other room systems, such as the basic protection room

	Basic protection room	High Availability room
	■	■
	-	■
	□	-
	-	■
	■	-
	■	■
	■	■
	■	■
	-	■
	■	■
	-	■
	□	■
	■	-
	-	■
	■	■

■ Standard □ Optional

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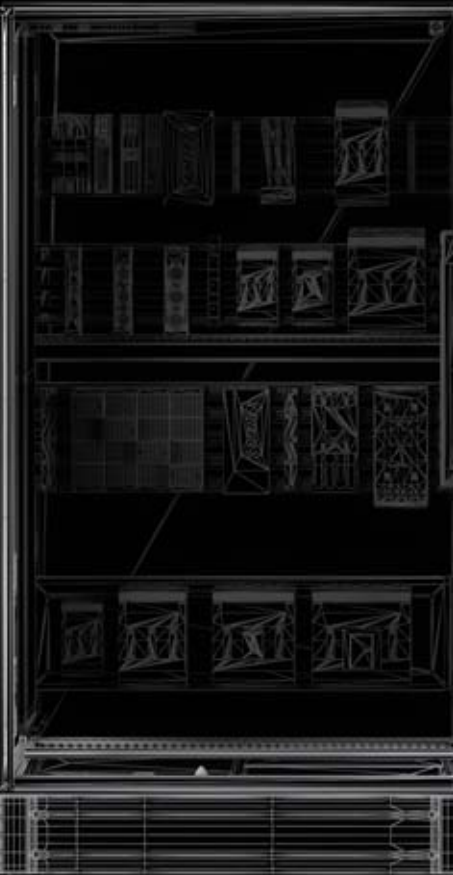
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Quality management.....	504
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for industry

The alliance between Eplan, Rittal and Kiesling is the only one of its kind in the world. Take value-added to the next level and completely re-automate your processes, from engineering through to production.

- Planning and project management
- Design, calculation, verification
- Components and system technology
- Virtual enclosure assembly
- Enclosure machining
- Documentation



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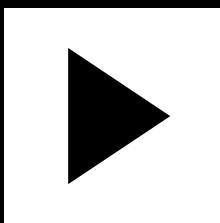
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Planning and project management

With Eplan, you are placing your trust in Europe's leading solutions for the engineering process. The Eplan platform integrates all relevant works in the development and design process, and is considered a pace-setter in the engineering world. The EPLAN Data Portal is the basis for cross-platform engineering, with a Web service for high-quality device data available worldwide. EPLAN Electric P8 – the high-end tool for process-oriented project management, documentation and administration of electrical automation projects – is incorporated into the Eplan platform.

- EPLAN Data Portal – Over 340,000 component data records for project management in electrical engineering
- EPLAN Electric P8 – Innovative project management, documentation and administration of electrical engineering automation projects



Planning
Project
management

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electric 8

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Design – Calculation – Verification

The application-dependent design of power distribution components and climate control measures is a key element in the engineering process of an automation plant.

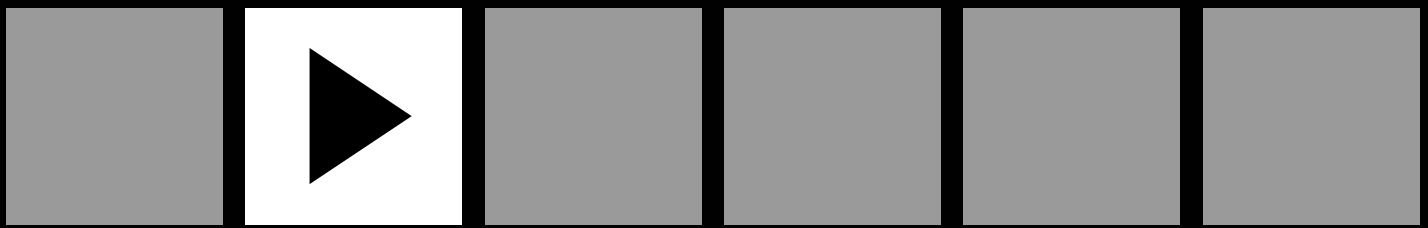
Rittal offers perfect tools to assist you:

“Rittal Power Engineering” allows you to easily configure standard-compliant Ri4Power low-voltage switchgear and busbar systems – with integral design certificate!

One key criterion of efficient plant planning is optimum design of the climate control system.

Here, our “Therm” product provides precise, fast calculation of your climate control requirements and helps you to design suitable climate control measures – also available as an App for iPhones and Androids! The CAD data of the components provide the basis for efficient planning. This data can be retrieved online via the Rittal website with our “RiCAD-3D” software, and worldwide via Partcommunity.

- Therm – Calculation program for enclosure climate control
- Rittal Power Engineering – Configuration of standard-compliant low-voltage switchgear and busbar systems
- RiCAD-3D – The database of Rittal CAD data compatible with all commercially available CAD systems



Design
Calculation
Verification

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► Therm 6.2

Projektierungs-Software zur Be-
Project Planning Software for C

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► Rittal Power Engineering 6.1

SV 3020.500

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► Rittal Power Engineering 6.1

Engineering Tool für Niederspannungsschaltanlagen Ri4Power und RiLine
Engineering tool for low voltage switchgear Ri4Power and RiLine60

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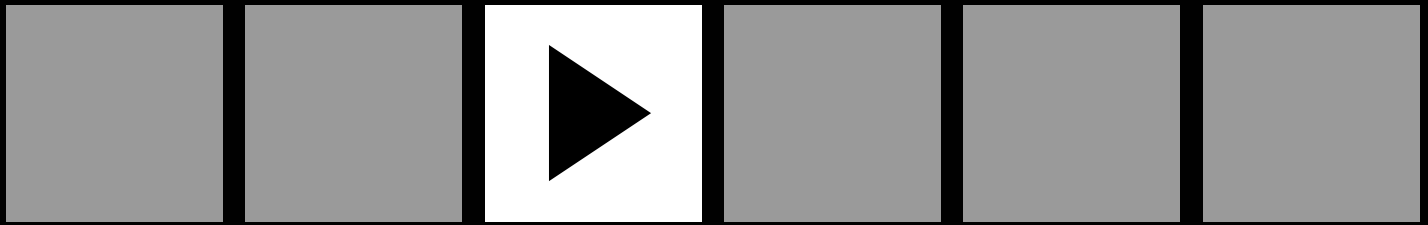
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Components and system technology

“Rittal – The System.” Due to its coordinated, innovative modular system, Rittal’s solutions offer maximum cost efficiency for your company, whatever its size. Tested components with regard to IP protection category, strength requirements and PE conductor function – ideal for compliance with standard IEC 61 439.

- Enclosures
- Power Distribution
- Climate Control
- IT Infrastructure
- Software & Services



Components
System
technology

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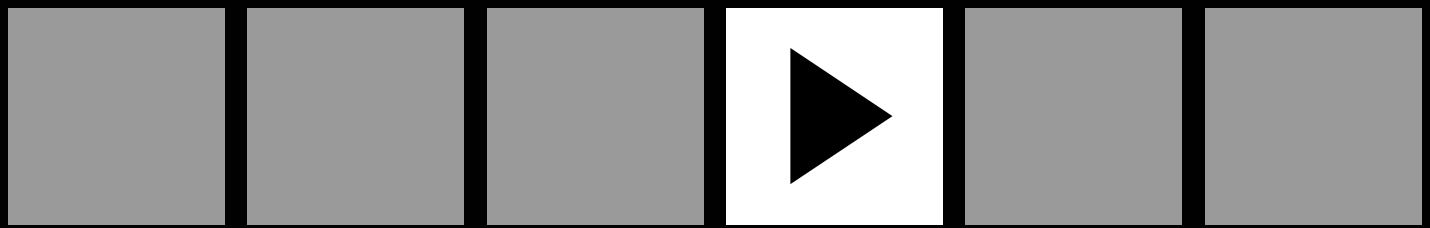
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Virtual enclosure layout

Based on electrical project management and hardware engineering, correct system-based design of power distribution and climate control, backed up by technological data on Rittal system components, EPLAN Pro Panel allows you to achieve a virtual enclosure assembly layout. EPLAN Pro Panel is the software solution for technological project management and 3D assembly layout of enclosures.

Fully integrated into the Eplan platform, consistent product data from the EPLAN Data Portal supports interdisciplinary engineering in electrical design and enclosure project management, enhances project quality, and in this way permanently accelerates the product creation process. The virtual 3D product data model provides all data needed to control NC production machines, automated wire assembly or the production of individual copper busbars.

- EPLAN Pro Panel Professional – Virtual enclosure layout in 3D



Virtual enclosure layout

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pro panel

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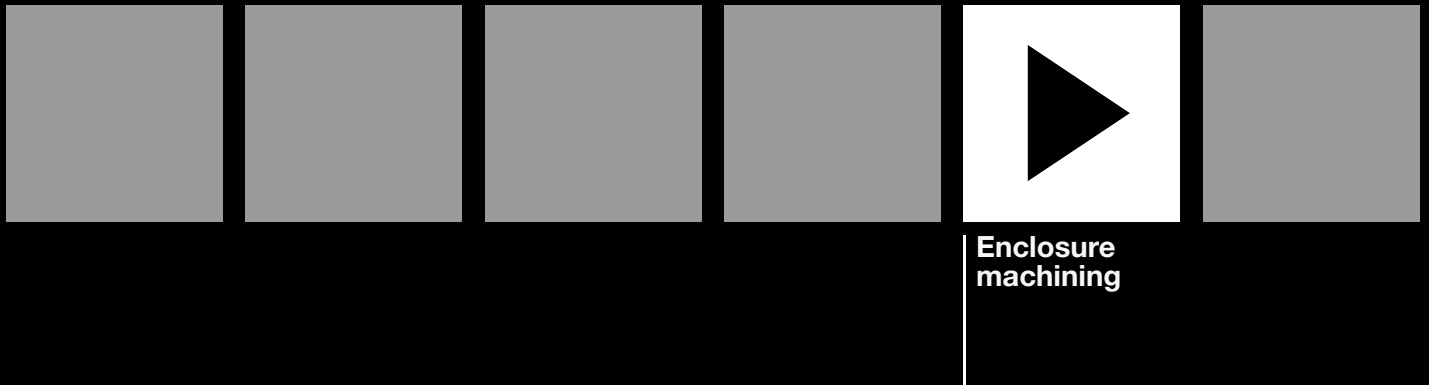


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Enclosure machining

The NC data output from EPLAN Pro Panel provides the basis for the professional machining of enclosures, cases and mounting plates. All machining (drilling, thread-tapping, milling) operations are fully automated, fast, precise and reliable with “Perforex” machining centres from Kiesling. The cost-intensive, time-consuming manual machining of enclosure parts is eliminated altogether, for the ultimate efficiency boost!



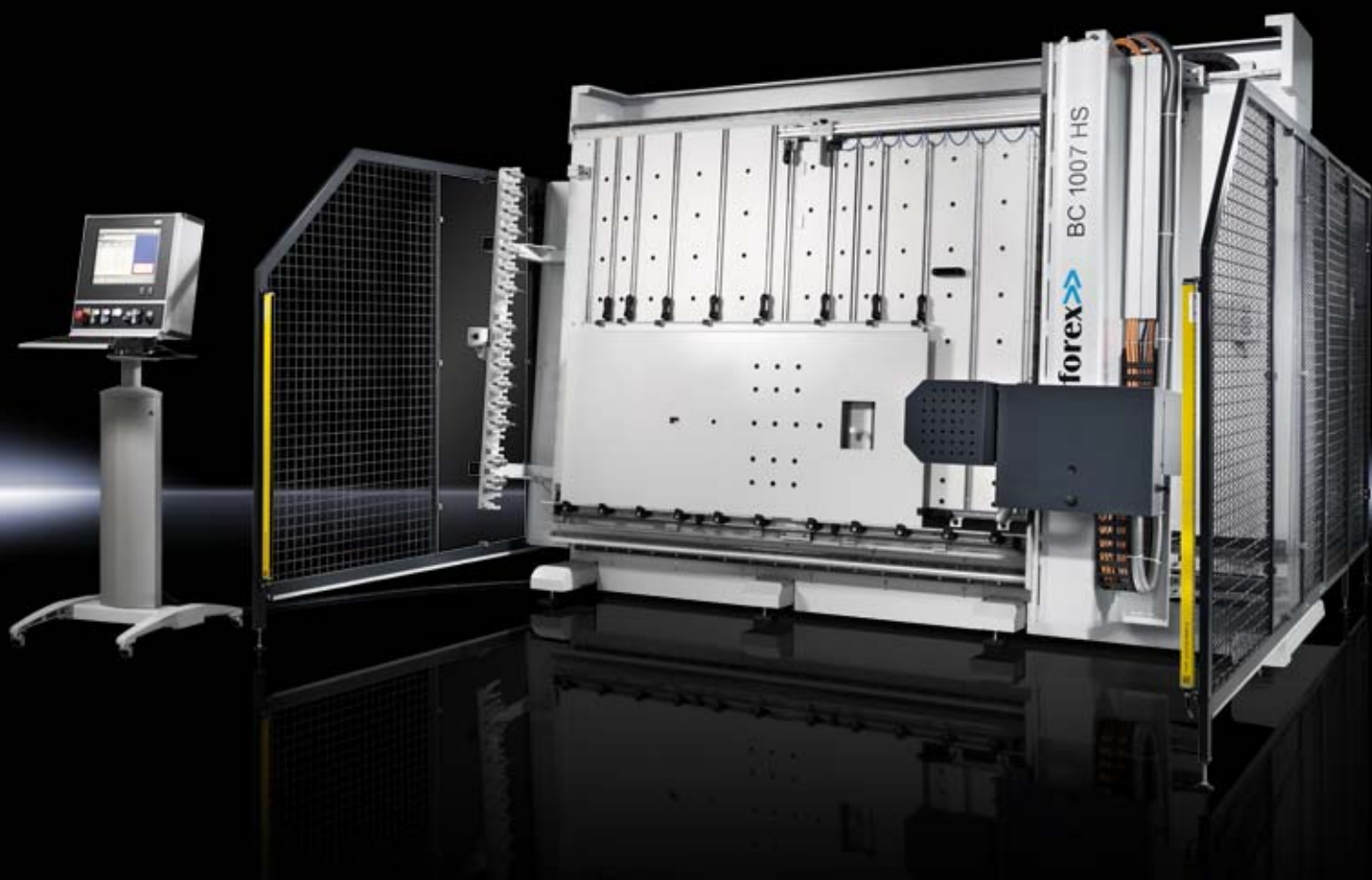
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Kiesling Perforex

- Perforex – The machining centre for enclosure production



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Documentation

Prepare your documentation to the latest standard IEC 61 439. Many Rittal components already meet the defined requirements, and have done for many years. Now, we can help you to prepare the required documentation with superbly coordinated processes in the value chain.

- Planning and project management with engineering solutions from Eplan
- Calculation and design using tools from Rittal
- Tested system components from Rittal
- 3D enclosure layout with engineering solutions from Eplan
- Machining with the Kiesling machining centre



Documentation

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Documentation



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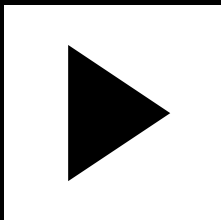
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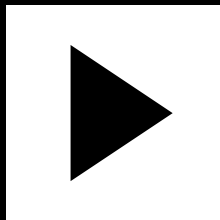
Benefits of the value chain

By accelerating processes throughout the value chain, you can achieve potential savings of up to 50%.

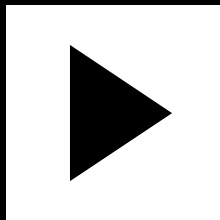
- Shorter throughput times
- Enhanced quality
- Flexible response to customer requirements
- Faster delivery
- Cost transparency and control
- Standard-compliant documentation



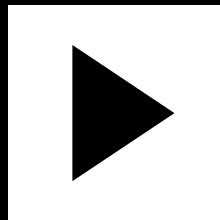
**Planning
Project
management**



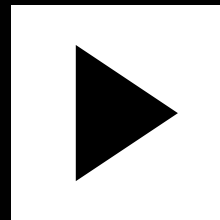
**Design
Calculation
Verification**



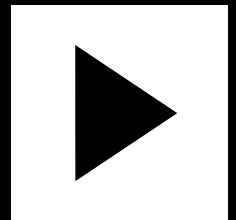
**Components
System
technology**



**Virtual
enclosure
layout**



**Enclosure
machining**



Documentation

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nextlevel

for industry



+



+



Up to 50% faster processes

IT INFRASTRUCTURE

SOFTWARE & SERVICES





RiCAD 3D

Greater efficiency in plant design

Regardless of which CAD system you use, RiCAD 3D effectively supports the efficiency and productivity of your plant design work.

It includes both 2D and 3D drawings for virtually all Rittal products, together with an extensive range of system accessories.

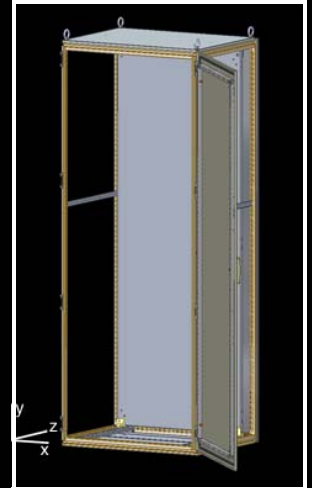
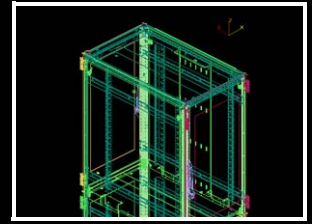
Three options for retrieving the CAD data

- Offline: RiCAD 3D as a database on your hard drive
- Online: Request data via the product pages on the Rittal website
- Online: Retrieve data via the Web platform "PARTcommunity"

Benefits for users of RiCAD 3D

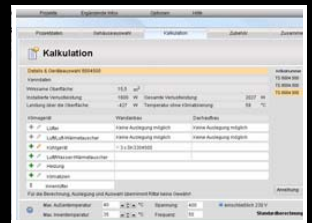
- All CAD data may be transferred into any commercially available CAD system, due to the intelligent, native 2D/3D multiCAD-compatible format.
- The accurately detailed and validated drawings allow design drawings to be created by users with optimum planning confidence, in a fraction of the time taken for conventional design, by simply remodelling.
- Thanks to the freely selectable level of detail in CAD models, these may be represented in a greatly simplified format, enabling huge performance enhancements among users.

Fast online access to original data in all commercially available CAD formats with direct downloading facility available at: www.rittal.com



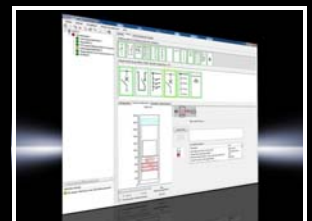
Therm software

The Therm software package eliminates the need for time-consuming calculation of climate control requirements, see page 385.



Rittal Power Engineering

Planning software for RiLine busbar systems and Ri4Power low-voltage switchgear with design certificate, see page 295.





Enclosures

Menu-assisted configurators will help you to select the right enclosure and matching standard accessories.

As well as the Rittal Model Number for the parts list definition, you will also receive the appropriate CAD data for your CAD system according to your selection.

TS 8 configurator

A complete enclosure configured in just eight clicks, including parts list and 3D model.

Benefits:

- Easy, menu-assisted configuration of a TS 8 bayed enclosure with base/plinth, side panels and the required handle system
- Mounting rails and punched sections with mounting flanges can be pre-assembled for interior installation
- This will produce a 3D drawing that can be incorporated directly into the system design or integrated into EPLAN Cabinet

www.rittal.com



Human/machine interface

Operation and monitoring play an increasingly vital role in mechanical and plant engineering. Rittal meets the exacting requirements placed on the "packaging" of the sensitive yet powerful electronics with its integrated modular system at the human/machine interface.

Design, function and ergonomics are the distinguishing features of this product range. Rittal provides free Internet planning tools to assist with planning and engineering of the command panels and support arm systems. In this way, the right product for your customer application is achieved simply, quickly and reliably.

Command panel configurators

The online configurators for Comfort Panel and Optipanel allow you to configure individual, perfectly coordinated panel solutions. Using a catalogue of questions, the configurators automatically guide you through the individual selection masks until you have compiled a complete system. The system also has a built-in smart consistency check to ensure that your configuration is complete and error-free.

Benefits:

- Select the enclosure that holds the HMI panel to be used (the integral database contains a variety of commercial panels from various manufacturers)
- Easy navigation through the catalogue of questions
- Quick compilation of the required features
- Request a quote based on the selected data
- Request a 3D CAD model for integration into the system design

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Support arm configurator

for CP 40/60/120/180

The tool is able to precisely define the correct support arm system using important user-specific parameters such as the jib length, enclosure weight or required cable cross-section.

Benefits:

- Individual assembly tailored to the requirements of the application
- Built-in consistency check
- The outcome is a plausibility-checked parts list

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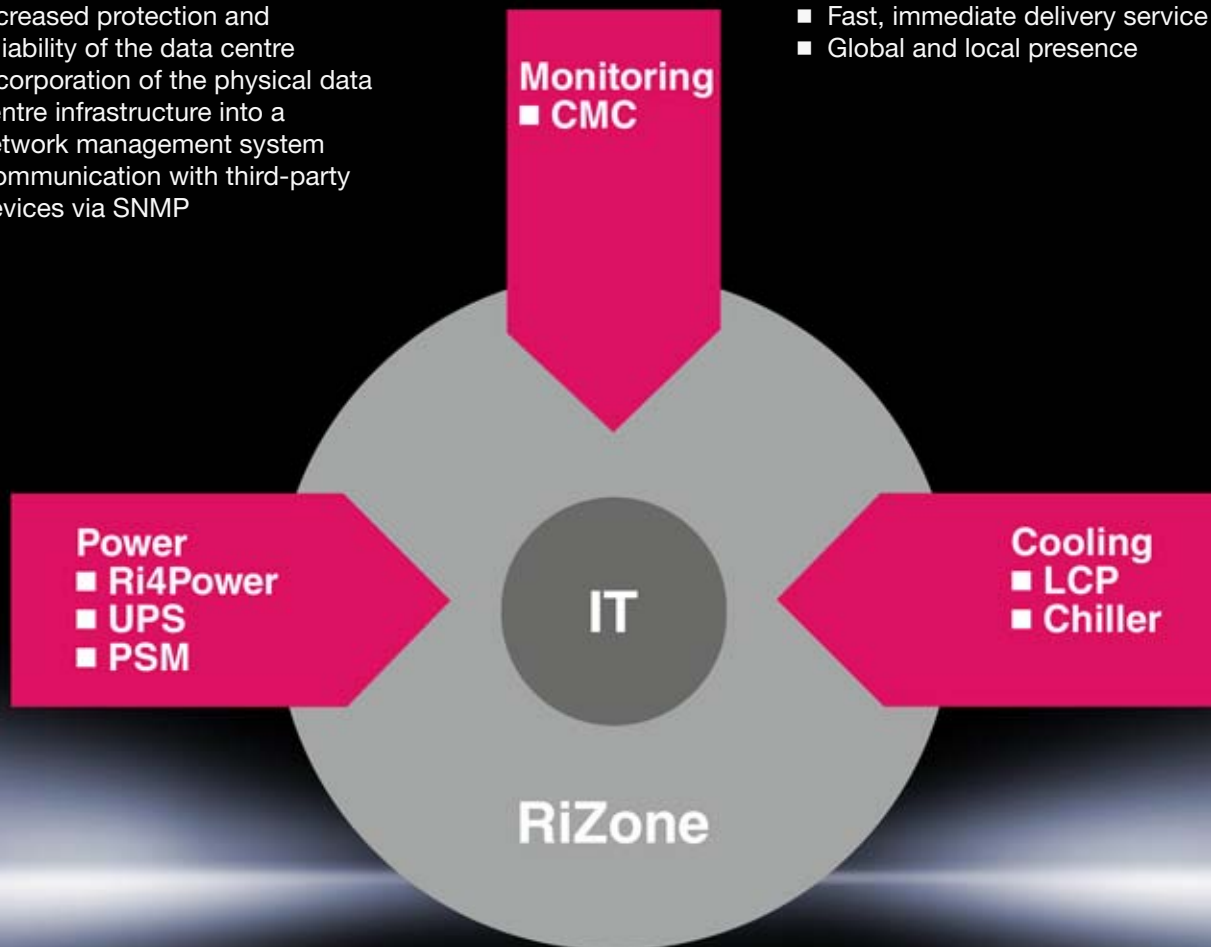
RiZone – Customer-focussed, cost-efficient

Six good reasons to choose RiZone

- Energy optimisation throughout the entire data centre
- Simple project management
- Automatic detection of Rittal components
- Increased protection and reliability of the data centre
- Incorporation of the physical data centre infrastructure into a network management system
- Communication with third-party devices via SNMP

Combine the sum total of all RiZone benefits with the particular benefits offered by Rittal, whatever your requirements.

- Comprehensive advice
- Holistic system concept
- Fast, immediate delivery service
- Global and local presence



Measurements from RiZone-compatible components (example)

UPS

- Inverter status
- Status of primary network
- Battery status

CMC

- Temperature
- Humidity
- Access

PSM/PDU

- Current measurement of PSM busbars
- Measurement of power consumption per socket with active PSM
- Switching of individual sockets

Cooling/LCP

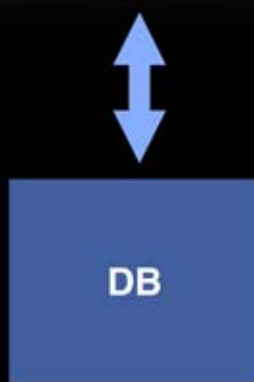
- Inlet temperature
- Setpoint (target value)
- Averaged air injection temperature

Ri4Power

- Current
- Voltage
- Energy
- Power

Chillers

- Inlet and return temperature
- Pump speed
- Operating mode
- Power consumption



DCIM – Data Center Infrastructure Management

RiZone – Perfect support of Rittal IT infrastructure components

Rittal components – from server enclosures to power supply and climate control, through to security and monitoring technology – are optionally supported during integration and in the operational phase, thanks to coordinated sensors and control.

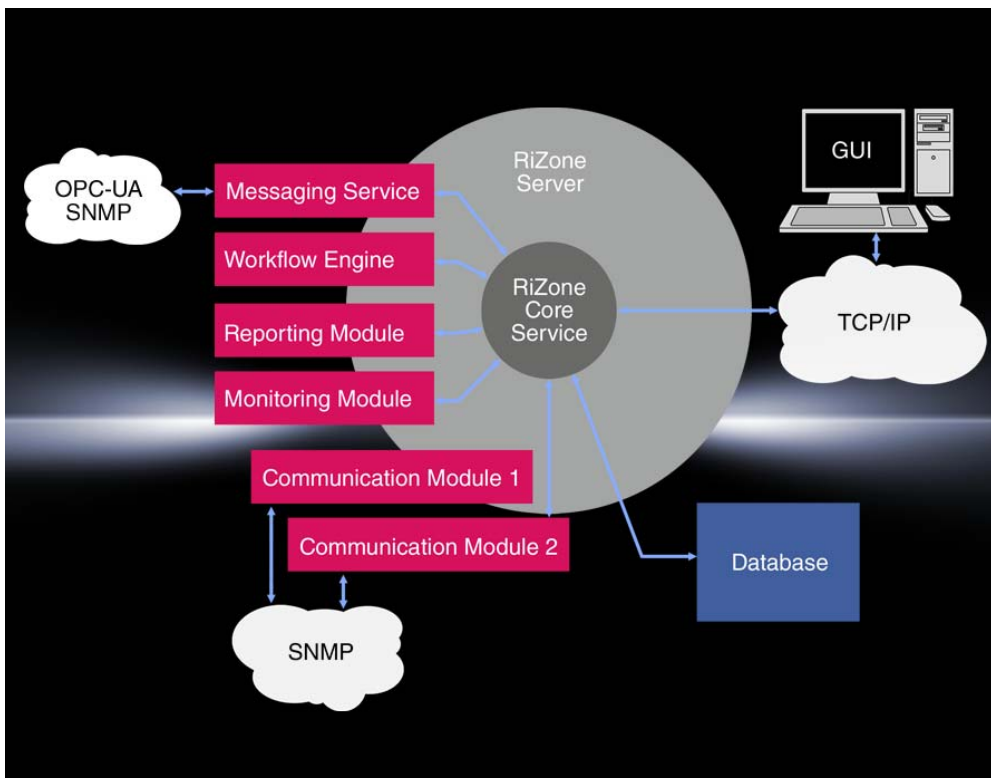
- Incorporation of the physical data centre infrastructure into a data centre infrastructure management system
- Simple configuration
- Automatic detection of Rittal components
- Workflow editor for user-defined scenarios (what happens if ...)
- Increased security and reliability
- Energy optimisation in the data centre
- Integration of SNMP-compatible third-party equipment

RiZone plus Rittal components creates a system solution with maximum energy efficiency.

Note:

- RiZone Appliance Standard
 - RiZone Appliance IP node licence
 - Server shutdown software
- see page 463

- **Messaging service**
The SNMP and OPC-UA protocols provide an interface to superordinate management systems
- **Workflow engine**
Control loops for optimisation of the data centre and individual escalation management
- **Reporting modules**
Reports based on any given data compilation and time interval
- **Monitoring modules**
Internal watchdog module ensures availability
- **Communication modules**
Communication with SNMP-compatible devices in the physical data centre infrastructure
- **Autodiscovery**
Detection of all SNMP-compatible IT infrastructure components
- **Database**
Own SQL database or link to external MS-SQL and Oracle databases
- **Administration**
Configuration of RiZone (user and rights management, network integration)





Service – Global availability

Your direct line to our service department

Whenever, wherever and however you need us, we are always on hand to assist you! Simply give us a call, send an e-mail or visit our website to get in touch. Fast, simple and reliable.

The benefits to you:

- International availability
- 24-hour availability
- Communication in your local language

Faster

- Short paths, fast communications:
Due to regional service support points and service partners
- Perfect interplay between service and engineering

Better

- Individual service solutions from a single source
- A high level of qualifications among Rittal service technicians worldwide

Everywhere

- More than 150 service partners with over 1,000 service technicians



Rittal service addresses worldwide

✉ service@rittal.de
☎ +49(0)2772 505-1855
🌐 www.rittal.com

Rittal Europe (Herborn)

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Rittal Asia-Pacific (Singapore)

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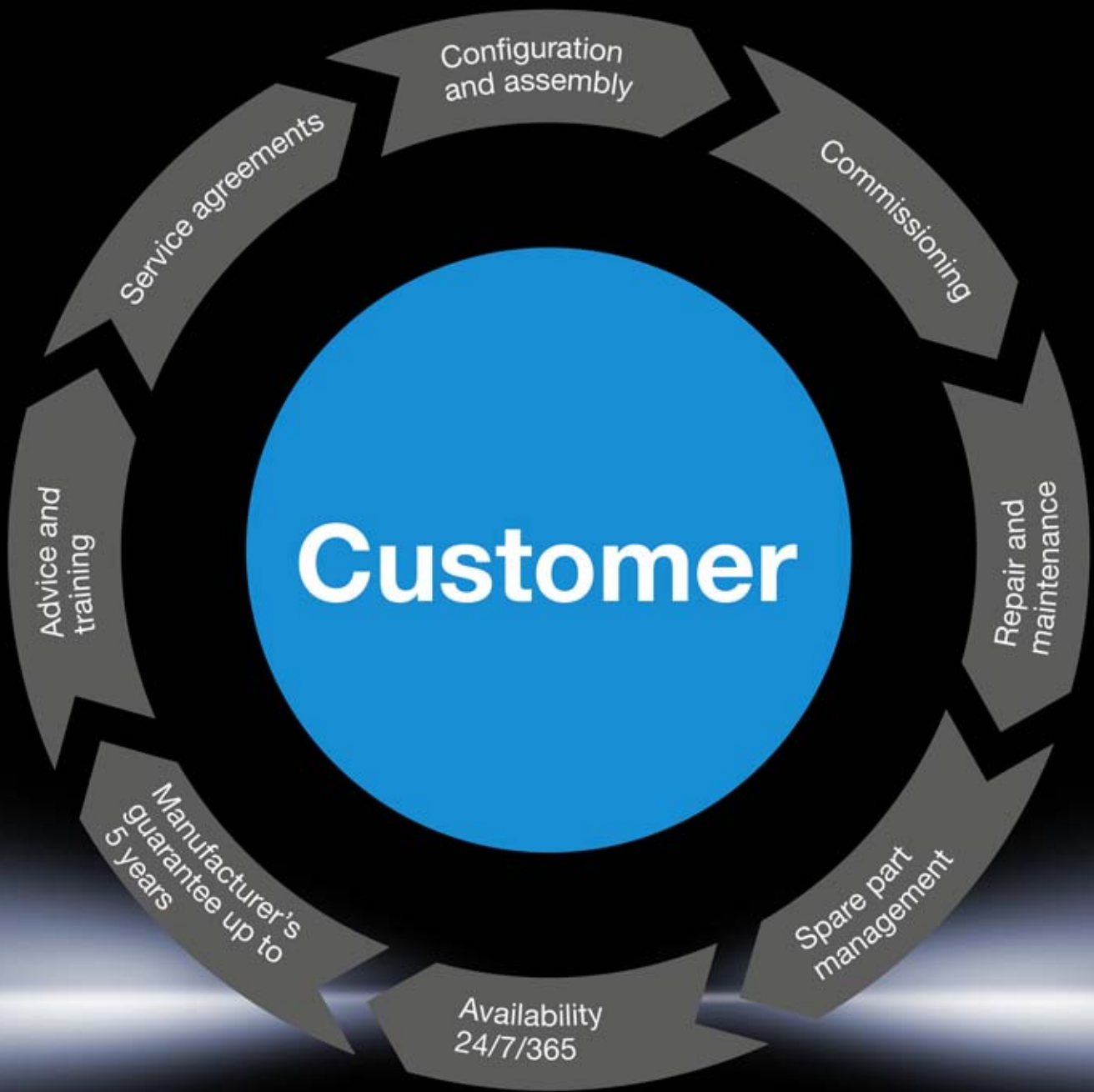
Individual services for the entire production cycle

With Rittal products, rest assured that your production processes are in safe hands.

Rittal lifecycle management goes far beyond mere statutory liability for defects and voluntary manufacturer warranties. Rittal safeguards the long-term productivity of your systems. What is more, this service is tailored to your specific requirements, because you decide for yourself which service level best caters for your risk of production downtime.

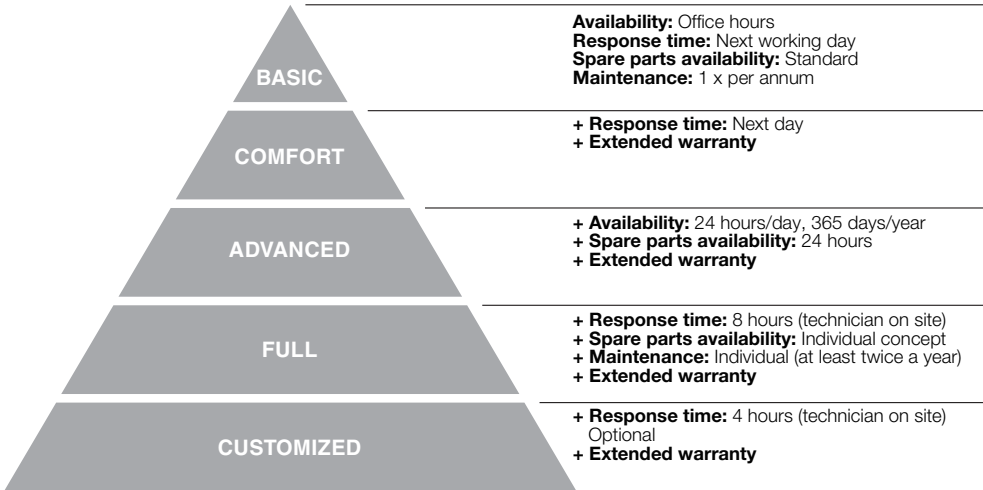
The benefits to you:

- Preserve the value of your systems and equipment
- Reduced downtimes
- Long-term cost management



Flexible service contracts: The right solution to match your requirements

Features of the Rittal service packages at a glance:



The benefits to you:

- Short response times thanks to local technicians
- Preserve the value of your equipment
- Extended warranty up to 5 years
- Spare parts held in stock
- Cost transparency

5 years
Manufacturers' warranty
 in conjunction with a
 signed service agreement



We are committed to perfection at every phase



Spare parts – any time, anywhere

Added value, thanks to global availability of individual parts

Professional spare parts management guaranteeing maximum global availability of spare parts, and graduated service contracts matched precisely to your individual requirements: That is what you can expect from Rittal International Service. A service contract enables you to spell out many details, such as the availability of spare parts, specifically for your equipment or system. International service: At your service, any time, anywhere.

The benefits to you:

- Customer-specific components are held in stock on the basis of individual service contracts
- Decentralised warehousing to ensure fast and reliable spare parts availability
- Approved original spare parts from the manufacturer





Quality management is a must. Quality philosophy is an attitude.

“Rittal – The System.” stands for consistent quality management and on-going refinements to products, services and internal processes.

Rittal quality management ensures that regulations and standards are observed, and individual customer requirements are met. In addition to this, we also define our exacting product quality demands in supplementary Rittal standards. The consistent Rittal quality philosophy guarantees perpetually high standards and ensures the global usability of all products with countless international approvals and licences.

Alongside product quality, we also focus on process and service quality.

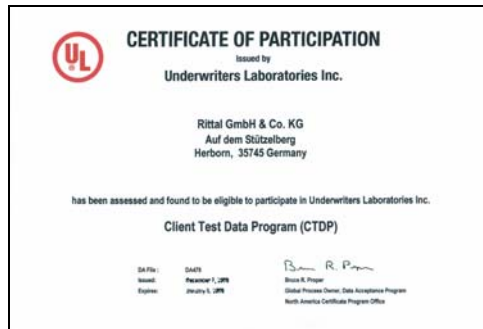
All internal processes are continuously refined by quality control groups, and reviewed during in-house audits. Each year, our improvements and high standards are verified by countless successful external system and customer audits.

Rittal offers support from day one

- Project planning of technical specifications
- Prototype assembly, testing and simulations
- Manufacturing and assembly
- Warehousing service and on-time delivery
- Your own personal point of contact throughout the entire project

Accredited Rittal test laboratory

- Simulation of climatic conditions
- Dynamic and static load tests
- 3D measurement
- Testing of IP protection categories and NEMA type ratings
- Salt spray tests
- Electrical safety and function tests
- Performance testing of cooling units and heat exchangers
- Material tests



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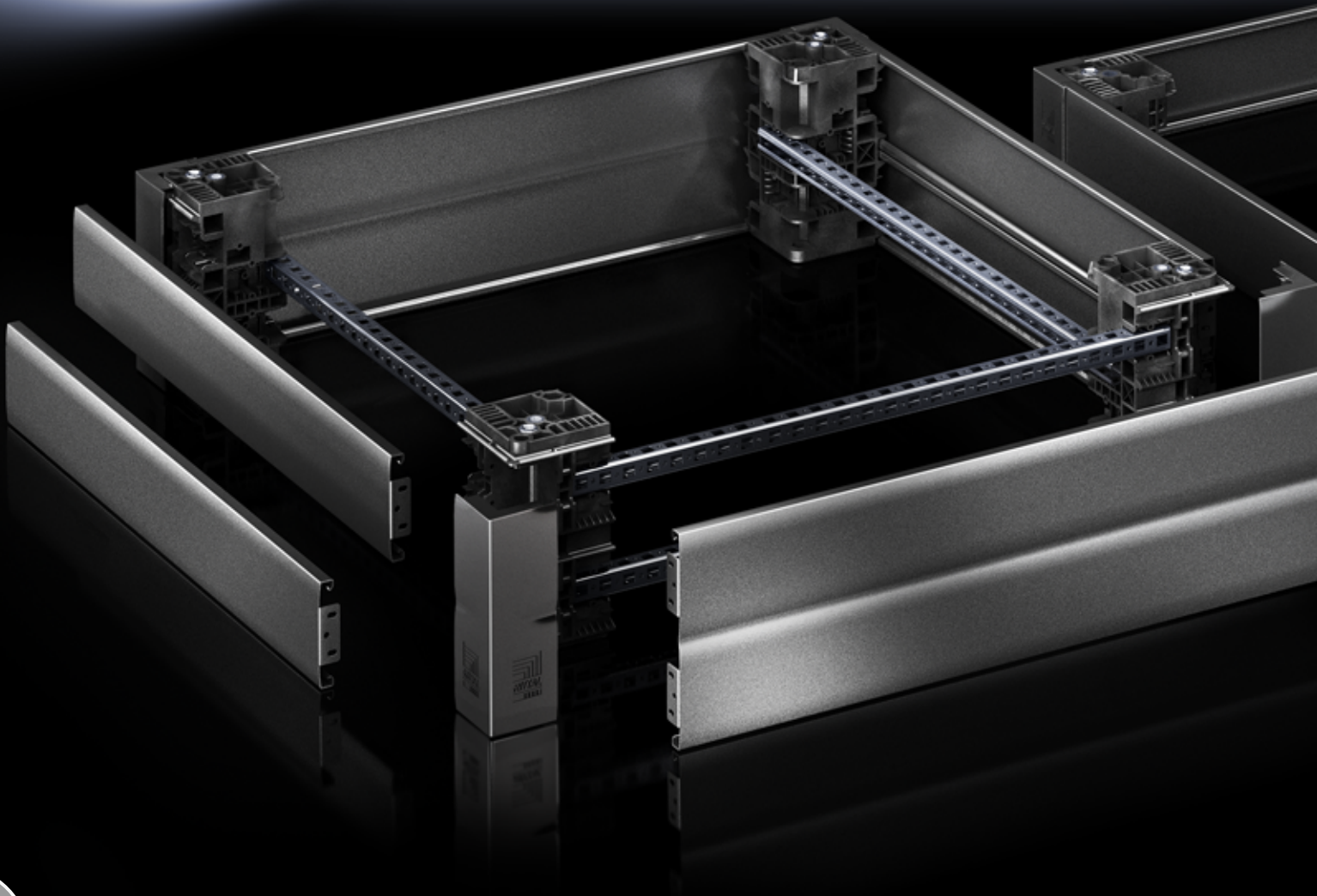
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The Rittal base/plinth system Flex-Block



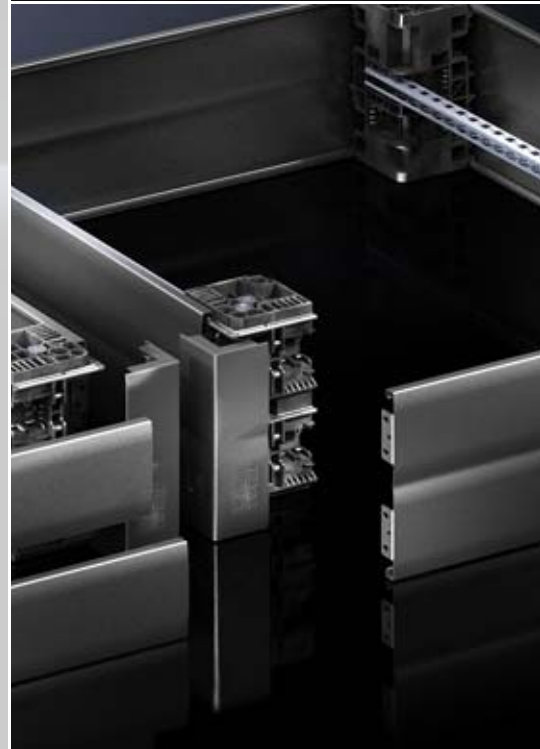
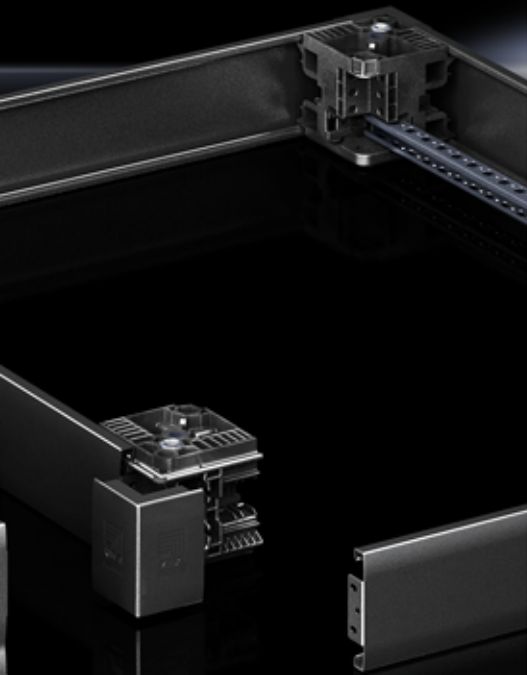
Save time

- Fast assembly by simply clipping together the base/plinth components
- Easily bayed with tool-free baying clip
- The enclosure is easily transported, both in its empty and configured state, by removing the base/plinth trim panel



Easy to assemble

- Tool-free assembly of all base/plinth components
- Tool-free assembly of accessories, e.g. baying and levelling feet
- Symmetrical in enclosure widths and depths
- With the 200 mm high Flex-Block, combinations of 100 and 200 mm high trim panels may be used



Large mounting area

- Space-saving cable management in the base/plinth means more space for enclosure configuration
- Installation using punched rail – Clip into position from the outside or inside
- Flexible configuration: Punched rail with 25 mm pitch pattern of holes



Base/plinth

Flex-Block base/plinth system

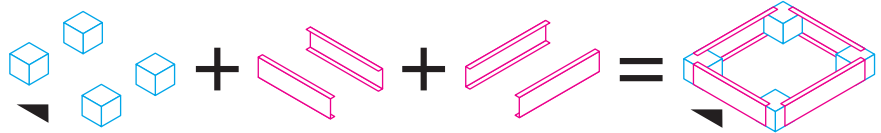


The Rittal base/plinth system

Flex-Block

Freely combinable base/plinth system for virtually any application. Because the corner pieces and trim panels are packaged separately, it may be tailored to any application.

The enclosure load rests on the corner pieces, so that the trim panels can be attached or removed at any time by using clips. The base/plinth trim panels are symmetrical and are readily exchanged in the width and depth. This creates unprecedented flexibility and great savings potential with base/plinth configuration.

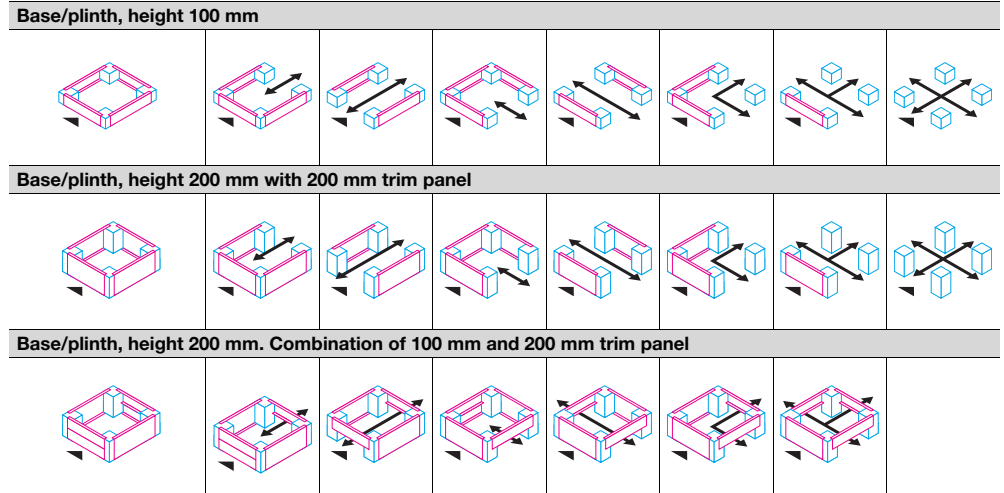


One Model No. for the **Flex-Block corner pieces** front and rear

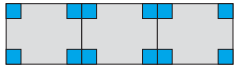
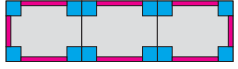

One Model No. for the **Flex-Block trim panels** front and rear

One Model No. for the **Flex-Block trim panels** at the sides

A complete **Flex-Block base/plinth**

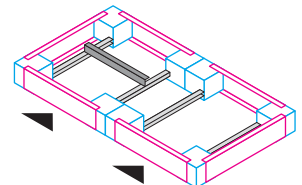


Functional and cost benefits

Order includes	Functional benefits	Potential savings for 100 mm high Flex-Block compared with complete base/plinth Flex-Block
3 packs of Flex-Block corner pieces	The enclosures rest securely on the corner pieces. Transportation via forklift or lifting truck with free-standing enclosures is supported.	12 trim panels 
3 packs of Flex-Block corner pieces 4 packs of Flex-Block trim panels	Completely closed suite of base/plinths, no trim panels between the enclosure panels. This means more space for assembly and cable entry.	4 trim panels 
3 packs of Flex-Block corner pieces 2 packs of Flex-Block trim panels	Trim panels are only needed in the area viewed; there are no trim panels between the enclosures. This means more space for assembly and cable entry.	8 trim panels 

Other options:

- Cable clamp may be configured individually in every enclosure panel using system accessories
- With 200 mm Flex-Block corner pieces, either 100 mm high or 200 mm high trim panels may be used, depending on requirements



Flex-Block base/plinth system

Flex-Block corner pieces

for TS, TS IT, SE, PC

High-strength plastic corner pieces for individual tool-free assembly with Flex-Block trim panels and accessories.

Material:

- Corner pieces: Fibreglass-reinforced plastic
- Cover caps: ABS

Colour:

- RAL 9005

Supply includes:

- 1 set =
- 4 corner pieces
- 4 cover caps
- Assembly parts for mounting on the enclosure

Corner pieces height mm	Model No.
100	8100.000
200	8200.000



Accessories:

- Flex-Block trim panels, see page 511
- Punched rail 23 x 23 mm, see page 611
- Baying clip 8000.100, see page 511
- Adaptor sleeve 8000.500, see page 522
- Base mounting plate 2817.000, see page 516



Flex-Block trim panels

for Flex-Block corner pieces

For tool-free assembly. With symmetrical enclosure dimensions, trim panels are identical in the width and depth.

Material:

- Sheet steel

Colour:

- RAL 9005

Supply includes:

- 1 set = 2 trim panels

100 mm high, solid

For enclosure width and depth in mm	Model No.
300	8100.300
400	8100.400
500	8100.500
600	8100.600
800	8100.800
1000	8100.010
1200	8100.120
1600	8100.160
1800	8100.180

200 mm high, solid

For enclosure width and depth in mm	Model No.
300	8200.300
400	8200.400
500	8200.500
600	8200.600
800	8200.800
1000	8200.010
1200	8200.120

100 mm high, vented

For enclosure width and depth in mm	Model No.
600	8100.602
800	8100.802



Accessories:

- Filter mats for vented Flex-Block trim panels 7583.500, see page 517



Baying clip

for baying the Flex-Block corner pieces

Tool-free baying of Flex-Block base/plinths via a simple clip system.

Material:

- Fibreglass-reinforced plastic

Colour:

- RAL 9005

Packs of	Model No.
12 pc(s).	8000.100



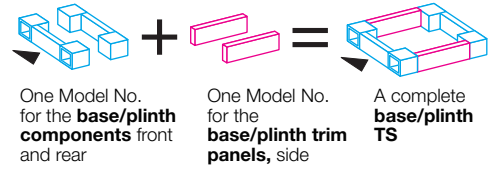
Base/plinth

Base/plinth TS

Modular base/plinth diversity

Regardless of the enclosure depth:
The base/plinth components at the front and rear, pre-configured with corner pieces, are always the same for the chosen width.
Only the side trim panels are selected according to the enclosure depth and the required base/plinth configuration. The modular concept produces exceptional advantages in terms of cost and function.

Mounting on the enclosure is conveniently carried out from the outside. The base/plinth interior offers diverse opportunities for cable management mounting levels.



Base/plinth	Basic form	Cable entry options				Stabilisation of bayed base/plinths
100 mm						
200 mm						

Functional and cost benefits

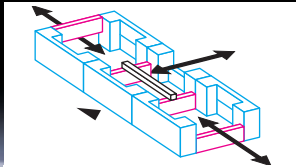
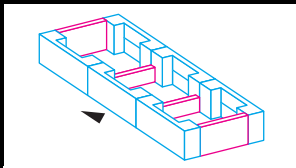
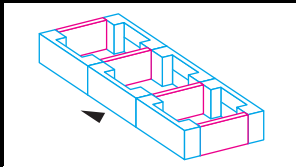
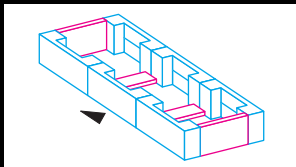
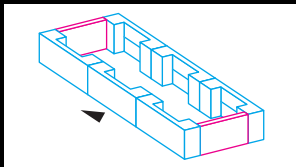
Fewer parts, more opportunities, lower purchasing, storage and assembly costs – this is the winning formula behind the modular base/plinth system.

The following table shows five possible solutions using three bayed base/plinths in 200 mm height from the wide range of options available, together with the potential savings with trim panels compared with the previous 200 mm base/plinth system each with two trim panels of 100 mm height at the sides.

Order includes	Functional benefits	Potential savings compared with twelve 100 mm trim panels
3 packs of base/plinth components 1 pack of base/plinth trim panels, 200 mm high	Continuous cable chamber	2 trim panels 200 mm
3 packs of base/plinth components 1 pack of base/plinth trim panels, 200 mm high 1 pack of base/plinth trim panels, 100 mm high 1 pack of base/plinth baying brackets 8601.100 (packs of 20 pieces) 4 pieces are required for this solution	Additional stabilisation for transportation purposes with base/plinth trim rotated through 90°	2 trim panels 200 mm 2 trim panels 100 mm
3 packs of base/plinth components 2 pack of base/plinth trim panels, 200 mm high	Shielding of the base/plinths in relation to one another	4 trim panels 200 mm
3 packs of base/plinth components 1 pack of base/plinth trim panels, 200 mm high 1 pack of base/plinth trim panels, 100 mm high	Additional connection of the base/plinths	2 trim panels 200 mm 2 trim panels 100 mm

Other options:

- Cable entry at the side by mounting a 100 mm base/plinth trim panel (top or bottom)
- Cable entry from the rear by dismantling one or more trim panels of the base/plinth components
- Cable clamp rail fitted on the 100 mm high trim panel



Base/plinth components front and rear

Sheet steel for TS, TS IT, SE, CM, TP, PC, IW

Base/plinth component consisting of one trim panel and two pre-configured corner pieces. In 200 mm high base/plinth components, one trim panel is divided into two for cable entry.

Material:

- Base/plinth components: Sheet steel
- Cover caps: Plastic

Surface finish:

- Spray-finished

Colour:

- Cover caps: RAL 9005/7035

Supply includes:

- 1 set =
2 base/plinth components, 4 cover caps,
4 screws and captive nuts M12 for mounting on the enclosure.



Also required:

- Depending on the application/load, side base/plinth trim panels, see page 514

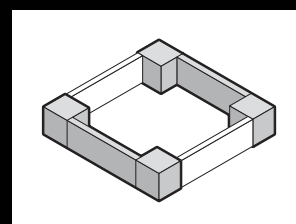


Accessories:

- Base mounting plate 2817.000, see page 516

Technical details:

Available on the Internet



100 mm high, colour: RAL 7022

For enclosure width mm	Version	Model No.
300	Solid	8601.915
400	Solid	8601.400
500	Solid	8601.500
600	Solid	8601.600
800	Solid	8601.800
850	Solid	8601.850
1000	Solid	8601.000
1100	Solid	8601.300
1200	Solid	8601.200
1600	Solid	8601.920
1800	Solid	8601.980

200 mm high, colour: RAL 7022

For enclosure width mm	Version	Model No.
300	Solid	8602.915
400	Solid	8602.400
500	Solid	8602.500
600	Solid	8602.600
800	Solid	8602.800
850	Solid	8602.850
1000	Solid	8602.000
1100	Solid	8602.100
1200	Solid	8602.200
1600	Solid	8602.920
1800	Solid	8602.980

100 mm high, colour: RAL 7035

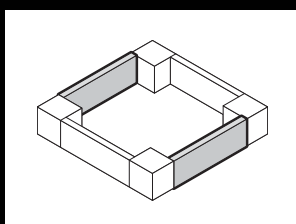
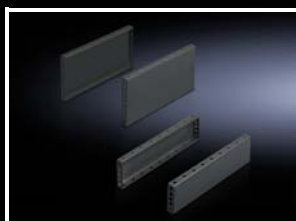
For enclosure width mm	Version	Model No.
300	Solid	8601.905
600	Solid	8601.605
800	Solid	8601.805

200 mm high, colour: RAL 7035

For enclosure width mm	Version	Model No.
300	Solid	8602.905
600	Solid	8602.605
800	Solid	8602.805

Base/plinth

Base/plinth TS



Base/plinth trim panels, side

Sheet steel

for base/plinth components, front and rear

For mounting between the base/plinth components. With the 200 mm height, two 100 mm base/plinth trim panels may also be used. Base/plinth trim panels (100 mm high) may be installed rotated through 90° to stabilise bayed base/plinth components.

Material:

- Sheet steel

Surface finish:

- Spray-finished

Supply includes:

- 1 set =
2 base/plinth trim panels, including parts for attaching to the base/plinth components



Also required:

- Base/plinth baying brackets 8601.100, see page 514, when mounting base/plinth trim panels rotated through 90°



Accessories:

- Assembly bolts for base/plinth, see page 516

Technical details:

Available on the Internet

100 mm high, colour: RAL 7022

For enclosure depth mm	Model No.
300	8601.030
400	8601.040
500	8601.050
600	8601.060
800	8601.080

200 mm high, colour: RAL 7022

For enclosure depth mm	Model No.
300	8602.030
400	8602.040
500	8602.050
600	8602.060
800	8602.080

100 mm high, colour: RAL 7035

For enclosure depth mm	Model No.
600	8601.065
800	8601.085
1000	8601.015
1200	8601.025

200 mm high, colour: RAL 7035

For enclosure depth mm	Model No.
600	8602.065
800	8602.085
1000	8602.015
1200	8602.025



Base/plinth baying brackets

for base/plinth TS

Essential if the trim panels are mounted rotated through 90° for additional stabilisation during the transportation of bayed enclosures.

Additional brackets required for each trim panel:
2 pc(s).

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Screws M8 x 16 mm

Packs of	Model No.
20 pc(s).	8601.100

Base/plinth

Base/plinth TS

Cable chamber

for TS, SE

With integral system punchings for individual system accessories.

Height: 200 mm

Material:

- Sheet steel

Colour:

- RAL 7035

Supply includes:

- Sheet steel trim panels front and rear
- Assembly parts for mounting on the enclosure

For enclosures		Model No.
Width mm	Depth mm	
400	500	8600.455
400	600	8600.465
600	500	8600.655
600	600	8600.665
800	500	8600.855
800	600	8600.865
1200	500	8600.255
1200	600	8600.265



Accessories:

- Side panels for cable chamber, see page 515

Technical details:

Available on the Internet



Side panels

for cable chamber

Height: 200 mm

Material:

- Sheet steel

Colour:

- RAL 7035

Supply includes:

- Assembly parts

For enclosure depth mm	Packs of	Model No.
500	2 pc(s).	8600.510
600	2 pc(s).	8600.520



Transport castors

for base/plinth TS

For locating onto the base/plinth corner piece 100 or 200 mm high.

Load capacity:

- Maximum permissible load per twin castor: static 100 kg

Supply includes:

- 1 set =
4 twin castors, 2 x with, 2 x without locks

Colour:

- RAL 7022

Floor clearance mm	Model No.
100	8800.390



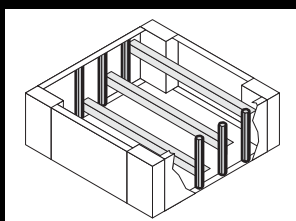
Also required:

- Base/plinth trim panels, side, see page 514



Base/plinth

Base/plinth TS



Base mounting plate

for

- Base/plinth TS
- Flex-Block base/plinth system
- Base/plinth, complete

For fastening the base/plinth to the floor without moving the enclosure or bayed enclosure suite. For assembly screws up to 12 mm Ø.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Packs of	Model No.
10 pc(s).	2817.000

Fastening bolts

for

- TS base/plinth
- Base/plinth, complete
- Base/plinth, stationary

For mounting on base/plinth trim panels, side. The lockable fastening bolt allows the installation of cable clamp rails. Tighten with hex spanner, width across flats 19 mm.

Material:

- Hexagon steel

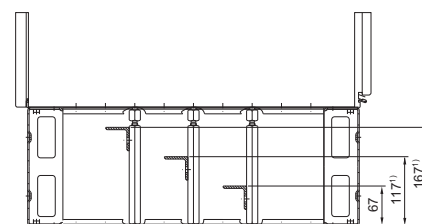
Surface finish:

- Zinc-plated

For base/plinth trim panel Height mm	Packs of	Model No.
100	10 pc(s).	2819.000
200	10 pc(s).	2819.200

Accessories:

- Cable clamp rail, see page 665



¹⁾ Only for height 200 mm

Levelling component

for TS base/plinth

For retrospective levelling on uneven floors at the installation site up to a maximum of 15 mm. Installed through the corner piece of the base/plinth component. Adjusted using a SW 19 hex spanner.

Benefits:

- A door offset caused by uneven flooring can be corrected
- Installed on the assembled enclosure, i.e. no need to plan levelling in advance

Load capacity:

- Max. admissible static load: 2500 N per levelling component (check the load capacity of the floor)

Supply includes:

- Assembly parts

For base/plinth height mm	Packs of	Model No.
100	4 pc(s).	2891.000
200	4 pc(s).	2892.000

Base/plinth

Base/plinth TS

Cover cap

for TS base/plinth components

As a replacement.

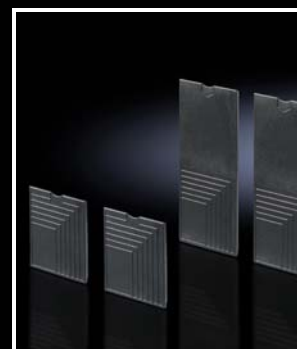
Material:

- Plastic ABS

Colour:

- RAL 9005

For base/plinth height mm	Packs of	Model No.
100	4 pc(s).	8601.130
200	4 pc(s).	8601.140



Base/plinth, stationary

for PC, IW

Design-coordinated with the enclosures, height 100 mm, with front projection.

Material:

- Sheet steel, 2.0 mm

Colour:

- RAL 7035
- Design component, front: RAL 7015

Supply includes:

- 1 design component, front
- 1 base/plinth component, rear
- 2 base/plinth trim panels, side

For depth mm	Model No.
600	8800.920



Accessories:

- Twin castors 7495.000, see page 522
- Levelling feet 4612.000, see page 521
- Fastening bolt for cable clamp rails 2819.000, see page 516
- Support bracket 4183.000, see page 620



Filter mat

for Flex-Block, vented version

To cover the trim panel in the Flex-Block. The filter mat is simply inserted into the trim panel from the rear. May be shortened to the required length.

For enclosure width mm	Packs of	Model No.
600/800	4 pc(s).	7583.500



Base/plinth

Base/plinth TS



Base/plinth components front and rear

Stainless steel for TS, SE

Material:

- Stainless steel 1.4301 (AISI 304)

Surface finish:

- Brushed, grain 400

Supply includes:

- Mounting accessories for mounting on the enclosure

100 mm high:

- 2 trim panels front/rear

200 mm high:

- 2 corner pieces with removable trim panel
- 1 trim panel front/rear



Base/plinth trim panels, side

Stainless steel for base/plinth components, front and rear

For mounting between the base/plinth components. With the 200 mm height, two 100 mm base/plinth trim panels may also be used. Base/plinth trim panels (100 mm high) may be installed rotated through 90° to stabilise bayed base/plinth components.

Material:

- Stainless steel 1.4301 (AISI 304)

Surface finish:

- Brushed, grain 400

Supply includes:

- 2 base/plinth trim panels, including parts for attaching to the base/plinth components



Base/plinth trim, modular

for

- TS base/plinth, stainless steel
- Base/plinth, complete, stainless steel

For secure cable routing in the base/plinth between the floor and the enclosure.

Width: 175 mm

Material:

- Stainless steel 1.4301 (AISI 304)

Supply includes:

- 4 base/plinth trim panels

Note:

- One base/plinth trim panel is needed per 200 mm base/plinth width

For enclosure width mm	Height mm	Model No.
600	100	8701.600
800	100	8701.800
1000	100	8701.000
1200	100	8701.200
600	200	8702.600
800	200	8702.800
1000	200	8702.000
1200	200	8702.200

+ Accessories:

- Base/plinth trim, modular (perforated plate), see page 518

For enclosure depth mm	Height mm	Model No.
400	100	8701.040
500	100	8701.050
600	100	8701.060
400	200	8702.040
500	200	8702.050
600	200	8702.060

! Also required:

- Base/plinth baying brackets 8601.100, see page 514, when base/plinth trim panels are installed rotated through 90°

+ Accessories:

- Fastening bolts for base/plinth, see page 516

Technical details:

Available on the Internet

For enclosure depth mm	Packs of	Model No.
400	4 pc(s).	2907.000
500	4 pc(s).	2908.000
600	4 pc(s).	2913.000

+ Accessories:

- Cable tie 2597.000, see page 667

Base/plinth, complete

Sheet steel for AE, TP universal console

Trim panels at the front and rear with fitted corner pieces and side trim panels.

Material:

- Sheet steel

Surface finish:

- Spray-finished

Colour:

- RAL 7022

Supply includes:

- Mounting accessories for mounting on the enclosure

100 mm high:

- 4 corner pieces
- 2 trim panels front/rear
- 2 trim panels, side

200 mm high:

- 4 corner pieces
- 1 trim panel front/rear x 200 mm
- 2 trim panels front/rear x 100 mm
- 4 trim panels, side

Base/plinth for TP universal console, 100 mm high

For enclosures/consolas		Base/plinth depth mm	Model No.
Width mm	Depth mm		
600	500	450	2807.200

Base/plinth for AE, 100 mm high

For enclosures		Base/plinth depth mm	Model No.
Width mm	Depth mm		
600	300	279	2816.200
800	300	279	2818.200
1000	300	279	2801.200

Base/plinth for AE, 200 mm high

For enclosures		Base/plinth depth mm	Model No.
Width mm	Depth mm		
600	300	279	2826.200
800	300	279	2828.200
1000	300	279	2802.200

Technical details:

Available on the Internet



Accessories:

- Fastening bolt, see page 516
- Base mounting plate, see page 516

Base/plinth, complete

Stainless steel for stainless steel one-piece consoles

Height: 100 mm

Where necessary, 2 base/plinths may be installed one above the other.

Material:

- Stainless steel 1.4301 (AISI 304)

Surface finish:

- Brushed

Supply includes:

- Mounting accessories for mounting on the enclosure
- 2 trim panels front/rear
- 2 trim panels, side

For enclosures/consolas		Model No.
Width mm	Depth mm	
600	400	2865.000
800	400	2869.000
1000	400	2867.000
1200	400	2870.000



Accessories:

- Levelling feet, see page 520
- Base/plinth trim, modular (perforated plate), see page 518

Cast feet

For secure siting of

- Enclosure for tower PC

or

- Other customer equipment

Depth: 700 mm

Material:

- Cast aluminium

Colour:

- RAL 7035

Supply includes:

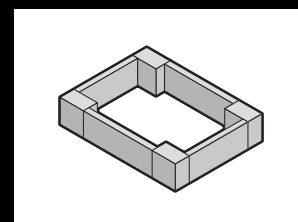
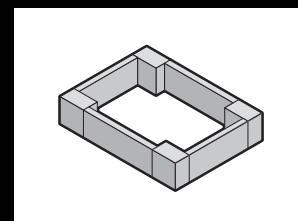
- Assembly parts

Packs of	Model No.
2 pc(s).	6902.920



Accessories:

- Base mount 6147.000, see page 167
- Twin castors, see page 522



Base/plinth

Base/plinth



Levelling feet

For direct mounting underneath the base/plinth TS and the base/plinth, complete. For unhindered access e.g. when cleaning the floor, and to compensate for floor irregularities.

Load capacity:

- Max. admissible static load: 400 kg per levelling foot

Adjustment range:

- M12: 55 mm – 125 mm
- M16: 45 mm – 120 mm

Material:

- Stainless steel 1.4301 (AISI 304)

Thread	Packs of	Model No.
M12	4 pc(s).	2889.000
M16	4 pc(s).	2890.000

Possible alternative:

- Levelling feet Hygienic Design, see page 172



Cross member

for TS, SE, CM, TP, PC, IW adjustable

- To increase stability
- Height 70 mm
- Adjustable from the enclosure depth

To increase stability, the cross member is positioned 138 mm above the base frame of the enclosure at the front and rear. For deeper enclosures, the rear part may be extended and screw-fastened again. For screw-fastening to the floor and enclosure with mounting hole at the sides, front and rear. The castors and levelling feet may be secured to the welded nuts M12.

Material:

- Sheet steel

Surface finish:

- Spray-finished

Colour:

- RAL 7015

For enclosure depth mm	Packs of	Model No.
400	1 set(s)	8601.450
500		
600		
800	1 set(s)	8601.680

Accessories:

- Twin castors 6148.000, 7495.000 see page 522
- Levelling feet 4612.000, 7493.100, see page 521

Technical details:

Available on the Internet



Stabiliser

for TS IT

The pull-out stabiliser is quickly and easily retrofitted to the lower frame of the server racks and only extended when necessary.

Load capacity:

- Up to a maximum of 150 kg static load

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

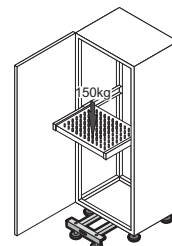
Note:

- The stabiliser cannot be used together with base plates, base frames or base/plinths

Enclosure depth mm	Model No.
1000	7825.250

Accessories:

- Levelling feet, see page 521 and/or
- Transport kit, see page 522



Levelling feet

for TS, TS IT, SE, PC, IW

To compensate for height differences with floor irregularities. Assembly thread M12.

Optionally with hex socket for adjustment from the inside of the enclosure.

Load capacity:

- Max. admissible static load: approx. 300 kg per levelling foot

Hex socket	Adjustment height	Packs of	Model No.
Without	18 – 43 mm	4 pc(s).	4612.000
With	18 – 63 mm	4 pc(s).	7493.100



Also required:

- For mounting on the TS base/plinth: Base/plinth adaptor 8800.220, see page 522

Technical details:

Available on the Internet



Levelling feet

for FlatBox

M10 x 20 mm

For screw-fastening onto the enclosure base when used as a floor-standing or desktop enclosure.

Width across flats 17, mounting thread multi-tooth 30.

Packs of	Model No.
4 pc(s).	7507.740



Levelling feet

85 – 115 mm high

For mounting on TS, SE and PC enclosures, for easier floor cleaning and to compensate for floor irregularities ±15 mm.

Height: 100 mm

Load capacity:

- Max. admissible static load: 350 kg per levelling foot

Material:

- Stainless steel 1.4301 (AISI 304)

Supply includes:

- Assembly parts to the enclosure

Packs of	Model No.
4 pc(s).	2859.000



Possible alternative:

- Levelling feet Hygienic Design, see page 172



Base

Base



Twin castors

Mounting thread M12 x 20.

For:

- Baying system TS 8
- SE 8 free-standing enclosure system
- PC enclosure system
- Pedestal base plate
- Pedestal 6106.200/6106.300
- TopConsole pedestals
- Industrial workstations
- Data Rack



Also required:

- For mounting on the TS base/plinth:
Base/plinth adaptor for twin castors 8800.290, see page 523

	Maximum admissible static load (per castor)	75 kg
	Floor clearance	85 mm
1	Lock	2 with, 2 without
	Packs of	1 set(s)
	Colour	Black with grey running surface
	Model No.	6148.000

	Maximum admissible static load (per castor)	120 kg
	Floor clearance	125 mm
2	Lock	2 with, 2 without
	Packs of	1 set(s)
	Colour	Black
	Model No.	7495.000



Transport kit

for TS IT

Floor clearance: approx. 40 mm

Load capacity:

- Max. admissible static load:
750 kg per enclosure

Supply includes:

- 1 set = 4 castors (2 steerable) including assembly parts

	Packs of	Model No.
	1 set(s)	7825.900

Note:

- Only for enclosures without gland plates and base tray/base mount

Technical details:

Available on the Internet



Adaptor sleeve

for Flex-Block

For stacking the base/plinth corner pieces.

Material:

- Steel

Surface finish:

- Zinc-plated

Supply includes:

- 12 adaptor sleeves
- 8 screws M12
- 8 washers

	Packs of	Model No.
	12 pc(s).	8000.500



Base/plinth adaptor

for levelling feet

Connection component for fastening M12 levelling feet to the TS base/plinth.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

	Packs of	Model No.
	4 pc(s).	8800.220



Accessories:

- Levelling feet 4612.000, 7493.100, see page 521

Base/plinth adaptor

for twin castors

Connection component for mounting twin castors on the TS base/plinth.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Packs of	Model No.
4 pc(s).	8800.290



Also required:

- Base/plinth trim panels, side, see page 514, wherever a twin castor is fitted



Width divider

Divides 1200 mm wide TS and SE enclosures into two halves.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- 1 set =
1 bracket for right/left, 2 compensating plates for the top, mounting accessories.

Packs of	Model No.
1 set(s)	8800.200



Also required:

- TS punched rail 18 x 38 mm, see page 609
 - PS punched section without mounting flange, 23 x 73 mm, see page 611
- Depending on the installation situation



1st mounting position:

Two mounting plates side by side.

Two mounting plates (from 600 mm wide enclosures) in a 1200 mm wide enclosure permit independent positioning and easy handling.



Also required:

- Four TS punched rails 18 x 38 mm at the bottom, according to the enclosure depth, see page 609
- One PS punched section without mounting flange 23 x 73 mm at the top, according to the enclosure depth, see page 611



2nd mounting position:

System support rails, fitted on the left.

Whilst heavy installed equipment rests on the system support rails, the remaining floor space is left free, e.g. for unhindered cable entry.



Also required:

- Two system support rails 4361.000, see page 613
- 1 TS punched rail 18 x 38 mm in accordance with the enclosure depth (included with the supply of the standard enclosure)



3rd mounting position:

Cable clamp rail, installed on the left.

With 1200 mm wide enclosures, the width divider allows cable entry and cable clamping to be arranged differently on the left and right of the enclosure.



Also required:

- 1 cable clamp rail 4191.000, see page 665
- 1 TS punched rail 18 x 38 mm in accordance with the enclosure depth (included with the supply of the standard enclosure)



Base

Base



Reinforcement bracket

for TS, SE, TP universal console

For use as an additional stabiliser to the clamping straps when populated enclosures are screw-fastened via the base tray to the base/plinth or pallet for transportation purposes.

Material:

– Sheet steel

Surface finish:

– Zinc-plated

Supply includes:

– Assembly parts

Packs of	Model No.
4 pc(s).	8800.830



Base mount

for TS IT

To accommodate gland plate modules.

- Tool-free mounting or screw-fastening
- Easily retrofitted and combined with stabiliser

Material:

– Sheet steel

Surface finish:

– Spray-finished

Colour:

– RAL 7035

Supply includes:

– 2 mounting rails including assembly parts

For enclosure depth mm	Packs of	Model No.
600	2 pc(s).	5501.300
800	2 pc(s).	5501.310
1000	2 pc(s).	5501.320
1200	2 pc(s).	5501.350



Clips

for gland plates

As replacement and for additional gland plate attachments in TS, SE, CM, TP.

Material:

– Sheet steel

Surface finish:

– Zinc-plated

Packs of	Model No.
50 pc(s).	8800.075

Gland plate

for CM, TP

Potential equalisation is provided via assembly components and earthing points.

Material:

– Sheet steel

Surface finish:

– Zinc-plated

Supply includes:


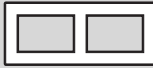
– Assembly parts

Note:

– For greater stability and universal cable entry, the base opening is divided in the width for 1000, 1200 and 1600 mm wide enclosures, and is suitable for various configurations



For enclosure depth 300 mm, complete module groups

	For enclosure/console width mm								
	One-piece base opening				Two-piece base opening				
									
For enclosure width	Packs of	Packs required	600	800	Packs of	Packs required	1000	1200	1600
Cable entry module groups			Model No.				Model No.		

Cable clamp strip, centre

Gland plate, depth 50 mm	1 pc(s).	2	5001.210	5001.211	1 pc(s).	4	5001.212	5001.213	5001.233
Section for cable entry, centre	1 set(s)	1	8802.060	8802.080	2 set(s)	1	8802.100	8802.120	8802.160

Cable clamp strip, rear

Gland plate, depth 100 mm	1 pc(s).	1	5001.214	5001.215	1 pc(s).	2	5001.216	5001.217	5001.234
Section for cable entry, rear	1 set(s)	1	8802.065	8802.085	2 set(s)	1	8802.105	8802.125	8802.165

Grommets, 1 x

Gland plate, depth 50 mm	1 pc(s).	1	5001.210	5001.211	1 pc(s).	2	5001.212	5001.213	5001.233
Cable entry plates for grommets	1 pc(s).	1	5001.226	5001.227	1 pc(s).	1	5001.228	5001.229	5001.237

Cable entry and connector grommets, see page 651

For cable glands

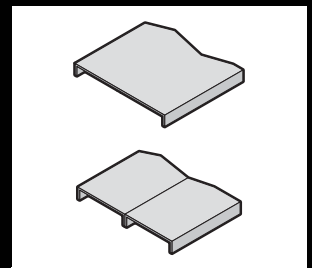
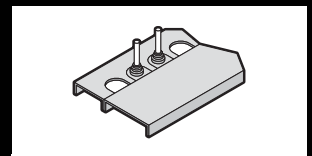
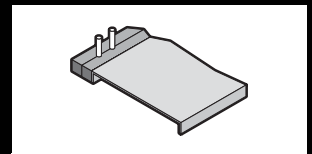
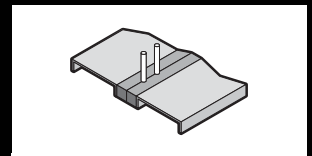
One-piece

Gland plate, depth 150 mm	1 pc(s).	1	5001.218	5001.219	1 pc(s).	2	5001.220	5001.221	5001.235
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Two-piece

Gland plate, depth 50 mm	1 pc(s).	1	5001.210	5001.211	1 pc(s).	2	5001.212	5001.213	5001.233
Gland plate, depth 100 mm	1 pc(s).	1	5001.214	5001.215	1 pc(s).	2	5001.216	5001.217	5001.234



Cable glands, see page 658



Base

Base

For enclosure depth 400 mm, complete module groups

	For enclosure/console width mm								
	One-piece base opening				Two-piece base opening				
									
For enclosure width	Packs of	Packs required	600	800	Packs of	Packs required	1000	1200	1600
Cable entry module groups			Model No.				Model No.		

Cable clamp strip, centre

Gland plate, depth 50 mm	1 pc(s).	1	5001.210	5001.211	1 pc(s).	2	5001.212	5001.213	5001.233
Gland plate, depth 150 mm	1 pc(s).	1	5001.218	5001.219	1 pc(s).	2	5001.220	5001.221	5001.235
Section for cable entry, centre	1 set(s)	1	8802.060	8802.080	2 set(s)	1	8802.100	8802.120	8802.160

Cable clamp strip, rear

Gland plate, depth 100 mm	1 pc(s).	2	5001.214	5001.215	1 pc(s).	4	5001.216	5001.217	5001.234
Section for cable entry, rear	1 set(s)	1	8802.065	8802.085	2 set(s)	1	8802.105	8802.125	8802.165

Cable clamp strip, centre and rear

Gland plate, depth 50 mm	1 pc(s).	1	5001.210	5001.211	1 pc(s).	2	5001.212	5001.213	5001.233
Gland plate, depth 100 mm	1 pc(s).	1	5001.214	5001.215	1 pc(s).	2	5001.216	5001.217	5001.234
Section for cable entry, centre	1 set(s)	1	8802.060	8802.080	2 set(s)	1	8802.100	8802.120	8802.160
Section for cable entry, rear	1 set(s)	1	8802.065	8802.085	2 set(s)	1	8802.105	8802.125	8802.165

Grommets, 1 x

Gland plate, depth 150 mm	1 pc(s).	1	5001.218	5001.219	1 pc(s).	2	5001.220	5001.221	5001.235
Cable entry plates for grommets	1 pc(s).	1	5001.226	5001.227	1 pc(s).	2	5001.228	5001.229	5001.237

Cable entry and connector grommets, see page 651

Grommets, 2 x

Gland plate, depth 50 mm	1 pc(s).	1	5001.210	5001.211	1 pc(s).	2	5001.212	5001.213	5001.233
Cable entry plates for grommets	1 pc(s).	2	5001.226	5001.227	1 pc(s).	4	5001.228	5001.229	5001.237

Cable entry and connector grommets, see page 651

EMC

EMC gland plate	1 set(s)	1	8800.660	8800.680	1 set(s)	2	8800.600	8800.620	-
Gland plate, depth 100 mm	1 pc(s).	1	5001.214	5001.215	1 pc(s).	2	5001.216	5001.217	-

Cable entry and connector grommets, see page 651

For cable glands

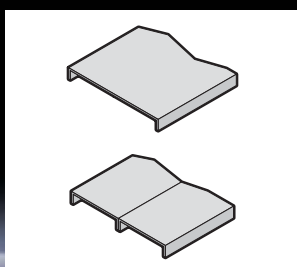
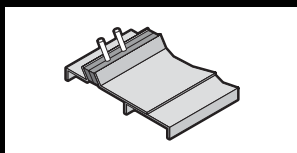
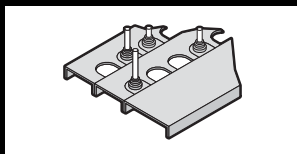
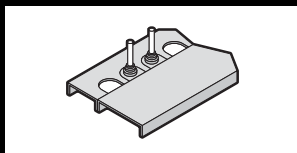
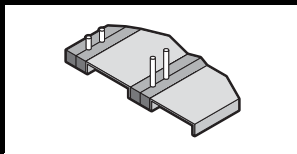
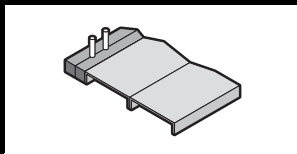
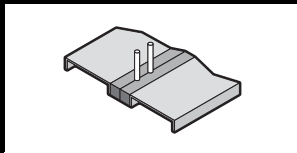
One-piece

Gland plate, depth 250 mm	1 pc(s).	1	5001.222	5001.223	1 pc(s).	2	5001.224	5001.225	5001.236
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Two-piece

Gland plate, depth 150 mm	1 pc(s).	1	5001.218	5001.219	1 pc(s).	2	5001.220	5001.221	5001.235
Gland plate, depth 100 mm	1 pc(s).	1	5001.214	5001.215	1 pc(s).	2	5001.216	5001.217	5001.234

Cable glands, see page 658



For enclosure depth 500 mm, complete module groups

	For enclosure/console width mm								
	One-piece base opening				Two-piece base opening				
For enclosure width	Packs of	Packs required	600	800	Packs of	Packs required	1000	1200	1600
Cable entry module groups			Model No.				Model No.		

Cable clamp strip, centre

Gland plate, depth 50 mm	1 pc(s).	1	5001.210	5001.211	1 pc(s).	2	5001.212	5001.213	5001.233
Gland plate, depth 250 mm	1 pc(s).	1	5001.222	5001.223	1 pc(s).	2	5001.224	5001.225	5001.236
Section for cable entry, centre	1 set(s)	1	8802.060	8802.080	2 set(s)	1	8802.100	8802.120	8802.160

Cable clamp strip, rear

Gland plate, depth 150 mm	1 pc(s).	2	5001.218	5001.219	1 pc(s).	4	5001.220	5001.221	5001.235
Section for cable entry, rear	1 set(s)	1	8802.065	8802.085	2 set(s)	1	8802.105	8802.125	8802.165

Cable clamp strip, centre and rear

Gland plate, depth 50 mm	1 pc(s).	1	5001.210	5001.211	1 pc(s).	2	5001.212	5001.213	5001.233
Gland plate, depth 100 mm	1 pc(s).	2	5001.214	5001.215	1 pc(s).	4	5001.216	5001.217	5001.234
Section for cable entry, centre	1 set(s)	1	8802.060	8802.080	2 set(s)	1	8802.100	8802.120	8802.160
Section for cable entry, rear	1 set(s)	1	8802.065	8802.085	2 set(s)	1	8802.105	8802.125	8802.165

Grommets, 1 x

Gland plate, depth 250 mm	1 pc(s).	1	5001.222	5001.223	1 pc(s).	2	5001.224	5001.225	5001.236
Cable entry plates for grommets	1 pc(s).	1	5001.226	5001.227	1 pc(s).	2	5001.228	5001.229	5001.237

Cable entry and connector grommets, see page 651

Grommets, 2 x

Gland plate, depth 150 mm	1 pc(s).	1	5001.218	5001.219	1 pc(s).	2	5001.220	5001.221	5001.235
Cable entry plates for grommets	1 pc(s).	2	5001.226	5001.227	1 pc(s).	4	5001.228	5001.229	5001.237

Cable entry and connector grommets, see page 651

EMC

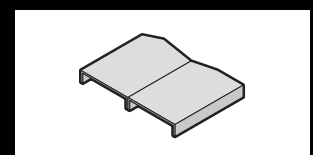
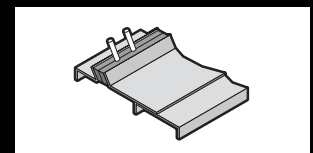
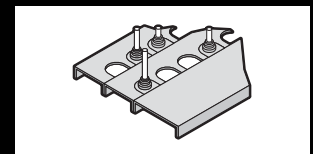
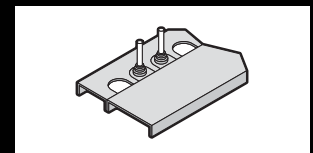
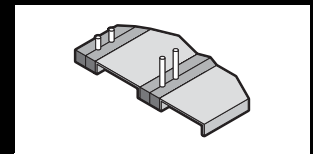
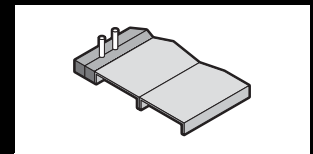
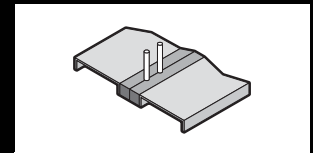
EMC gland plate	1 set(s)	1	8800.660	8800.680	1 set(s)	2	8800.600	8800.620	-
Gland plate, depth 100 mm	1 pc(s).	2	5001.214	5001.215	1 pc(s).	4	5001.216	5001.217	-

Cable entry and connector grommets, see page 651

For cable glands, two-piece

Gland plate, depth 100 mm	1 pc(s).	1	5001.214	5001.215	1 pc(s).	2	5001.216	5001.217	5001.234
Gland plate, depth 250 mm	1 pc(s).	1	5001.222	5001.223	1 pc(s).	2	5001.224	5001.225	5001.236

Cable glands, see page 658



Base

Base



Gland plate

for TS IT

Potential equalisation is provided via assembly components and earthing points.

■ Gland plate set

To conceal the entire base opening.

■ Gland plate modules

Select suitable modules depending on the application.

Material:

– Sheet steel

Surface finish:

– Zinc-plated

Supply includes:

– Assembly parts



Accessories:

– Clips for gland plates, see page 524

For enclosure depth 600 mm

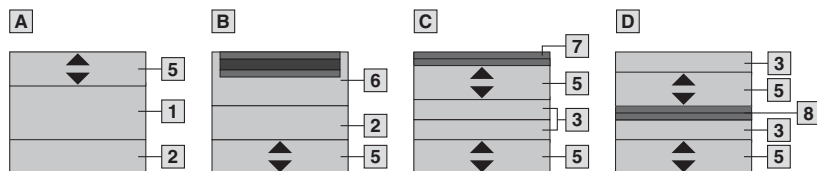
A Gland plate set	Packs of	Packs required	For enclosure width mm	
			600	800
			Model No.	
Gland plate, solid, with sliding panel, multi-piece	1 set(s)	1	–	5502.510

Gland plate modules	Packs of	Packs required	For enclosure width mm	
			600	800

B 1 module plate as selected			Model No.		
Gland plate, depth 150 mm	1 pc(s).	1	5001.218	5001.219	
Sliding panel, depth 150 mm	1 pc(s).	1	5001.239	5001.240	
Module plate, depth 237.5 mm	1 pc(s).	1	Cable entry with brush strip	7825.361	7825.381
			Vented	7825.360	7825.380
			Cable entry with brush strip, super-airtight	7825.367	7825.387
			Cable entry, side	–	7825.388

C Cable entry, rear or front			Model No.	
Gland plate, depth 100 mm	1 pc(s).	2	5001.214	5001.215
Sliding panel, depth 150 mm	1 pc(s).	2	5001.239	5001.240
Foam rubber cable clamp strip	3 m	1	2573.000	2573.000

D Cable entry, centre			Model No.	
Gland plate, depth 100 mm	1 pc(s).	2	5001.214	5001.215
Sliding panel, depth 150 mm	1 pc(s).	2	5001.239	5001.240
Section for cable entry, centre	1 set(s)	1	8802.060	8802.080



- 1 Gland plate, depth 250 mm
- 2 Gland plate, depth 150 mm
- 3 Gland plate, depth 100 mm
- 4 Gland plate, depth 50 mm
- 5 Sliding panel, depth 150 mm
- 6 Module plate, depth 237.5 mm
- 7 Self-adhesive foam cable clamp strip
- 8 Section for cable entry, centre



Also required:

– Base mount, see page 524



For enclosure depth 800 mm

A Gland plate set	Packs of	Packs required	For enclosure width mm	
			600	800
Model No.				
Gland plate, solid, with sliding panel, multi-piece	1 set(s)	1	–	5502.530

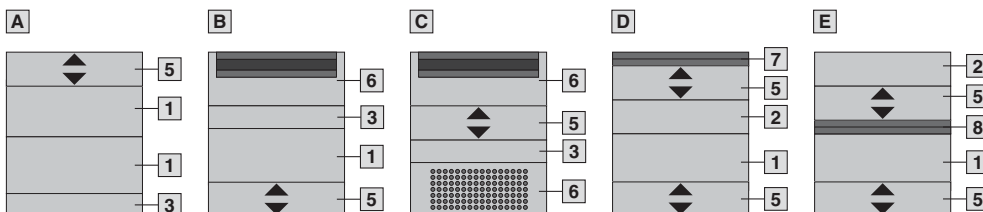
Gland plate modules	Packs of	Packs required	For enclosure width mm	
			600	800

B 1 module plate as selected				Model No.	
Gland plate, depth 250 mm	1 pc(s).	1	5001.222	5001.223	
Gland plate, depth 100 mm	1 pc(s).	1	5001.214	5001.215	
Sliding panel, depth 150 mm	1 pc(s).	1	5001.239	5001.240	
Module plate, depth 237.5 mm	1 pc(s).	1	Cable entry with brush strip	7825.361	7825.381
			Vented	7825.360	7825.380
			Cable entry with brush strip, super-airtight	7825.367	7825.387
			Cable entry, side	–	7825.388

C 2 module plates as selected				Model No.	
Gland plate, depth 150 mm	1 pc(s).	1	5001.218	5001.219	
Sliding panel, depth 150 mm	1 pc(s).	1	5001.239	5001.240	
Module plate, depth 237.5 mm	1 pc(s).	2	Cable entry with brush strip	7825.361	7825.381
			Vented	7825.360	7825.380
			Cable entry with brush strip, super-airtight	7825.367	7825.387
			Cable entry, side	–	7825.388

D Cable entry, rear or front				Model No.	
Gland plate, depth 250 mm	1 pc(s).	1	5001.222	5001.223	
Gland plate, depth 150 mm	1 pc(s).	1	5001.218	5001.219	
Sliding panel, depth 150 mm	1 pc(s).	2	5001.239	5001.240	
Foam rubber cable clamp strip	3 m	1	2573.000	2573.000	

E Cable entry, centre				Model No.	
Gland plate, depth 250 mm	1 pc(s).	1	5001.222	5001.223	
Gland plate, depth 150 mm	1 pc(s).	1	5001.218	5001.219	
Sliding panel, depth 150 mm	1 pc(s).	2	5001.239	5001.240	
Section for cable entry, centre	1 set(s)	1	8802.060	8802.080	



- 1 Gland plate, depth 250 mm
- 2 Gland plate, depth 150 mm
- 3 Gland plate, depth 100 mm
- 4 Gland plate, depth 50 mm
- 5 Sliding panel, depth 150 mm
- 6 Module plate, depth 237.5 mm
- 7 Self-adhesive foam cable clamp strip
- 8 Section for cable entry, centre

! Also required:

– Base mount, see page 524

Base

Base



For enclosure depth 1000 mm

A Gland plate set	Packs of	Packs required	For enclosure width mm	
			600	800
			Model No.	
Gland plate, solid, with sliding panel, multi-piece	1 set(s)	1	5502.540	5502.550

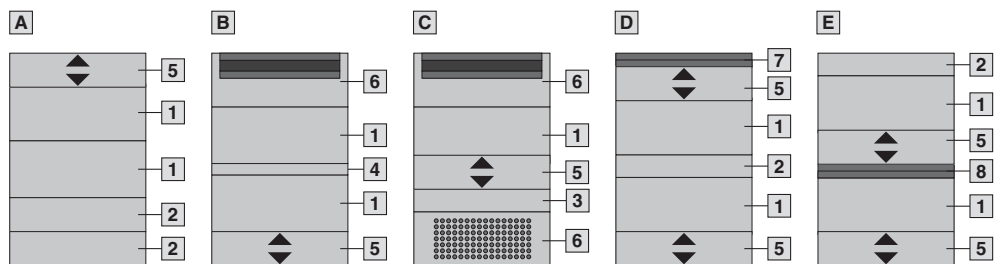
Gland plate modules	Packs of	Packs required	For enclosure width mm	
			600	800

B 1 module plate as selected			Model No.		
Gland plate, depth 250 mm	1 pc(s).	2	5001.222	5001.223	
Gland plate, depth 50 mm	1 pc(s).	1	5001.210	5001.211	
Sliding panel, depth 150 mm	1 pc(s).	1	5001.239	5001.240	
Module plate, depth 237.5 mm	Cable entry with brush strip	1 pc(s).	1	7825.361	7825.381
	Vented			7825.360	7825.380
	Cable entry with brush strip, super-airtight			7825.367	7825.387
	Cable entry, side			-	7825.388

C 2 module plates as selected			Model No.		
Gland plate, depth 250 mm	1 pc(s).	1	5001.222	5001.223	
Gland plate, depth 100 mm	1 pc(s).	1	5001.214	5001.215	
Sliding panel, depth 150 mm	1 pc(s).	1	5001.239	5001.240	
Module plate, depth 237.5 mm	Cable entry with brush strip	1 pc(s).	2	7825.361	7825.381
	Vented			7825.360	7825.380
	Cable entry with brush strip, super-airtight			7825.367	7825.387
	Cable entry, side			-	7825.388

D Cable entry, rear or front			Model No.	
Gland plate, depth 250 mm	1 pc(s).	2	5001.222	5001.223
Gland plate, depth 100 mm	1 pc(s).	1	5001.214	5001.215
Sliding panel, depth 150 mm	1 pc(s).	2	5001.239	5001.240
Foam rubber cable clamp strip	3 m	1	2573.000	2573.000

E Cable entry, centre			Model No.	
Gland plate, depth 250 mm	1 pc(s).	2	5001.222	5001.223
Gland plate, depth 100 mm	1 pc(s).	1	5001.214	5001.215
Sliding panel, depth 150 mm	1 pc(s).	2	5001.239	5001.240
Section for cable entry, centre	1 set(s)	1	8802.060	8802.080



- 1 Gland plate, depth 250 mm
- 2 Gland plate, depth 150 mm
- 3 Gland plate, depth 100 mm
- 4 Gland plate, depth 50 mm
- 5 Sliding panel, depth 150 mm
- 6 Module plate, depth 237.5 mm
- 7 Self-adhesive foam cable clamp strip
- 8 Section for cable entry, centre

! Also required:

- Base mount, see page 524



For enclosure depth 1200 mm

A Gland plate set	Packs of	Packs required	For enclosure width mm	
			600	800
			Model No.	
Gland plate, solid, with sliding panel, multi-piece	1 set(s)	1	5502.560	5502.570

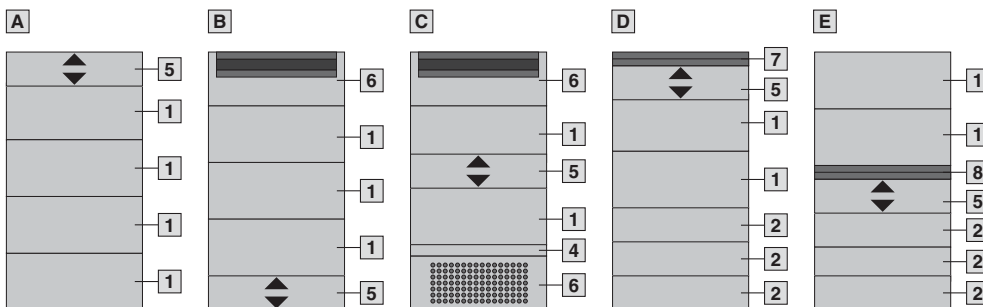
Gland plate modules	Packs of	Packs required	For enclosure width mm	
			600	800
			Model No.	

B 1 module plate as selected			Model No.		
Gland plate, depth 250 mm	1 pc(s).	3	5001.222	5001.223	
Sliding panel, depth 150 mm	1 pc(s).	1	5001.239	5001.240	
Module plate, depth 237.5 mm	1 pc(s).	1	Cable entry with brush strip	7825.361	7825.381
			Vented	7825.360	7825.380
			Cable entry with brush strip, super-airtight	7825.367	7825.387
			Cable entry, side	-	7825.388

C 2 module plates as selected			Model No.		
Gland plate, depth 250 mm	1 pc(s).	2	5001.222	5001.223	
Gland plate, depth 50 mm	1 pc(s).	1	5001.210	5001.211	
Sliding panel, depth 150 mm	1 pc(s).	1	5001.239	5001.240	
Module plate, depth 237.5 mm	1 pc(s).	2	Cable entry with brush strip	7825.361	7825.381
			Vented	7825.360	7825.380
			Cable entry with brush strip, super-airtight	7825.367	7825.387
			Cable entry, side	-	7825.388

D Cable entry, rear or front			Model No.	
Gland plate, depth 250 mm	1 pc(s).	2	5001.222	5001.223
Gland plate, depth 150 mm	1 pc(s).	3	5001.218	5001.219
Sliding panel, depth 150 mm	1 pc(s).	1	5001.239	5001.240
Foam rubber cable clamp strip	3 m	1	2573.000	2573.000

E Cable entry, centre			Model No.	
Gland plate, depth 250 mm	1 pc(s).	2	5001.222	5001.223
Gland plate, depth 150 mm	1 pc(s).	3	5001.218	5001.219
Sliding panel, depth 150 mm	1 pc(s).	1	5001.239	5001.240
Section for cable entry, centre	1 set(s)	1	8802.060	8802.080



- 1 Gland plate, depth 250 mm
- 2 Gland plate, depth 150 mm
- 3 Gland plate, depth 100 mm
- 4 Gland plate, depth 50 mm
- 5 Sliding panel, depth 150 mm
- 6 Module plate, depth 237.5 mm
- 7 Self-adhesive foam cable clamp strip
- 8 Section for cable entry, centre

! Also required:

- Base mount, see page 524

Base

Base



Trim panel

for CM, TP

To conceal the entire base opening with CM or as the cover for a TP pedestal.

Material:

- Sheet steel

Surface finish:

- Textured paint

Colour:

- RAL 7035

Protection category to IEC 60 529:

- IP 55

Supply includes:

- Assembly parts

For enclosure		Model No.
Width mm	Depth mm	
600	400	5001.130
800	400	5001.140
1000	400	5001.150
1200	400	5001.160
1600	400	6730.030
600	500	6730.100
800	500	6730.110
1200	500	6730.120
1600	500	6730.130



Gland plate module, vented

for TS, TS IT, SE

Large perforated section for passive enclosure ventilation.

Gland plate depth:

- 237.5 mm

Supply includes:

- Filter mat and nylon tape

For enclosure width mm	Model No.
600	7825.360
800	7825.380



Also required:

- Base mount for installation in TS IT, see page 524
- Gland plates for installation in TS IT, see page 528



Gland plate module, one-piece, with brush strip

for TS, TS IT, SE

For simple, sealed cable entry.

Gland plate depth:

- 237.5 mm

For enclosure width mm	Model No.
600	7825.361
800	7825.381



Also required:

- Base mount for installation in TS IT, see page 524
- Gland plates for installation in TS IT, see page 528



Gland plate module, two-piece, with brush strip

for TS, TS IT, SE

Special brush strips with brush strips offset on alternate sides offer maximum possible protection with professional cable entry. The two-piece design even allows retrospective fitting of the base module with the cables already installed.

Gland plate depth:

- 237.5 mm

Material:

- Module plate: Sheet steel
- Brush strip: Plastic, UL 94-V0

Surface finish:

- Module plate: Zinc-plated

Supply includes:

- Assembly parts

For enclosure width mm	Packs of	Model No.
600	1 pc(s).	7825.367
800	1 pc(s).	7825.387



Also required:

- Base mount for installation in TS IT, see page 524
- Gland plates for installation in TS IT, see page 528



Gland plate module for side cable entry

for TS, TS IT, SE

With adjustable openings on both sides and rubber cable clamp strip. The two-piece design even allows retrospective fitting of the base module with the cables already installed.

Supply includes:

- Assembly parts

For enclosure width mm	Model No.
800	7825.388



Also required:

- Base mount for installation in TS IT, see page 524
- Gland plates for installation in TS IT, see page 528



Pressure relief stoppers

Especially when enclosures are exposed to changing climatic conditions (e.g. with outdoor siting), condensation may form in sealed enclosures due to pressure differences. The integral sealing membrane largely prevents such pressure differences and hence condensation; additionally, it also prevents the ingress of moisture from the outside. Installed in vertical surfaces to protect against dirt.

Packs of	Model No.
5 pc(s).	2459.500

Technical specifications:

- Air permeability up to 120 litres/hour with a pressure difference of 70 mbar
- Connection thread M12 x 1.5
- For fitting in wall thicknesses up to 4 mm

Material:

- Polyamide

Colour:

- Similar to RAL 9005

Protection category IP to IEC 60 529:

- IP 66, 68

Protection category IP to DIN 40 050-9:

- IP 69K

Supply includes:

- Lock nut



Condensate discharge

For reliable condensate discharge from the inside and protection against splashed water from the outside (labyrinth effect).

A hole diameter of 16 mm is required.

(With AE sheet steel, the holes are already provided in the base).

Material:

- Polyamide

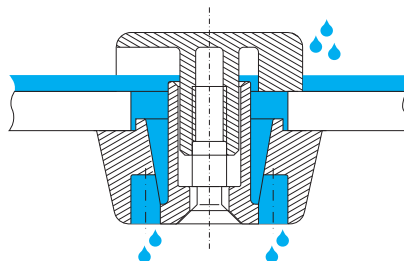
Colour:

- Similar to RAL 7035

Protection category:

- Protection from splashed water, when professionally installed at the bottom

Packs of	Model No.
6 pc(s).	2459.000



Walls

Side panels



Side panels, screw-fastened, sheet steel

for TS, TS IT

- Automatic potential equalisation and higher EMC protection thanks to enclosure panel holders with earthing insert
- Easy positioning with the location aid
- Earthing bolt with contact surface

Material:

- Sheet steel 1.5 mm

Surface finish:

- Dipcoat-primed, powder-coated on the outside

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 55

Supply includes:

- Assembly parts

Note:

- Enclosure panel holders may optionally be fitted from the inside or outside of the enclosure.
- Area available for population:
External dimension -100 mm

For enclosures		Packs of	Model No.
Height mm	Depth mm		
800	600	2 pc(s).	8173.235
1000	600	2 pc(s).	8174.235
1200	500	2 pc(s).	8115.235
1200	600	2 pc(s).	8170.235
1200	800	2 pc(s).	8175.235
1200	1000	2 pc(s).	8176.235
1400	500	2 pc(s).	8145.235
1400	600	2 pc(s).	8146.235
1400	800	2 pc(s).	8148.235
1600	500	2 pc(s).	8165.235
1600	600	2 pc(s).	8166.235
1600	800	2 pc(s).	8168.235
1800	400	2 pc(s).	8184.235
1800	500	2 pc(s).	8185.235
1800	600	2 pc(s).	8186.235
1800	800	2 pc(s).	8188.235
1800	1000	2 pc(s).	8180.235
2000	400	2 pc(s).	8104.235
2000	500	2 pc(s).	8105.235
2000	600	2 pc(s).	8106.235
2000	800	2 pc(s).	8108.235
2000	1000	2 pc(s).	8100.235
2200	600	2 pc(s).	8126.235
2200	800	2 pc(s).	8128.235

+ Accessories:

- Earth straps, see page 644
- Enclosure panel holders, internal, see page 535, for heavy installed equipment and high dynamic loads



Side panels, screw-fastened, stainless steel

for TS

- Automatic potential equalisation and higher EMC protection thanks to enclosure panel holders
- Easy positioning with the location aid
- Earthing bolt with contact surface

Material:

- Stainless steel 1.4301 (AISI 304), 1.5 mm

Surface finish:

- Brushed, grain 400

Protection category IP to IEC 60 529:

- IP 55

Supply includes:

- Assembly parts

For enclosures		Packs of	Model No.
Height mm	Depth mm		
1800	400	2 pc(s).	8700.840
1800	500	2 pc(s).	8700.850
2000	600	2 pc(s).	8700.060

+ Accessories:

- Enclosure panel holders, internal, see page 535, for heavy installed equipment and high dynamic loads

Side panels

Baying frame, IP 66/NEMA 4, NEMA 4X

for TS

For baying enclosure systems.

- Automatic potential equalisation and higher EMC protection thanks to enclosure panel holders
- Easy positioning with the location aid
- Foamed-in on both sides

Material:

- Stainless steel 1.4301 (AISI 304), 1.5 mm

Surface finish:

- Brushed, grain 400

Protection category IP to IEC 60 529:

- IP 66

Protection category NEMA:

- NEMA 4
- NEMA 4X

Supply includes:

- Assembly parts

For enclosures		Packs of	Model No.
Height mm	Depth mm		
2000	600	1 pc(s).	8700.010



Enclosure panel holders, internal

for TS

For additional fixing of the side or rear panel with heavy installed equipment and high dynamic loads.

Packs of	Model No.
10 pc(s).	8800.071



Hinges

for side panel, screw-fastened, sheet steel

The 180° opening angle allows unhindered access.

May be installed optionally from the inside or outside of the enclosure. Replace the 3 enclosure panel holders with hinges. Despite the hinge, the protection category of the enclosure is retained.

Material:

- Die-cast zinc

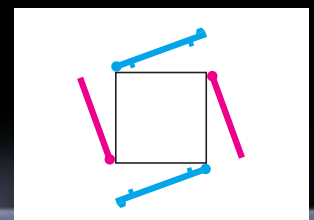
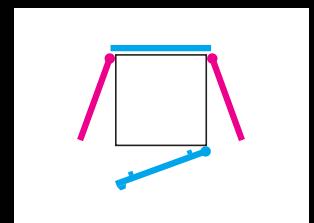
Supply includes:

- Assembly parts

Colour	Packs of	Model No.
RAL 7035	6 pc(s).	8800.110

Note:

- Side panel and door hinges may only be installed on the same enclosure section when using a 180° door hinge (see page 574)
- Please note: Red areas (side panels), hinged and unhinged, must always be opposite one another, and blue areas (doors/rear panels) must always be opposite one another
- Only one surface on each vertical enclosure section may be hinged



Walls

Side panels



Side panel, divided

for TS IT

- Easy handling and tool-free assembly
- Quick-release fastener including security lock 3524 E
- Internal latch included (cannot be opened with a key)
- Lock with chassis, cable clamp rail may be top-mounted on the outer mounting level
- Suitable for IT climate control and rack fire extinguishing

Material:

- Sheet steel

Surface finish:

- Powder-coated

Colour:

- RAL 7035

Supply includes:

- 1 top piece
- 1 bottom piece
- Earth conductor
- Assembly parts

For enclosures		Packs of	Model No.
Height mm	Depth mm		
1800	800	1 pc(s).	5501.000
2000	600	1 pc(s).	5501.010
2000	800	1 pc(s).	5501.020
2000	1000	1 pc(s).	5501.030
2000	1200	1 pc(s).	5501.040
2200	800	1 pc(s).	5501.050
2200	1000	1 pc(s).	5501.060
2200	1200	1 pc(s).	5501.070



Side panel, lockable

for TS, TS IT

- Simply locate from above
- Lock via security lock no. 3524 E
- Earthing bolt with contact lug

Material:

- Sheet steel

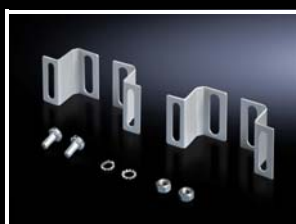
Surface finish:

- Powder-coated

Colour:

- RAL 7035

For enclosures		Packs of	Model No.
Height mm	Depth mm		
1200	800	2 pc(s).	7824.128
1200	1000	2 pc(s).	7824.120
1800	800	2 pc(s).	7824.188
2000	600	2 pc(s).	7824.206
2000	800	2 pc(s).	7824.208
2000	1000	2 pc(s).	7824.200
2200	800	2 pc(s).	7824.228
2200	1000	2 pc(s).	7824.220



Internal latch

for side panel, lockable

Additional security is achieved via the option of latching the side panel from the inside.

The side panels on the frame section are screw-fastened from the inside with latching brackets.

Supply includes:

- Assembly parts

For enclosure system	Packs of	Model No.
TS	4 pc(s).	7824.510



Paint

For touching up and repairing powder-coated and wet-painted surfaces, air-drying.

	Colour RAL	Model No.
Touch-up pen 12 ml	7035	2436.735
Tin 1000 ml	7035	2438.735
Spray can 150 ml	7022	2581.000
	7035	2440.735

Divider panels/partitions

Divider panel

for TS

For shielding individual enclosure cells. Thanks to the symmetry of the frame system, the divider panel can also be used at the rear. All-round, double fold for stability and to hold the seal.

Notches in the corners and half-way up the sides permit the use of angular baying brackets and baying brackets, even with a divider panel fitted.

For mounting on the outer mounting level. This leaves the inner level free for further population.

Material:

- Sheet steel, 1.5 mm

Surface finish:

- Zinc-plated

Protection category to IEC 60 529:

- IP 54

Supply includes:

- Assembly parts

Note:

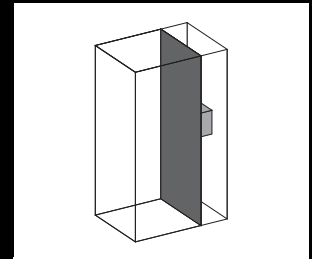
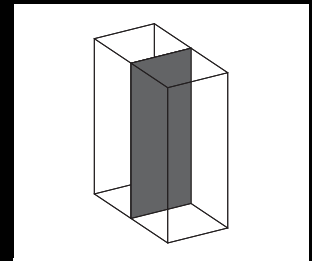
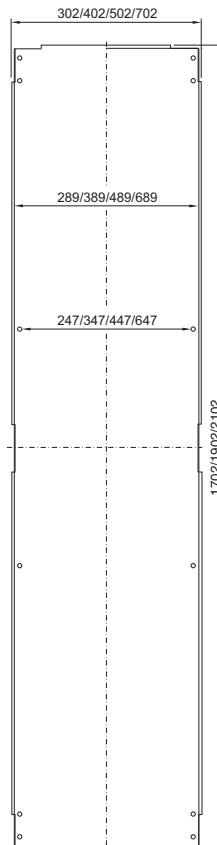
- The divider panel can also be fitted at the rear, allowing e.g. frequency converters for heat dissipation to be installed in a divider panel with the cooling units facing outwards and protected/finished off with a cover (see page 540).



Accessories:

- Cover with door, see page 540
- Baying bracket, vertical, 8800.470 for enclosures with fitted divider panel, see page 546

For enclosures		Model No.
Height mm	Depth mm	
1800	400	8609.840
1800	500	8609.850
1800	600	8609.860
2000	400	8609.040
2000	500	8609.050
2000	600	8609.060
2000	800	8609.080
2200	600	8609.260



Partition

for TS IT

For rack mounting, suspended between two enclosures. With three Ø 40 mm holes in all 4 corner areas for the insertion of cables, conduits etc. Drilled holes may be sealed with the enclosed stepped collars. For cable entry, simply cut off at a suitable level to match the required cross-section.

Material:

- Partition: Sheet steel
- Stepped collar: Plastic to UL 94-HB

Surface finish:

- Partition: Zinc-plated

For enclosures		Model No.
Height mm	Depth mm	
2000	1000	7831.723
2000	1200	7831.724

Note:

- Not suitable for use in conjunction with a baying seal. Any existing seals must be removed prior to installation



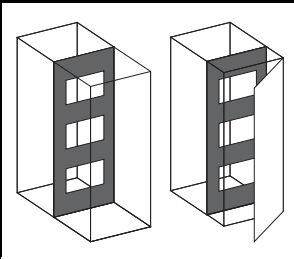
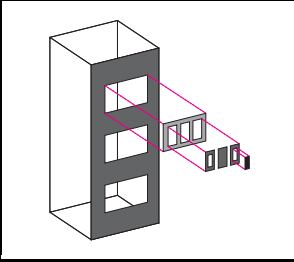
Accessories:

- Baying clamp 8800.490, see page 544



Walls

Divider panels/partitions



The divider panel and module plate system

More options:

The cut-outs of a divider panel are individually equipped with module plates for 16-pole or 24-pole connectors, with module plates for cable entry and with solid module plates.

Faster assembly:

Usually only some of the total number of connector cut-outs are used. Thanks to the new divider panel technique, the cut-outs do not need to be covered individually. The solid module plate is used instead. The benefit: Less plates, less screws, less assembly work.

Divider panel

for module plates TS

With cut-outs for the installation of module plates for connectors or for cable entry, and also for the entry of busbar systems and other installed equipment. All-round, double fold for stability and to hold the seal. Thanks to the symmetry of the enclosure frame, divider panels may also be fitted at the rear, dimensions permitting. For mounting on the outer mounting level. This leaves the inner level free for further population.

Material:

- Sheet steel, 2 mm

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts and multi-tooth screws
- M5 x 12 mm for mounting the module plates.

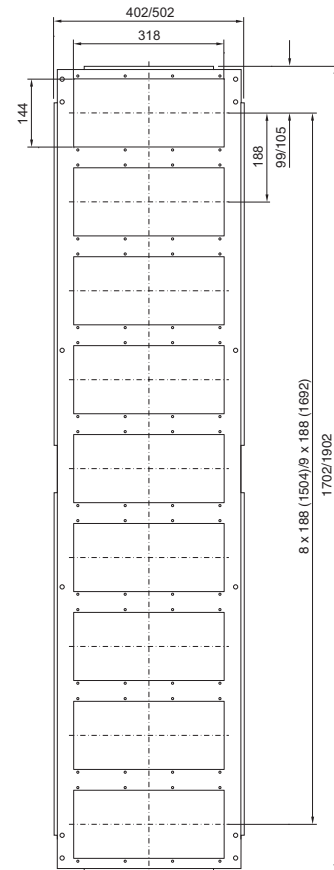
Note:

- Notches in the corners and half-way up the sides permit the use of angular baying brackets and baying brackets, even with a divider panel fitted



Accessories:

- Module plates, see page 539
- Cover with door, see page 540
- Baying attachment 8800.470 for enclosures with fitted divider panel, see page 546



For enclosures		Number of cut-outs	Model No.
Height mm	Depth mm		
1800	500	9	8609.100
1800	600	9	8609.110
2000	500	10	8609.120
2000	600	10	8609.130

Divider panels/partitions

Module plates

Material:

- Sheet steel, 2 mm

Surface finish:

- Zinc-plated

Supply includes:

- Seal

Design	Cut-outs	Packs of	Model No.
Solid	-	1 pc(s).	8609.160
For 16-pole connectors	4	1 pc(s).	8609.150
For 24-pole connectors	4	1 pc(s).	8609.140
For cable entry	1	1 pc(s).	8609.170
With cable sleeve	1	1 pc(s).	8609.390

Solid

For sealing unused cut-outs. Easily machined for individual cut-outs.

For 16/24-pole connectors

With cut-outs to accommodate connectors. In addition to mounting on divider panels, module plates may also be attached to the 25 mm pitch pattern of the enclosure and to the rails of the TS/PS system.



Accessories:

- Adaptor, cover plate, see page 540
- Connector gland for connector cut-outs, see page 660
- Connector gland sealing frame and sealing module, see page 661

For cable entry

For the entry of pre-assembled cables. Sealed, secure routing is achieved via adjustable angle brackets with inserted foam cable clamp strip. Attachment bracket, punched, for cable clamping.



Accessories:

- Cable tie for fast assembly 2597.000, see page 667

With cable sleeve

For 10 – 65 mm cable diameters. The flexible grommet adapts to the cable's bending radius.



Walls

Divider panels/partitions



Adaptor

for connector cut-outs

For using connectors with varying numbers of poles.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Seal and assembly parts

For reduction	Packs of	Model No.
From 24 to 16 poles	5 pc(s).	2479.000
From 24 to 10 poles	5 pc(s).	2480.000
From 24 to 6 poles	5 pc(s).	2481.000
From 16 to 10 poles	5 pc(s).	2401.000
From 16 to 6 poles	5 pc(s).	2402.000



Cover plate

for connector cut-outs

For unused cut-outs.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Seal and assembly parts

For	Packs of	Model No.
24-pole cut-outs	20 pc(s).	2477.000
16-pole cut-outs	20 pc(s).	2478.000



Cover with door

for TS

- To protect and finish off connectors or other installed equipment.
- Optional cable entry from above or below

Material:

- Cover: Sheet steel, 1.5 mm
- Door: Sheet steel, 2.0 mm

Colour:

- RAL 7035

Supply includes:

- Cover
- Door with locking rod and double-bit lock insert
- 1 cover plate for top or bottom

For enclosures		Model No.
Height mm	Depth mm	
2000	500	8609.020
2000	600	8609.030

Accessories:

- Lock inserts, type F, see page 570
- Comfort handle, see page 564
- 180° hinge, see page 574

Isolator door locking

TS isolator door cover (US version)

Including main door lock for safety locking of enclosures and bayed enclosure suites in accordance with US regulations, only in conjunction with actuator lever for master switches:

- Allen Bradley 1494 F-M1/P1/S1 and 140 U-K-FCX04
- Square D 9422 A1
- Siemens actuator for Max-Flex drives for moulded-case circuit-breakers in the SENTRON series (ED, FD, LD, JD; not for Siemens circuit-breaker 3VL) US Model No.: FHOH
- General Electric TDA Type 1 and 2
- Moeller NZM-XSHGVR 12-NA

Benefits:

- In combination with
 - Operating mechanism
 - Adjacent door latch
 - Interconnecting rods
 meets the requirements of UL 508 A
- Compact design with 125 mm width, may optionally be fitted on the left or right of the enclosure. With this cover, all standard single-door TS 8 enclosures may be configured as isolator door enclosures. The complete installation surface of the enclosure is retained.
- In conjunction with the integrable TS mounting plate infill, (see page 591), the mounting surface of the main enclosure can be enlarged by around 14%.
- Cover may only be mounted on a single-door enclosure with tubular door frame

Material:

- Sheet steel

Surface finish:

- Powder-coated

Colour:

- RAL 7035

Protection category to IEC 60 529:

- IP 55

Protection category NEMA:

- NEMA 12

Supply includes:

- Main door lock, cover plate and assembly parts

Width mm	Height mm	Depth mm	Model No.
100	1800	400	8950.840
100	1800	500	8950.850
100	2000	500	8950.050
100	2000	600	8950.060



Also required:

- Operating mechanism, 4912.000, for enclosure with isolator door cover and additionally every fourth adjacent enclosure, see page 541
- Adjacent door latch, 4911.000, 4911.100, for every adjacent enclosure, see page 541
- Interconnecting rods, for every adjacent enclosure in the appropriate enclosure width, see page 541
- Side panel TS, screw-fastened, see page 534

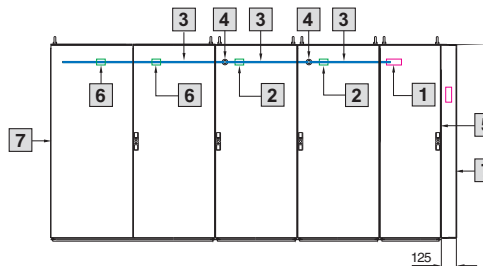


Accessories:

- Mounting plate infill, see page 591

Isolator door locking (US version)

- 1 Operating mechanism
- 2 Adjacent door latch (single-door)
- 3 Interconnecting rod
- 4 Connection component
- 5 Main door latch
- 6 Adjacent door latch (two-door)
- 7 Side panel TS, screw-fastened



Technical details:

Available on the Internet



Door latch for bayed enclosure suites

For extending the door locking of commercially available master switches to bayed suites TS. Adjacent doors cannot be opened until the main door has been opened.

- 1 **Operating mechanism**
Fitted in the enclosure with main switch and additionally in every fourth adjacent enclosure

- 2 **Adjacent door latch**
Fitted in adjacent enclosure

- 3 **Interconnecting rods**
To extend locking from the main enclosure to the adjacent enclosures of a bayed suite. An interconnecting rod corresponding to the width of the enclosure is required for each adjacent enclosure.

	Packs of	Model No.
Operating mechanism	1 pc(s).	4912.000

	Packs of	Model No.
Adjacent door latch for Single-door enclosures	1 pc(s).	4911.000
Two-door enclosures	1 pc(s).	4911.100

	Packs of	Model No.
For enclosure width mm		
600	10 pc(s).	4916.000
800	10 pc(s).	4918.000
1200	10 pc(s).	4920.000



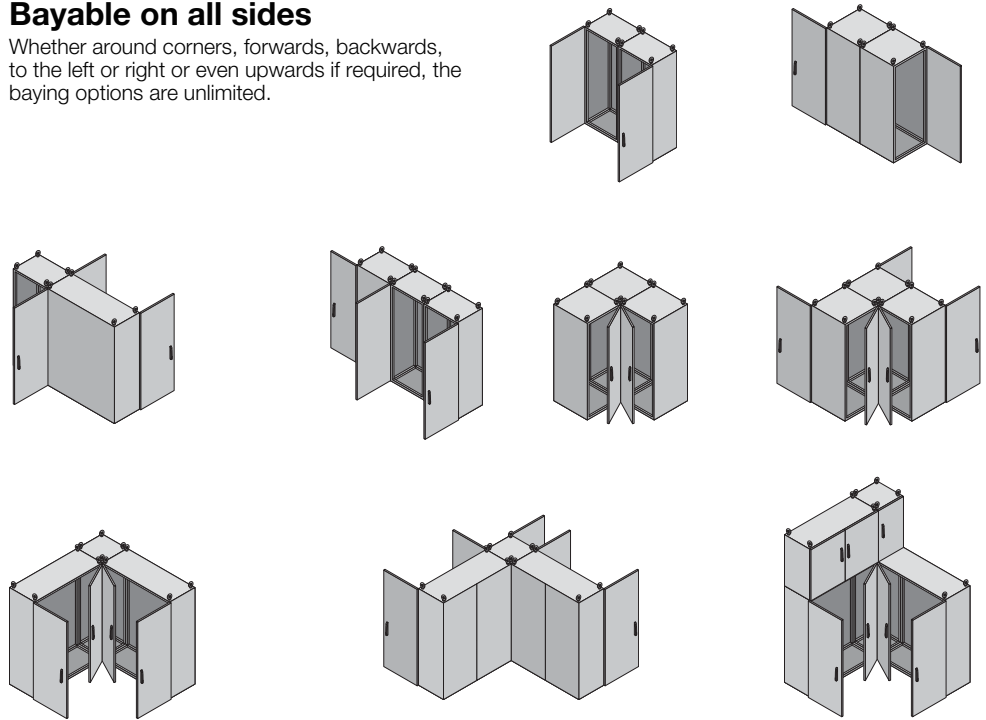
Baying system

Enclosure suites



Bayable on all sides

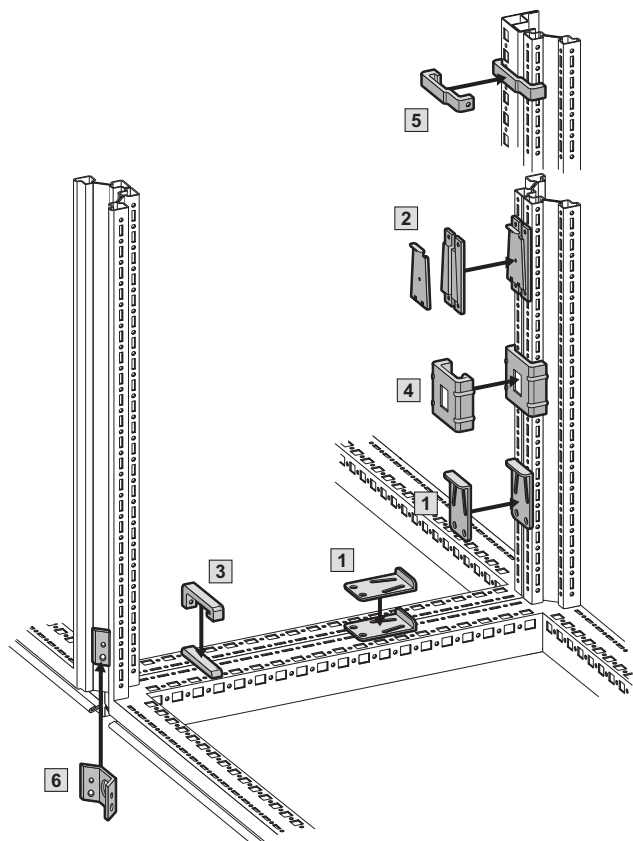
Whether around corners, forwards, backwards, to the left or right or even upwards if required, the baying options are unlimited.



For baying at the installation site or for provisional siting in the workshop

- 1 Quick-fit baying clamp, one-piece
- 2 Quick-fit baying clamp, three-piece
- 3 Baying clamp, horizontal
- 4 Baying clamp, vertical for TS/TS
- 5 Baying clamp, vertical for TS/PS
- 6 Baying connector, external

Notes on the transportation of bayed enclosures, see page 544.



Baying system

Enclosure suites

1 Quick-fit baying clamp, one-piece

for TS/TS

Simply attach the screws, insert the quick-fit baying clamp, tap in with a hammer and lock.

Material:

– Sheet steel

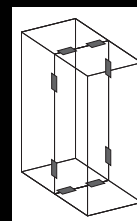
Surface finish:

– Zinc-plated

Supply includes:

– Assembly parts

Packs of	Model No.
6 pc(s).	8800.500



2 Quick-fit baying clamp, three-piece

for TS/TS

Simply locate, connect with the lock plate, and secure.

Material:

– Sheet steel

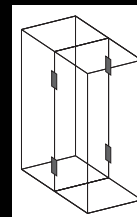
Surface finish:

– Zinc-plated

Supply includes:

– Assembly parts

Packs of	Model No.
6 pc(s).	8800.590



3 Baying clamp, horizontal

for TS/TS, TS/PS

For mounting on the horizontal enclosure sections.

Material:

– Cast steel

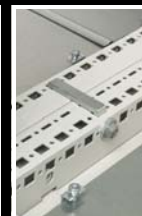
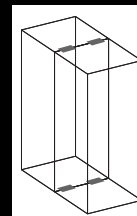
Surface finish:

– Zinc-plated

Supply includes:

– Assembly parts

Packs of	Model No.
4 pc(s).	8800.400



4 Baying clamp, vertical

for TS/TS

For mounting on the vertical enclosure sections.

Material:

– Sheet steel

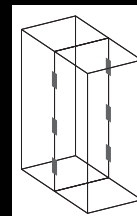
Surface finish:

– Zinc-plated

Supply includes:

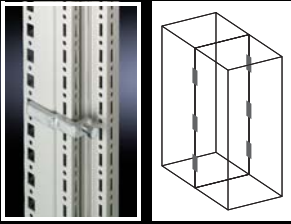
– Assembly parts

Packs of	Model No.
6 pc(s).	8800.410



Baying system

Enclosure suites



5 Baying clamp, vertical

for TS/PS

For mounting on the vertical enclosure sections.

Material:

- Cast steel

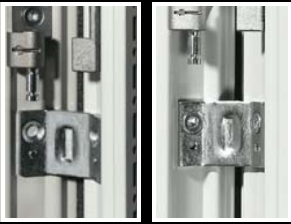
Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

Packs of	Model No.
6 pc(s).	8800.420



6 Baying connector, external

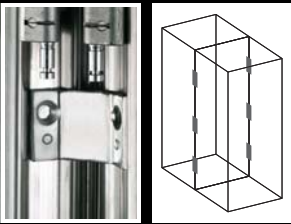
for TS/TS

For mounting on the vertical enclosure sections. Simply position on the outside and screw-fasten either from the inside or outside.

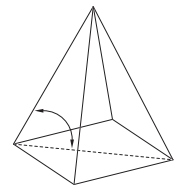
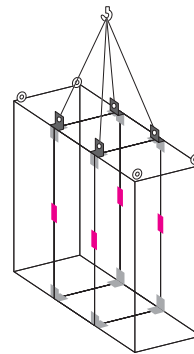
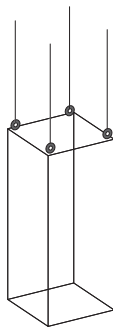
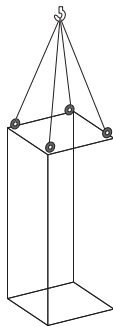
Supply includes:

- Assembly parts

Material/surface finish	Packs of	Model No.
Sheet steel, zinc-plated	6 pc(s).	8800.490
Stainless steel 1.4301 (AISI 3304)	6 pc(s).	8700.000



Notes on the transportation of bayed enclosures



Individual enclosures may be safely transported using the eyebolts included with the supply. For symmetrical loads, the following maximum permissible loads apply:
 at 45° cable pull angle 4,800 N,
 at 60° cable pull angle 6,400 N,
 at 90° cable pull angle 13,600 N.

Note:

- The eyebolts must be aligned in the direction of the cable pull

For the enclosure combination with angular baying brackets, quick-fit baying clamps and combination angles shown here, the load capacity with a cable pull angle of 60° is as follows:
 for the left-hand enclosure 7,000 N,
 for the middle enclosure 14,000 N,
 for the right-hand enclosure 7,000 N.

The cable pull angle between the roof plate and the cable has a significant influence on the total permissible load. The cable pull angle must not be less than 45°, and ideally not less than 60°.

Baying system

Enclosure suites

When transporting bayed enclosures

- 7 Baying bracket for TS/TS
- 8 Baying bracket for TS/TS and TS/PS

Note:

- In addition, an external baying connector (see page 544), can be used for reinforcement.
- When transporting large, heavy enclosure combinations by crane, we additionally recommend the use of combination angles 4540.000, see page 546



Also required:

- For protection category IP 55:
One quick-fit baying clamp is required half-way up the enclosure height, see page 543

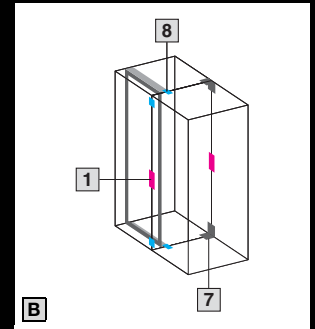
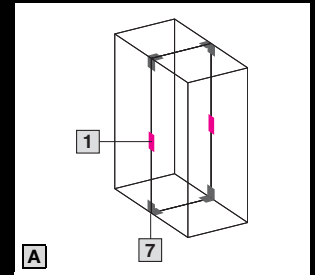
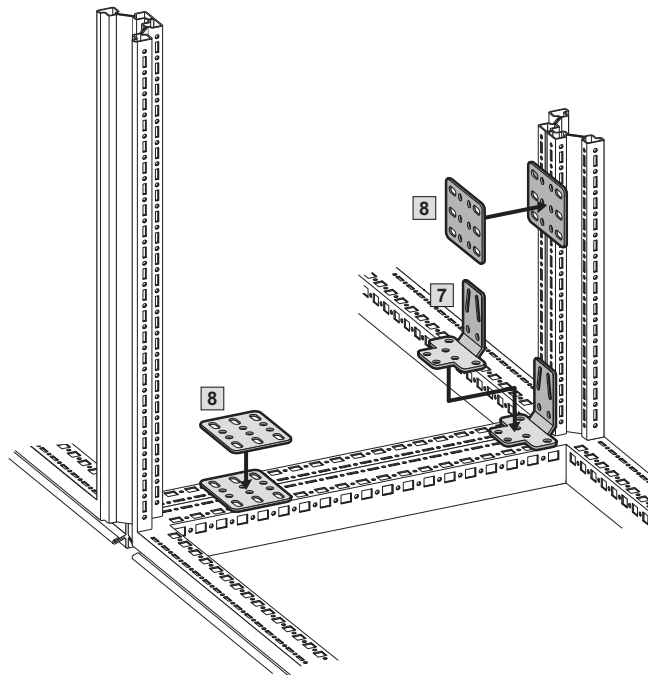
Notes on the transportation of bayed enclosures, see page 544

Example A

- 1 2 quick-fit baying clamps
8800.500
(see page 543)
- 7 4 angular baying brackets
8800.430
(see page 545)

Example B

- 1 2 quick-fit baying clamps
8800.500
(see page 543)
- 7 2 angular baying brackets
8800.430
(see page 545)
- 8 4 baying brackets
4582.500
(see page 546)
if the angular baying brackets cannot be fitted in the foremost installation position due to installed equipment such as large swing frames.



7 Angular baying bracket

for TS/TS

For a stable connection when transporting bayed enclosure suites.

Screw-fastening either

- Horizontally or vertically with 8 screws
 - Horizontally with 2 screws and M8 threaded blocks, vertically with 4 screws
- is supported.

Material:

- Sheet steel

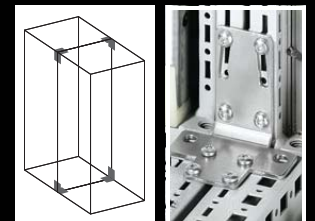
Surface finish:

- Zinc-plated

Supply includes:

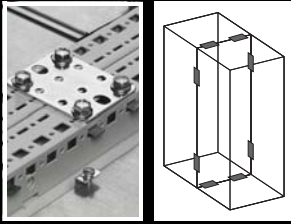
- Assembly parts

Packs of	Model No.
4 pc(s).	8800.430



Baying system

Enclosure suites



8 Baying brackets

for TS/TS and TS/PS

For additional stabilisation, or in cases where for example

- Mounting plate brackets
 - Swing frames
 - Busbar supports
- prevent the installation of angular baying brackets

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

Packs of	Model No.
4 pc(s).	4582.500

+ Accessories:

- For mounting on the vertical TS enclosure section: Snap-on nut M8, 8800.808, see page 618



Angular baying brackets

The alternative to baying bracket 4582.500 and for individual interior installations.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

Packs of	Model No.
4 pc(s).	4582.000

! Also required:

- For mounting on the horizontal TS enclosure section: Captive nuts/threaded blocks M8, see page 624
- For mounting on the vertical TS enclosure section: Snap-on nut M8, 8800.808, see page 618



Combination angle

For optimum distribution of tensile forces during transportation of bayed enclosures by crane.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

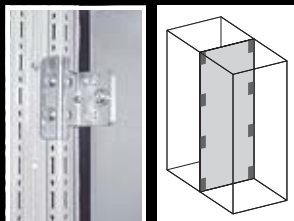
- Assembly parts

Packs of	Model No.
4 pc(s).	4540.000

+ Accessories:

- Top baying cover, see page 548

Notes on the transportation of bayed enclosures, see page 544



Baying attachment, vertical

for TS/TS with divider panel

Only suitable for mounting in conjunction with the angle brackets of the divider panel (included with the supply).

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

Packs of	Model No.
8 pc(s).	8800.470

Note:

- May also be used for side or rear wall attachment/fastening of enclosures. In such cases, additional holes must be drilled in the side or rear panel.

Baying system

Enclosure suites

Baying attachment, vertical for TS/TS

For baying two populated enclosures on the vertical enclosure section.
Simply locate into the vertical TS punchings, secure and connect both brackets using the hex screws (supplied loose).
Using the fastening bolts, the enclosure is pulled into a defined end position, with a height or side offset of up to ± 2 mm.

Material:

- Sheet steel

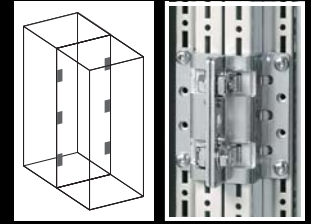
Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

Packs of	Model No.
6 pc(s).	8800.670



Baying cover, vertical

To balance out the gap between the side panels when baying back-to-back. For enclosure height 2200 mm, or may be cut to length individually for lower heights.

Material:

- Cover section: Plastic

Colour:

- RAL 7035

Supply includes:

- Assembly parts

Packs of	Model No.
2 pc(s).	8800.870

**Also required:**

- Baying connector, external, 8800.490, see page 544



Baying clamp, horizontal for back-to-back mounting

Two-piece, for in situ assembly of enclosures with mounting plate in the rearmost installation position.

Material:

- Sheet steel

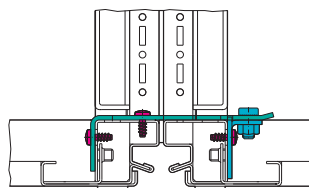
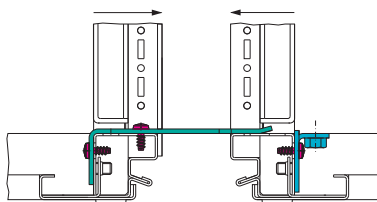
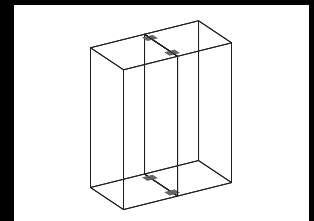
Surface finish:

- Zinc-plated

Supply includes:

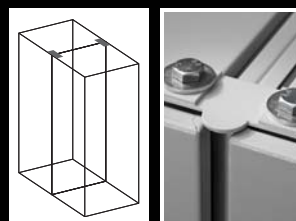
- Assembly parts

Packs of	Model No.
4 pc(s).	8800.170



Baying system

Enclosure suites



Baying cover, top

A cover with two end caps may additionally be clipped over the seal between the two enclosures. This prevents dirt and liquid from collecting on the baying seal.

Supply includes:

- Assembly parts
- 2 end caps

Note:

- May also be fitted in the width with enclosure suites bayed back-to-back
- May also be used in conjunction with dust guard trim, see page 581

For enclosure depth mm	Packs of	Plastic RAL 7035	Stainless steel 1.4301 (AISI 304)	Model No.
400	1 pc(s).	■	-	8800.845
500	1 pc(s).	■	-	8800.855
600	1 pc(s).	■	-	8800.865
800	1 pc(s).	■	-	8800.885
1200	1 pc(s).	■	-	8800.825
400	1 pc(s).	-	■	8700.140
500	1 pc(s).	-	■	8700.150
600	1 pc(s).	-	■	8700.160

Baying connector, external

for TS IT/TS IT with side panels

For retrospective baying of enclosures with screw-fastened or lockable side panels.

Material:

- Sheet steel

Colour:

- RAL 7035

Supply includes:

- Assembly parts

Packs of	Model No.
4 pc(s).	7824.540

Baying kit

for KL, AE

Special screws and nuts

- For fast, simple assembly without thread-tapping
- Compression of the seal is limited to a predefined level, to ensure a long-lasting, permanent seal between enclosures

Seal, self-adhesive

- Comprised of bayable sealing elements and corner pieces, for individual adaptation to various enclosure sizes

One pack is sufficient for a baying point up to H x D = 800 x 350 mm.

Supply includes:

- Sealing elements
- Assembly parts

Packs of	Model No.
1 set(s)	1199.100

Door variants

Tubular door frame

for TS, TS IT, SE

To fit sheet steel doors prepared for a tubular door frame.

Material:

- Tube section: Sheet steel
- Corner connectors: Plastic

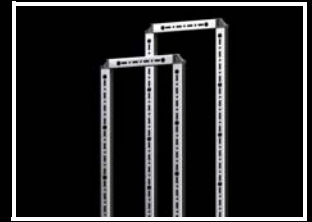
Surface finish:

- Tube section: Zinc-plated

Supply includes:

- Assembly parts

For doors		Packs of	Model No.
Width mm	Height mm		
300	2000	1 set(s)	5501.200
400	2000	1 set(s)	5501.210



Glazed door

for TS, TS IT

Instead of a sheet steel door or rear panel.

Material:

- Frame: Extruded aluminium section
- Corner pieces: Die-cast zinc
- Viewing window: Single-pane safety glass, 3 mm

Surface finish:

- Powder-coated

Colour:

- Frame and corner pieces: RAL 7035
- Viewing window (printed mask on the inside): RAL 9005

Protection category IP to IEC 60 529:

- IP 55

Supply includes:

- Glazed door frame with safety glass
- Locking rod with double-bit lock insert
- 180° hinges (4)
- Visible area: W -140 mm, H -160 mm

For enclosures		Model No.
Width mm	Height mm	
600	1800	8610.685
800	1800	8610.885
600	2000	8610.605
800	2000	8610.805
600	2200	8610.625
800	2200	8610.825



Also required:

- When mounting instead of the rear panel or double door: Lock components for frame 8800.040, see page 550



Handle adaptor

The handle adaptor compensates for the design chamfer in the door profile to enable installation of the comfort handle.

Material:

- Plastic

Supply includes:

- 1 adaptor plate
- 1 bolt to extend the screw-on dome
- 2 assembly screws

For glazed door TS

Colour	Model No.
RAL 7035	8611.080

For designer door IW and PC, bottom door

Colour	Model No.
RAL 7035	8611.300



Doors/locks

Door variants



Lock components

for TS, TS IT, SE

For retrofitting a glazed door or sheet steel door in place of a rear panel.

Material:

- Die-cast zinc

Supply includes:

- Assembly screws

Packs of	Model No.
4 pc(s).	8800.040



Glazed door, vented

for TS, TS IT, SE

With 180° hinges and comfort handle with security lock no. 3524 E. Surface perforated on both sides with air inlet openings > 78 % for optimum air throughput.

Material:

- Door: Sheet steel
- Viewing window: Single-pane safety glass, 3 mm

Surface finish:

- Powder-coated

Colour:

- RAL 7035

Supply includes:

- 4 enclosure hinges
- Assembly parts

For enclosures		Model No.
Width mm	Height mm	
600	2000	7824.201
800	2000	7824.202
800	2200	7824.222

+ Accessories:

- 180° hinge for bayed TS enclosure suites with comfort handle, see page 574



Lockable and adjacent door

for TS, TS IT, SE

For example, if two 400 mm doors instead of one 800 mm wide door are used to comply with escape routes.

Material:

- Sheet steel

Surface finish:

- Dipcoat-primed, Powder-coated on the outside

Supply includes:

- 2 doors, including tubular door frame, hinges and lock parts

For enclosures		Colour RAL	Model No.
Width mm	Height mm		
800	2000	7035	8801.450

+ Accessories:

- Lock system, see page 564

Doors/locks

Door variants

Protective bars

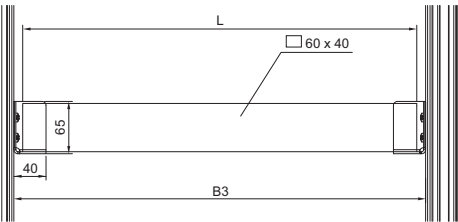
for TS, SE

As an alternative to a door, e.g. in sealed switch rooms. Prevents people from falling into the open enclosure frame. Easily removable for maintenance purposes.

For 1200 mm enclosure width; may be shortened or divided for other sizes.

Material:

- Wood, spray-finished, RAL 3000



For enclosure width mm	Length mm	Packs of	Model No.
1200	1090	1 pc(s).	8801.010

Enclosure width mm	Clearance between the enclosure frame (B3) mm	Length of protective bar (L) mm
400	312	290 ¹⁾
600	512	490 ¹⁾
800	712	690 ¹⁾
1000	912	890 ¹⁾
1200	1112	1090

¹⁾ The protective bar 8801.010 (1090 mm) will need to be shortened



Holder

for protective bars

For mounting on the vertical section. The protective bar is simply inserted.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly screws

Packs of	Model No.
2 pc(s).	8801.000



Variable modular climate control concept

Instead of an enclosure door in a 600 mm/800 mm/1200 mm wide and 1800 mm/2000 mm high TS enclosure, section doors with integral cooling module may be retrofitted without major assembly work.



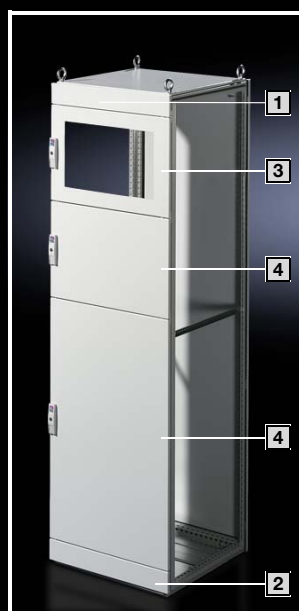
Possible alternative:

- Modular climate control concept, see page 350/351



Doors/locks

Installation accessories for modular front design TS



Modular front design

for baying systems TS 8

(see page 76)

Suitable for 400, 600 and 800 mm wide TS enclosures instead of a door or rear panel.

The partial doors with and without viewing panels including cross members may be combined with one another as required. A trim panel is required at the top and bottom in each case.

The requirements for your individual front design and the considerations which must be taken into account are illustrated on the sample configuration opposite.

- 1 Front trim panel, top
- 2 Front trim panel, bottom
- 3 Partial door with viewing window
- 4 Partial door

Protection category IP to IEC 60 529:

- IP 54 for a completed enclosure



Partial doors

for TS

The door may be optionally hinged on the right or left. The partial door is attached to the TS enclosure with no drilling required. In the case of partial doors without a viewing panel (height 600 – 1000 mm), monitor frame 2305.000 may be installed. Standard double-bit lock insert may be exchanged for lock inserts, type F, and from a height of 600 mm, for comfort handles.

Material:

- Partial door: Sheet steel, 2 mm
- Viewing window: 3 mm single-pane safety glass

Surface finish:

- Textured paint

Colour:

- RAL 7035

Supply includes:

- Cross member, hinges and lock parts
- Assembly parts

! Also required:

- Front trim panels, top, see page 553 or Trim panel, hinged at the top, see page 554
- Front trim panels, bottom, see page 553

+ Accessories:

- Monitor frame 2305.000, see page 558
- Lock inserts, type F, see page 570
- Comfort handle, see page 564
- Perforated mounting strips, see page 553

Technical details:

Available on the Internet

For enclosure width 400 mm

Height mm	With viewing window	Packs of	Model No.
150	–	1 pc(s).	9672.141
200	–	1 pc(s).	9672.142
300	–	1 pc(s).	9672.143
400	–	1 pc(s).	9672.144
600	–	1 pc(s).	9672.146
800	–	1 pc(s).	9672.148
1000	–	1 pc(s).	9672.140
1600	–	1 pc(s).	9672.156
1800	–	1 pc(s).	9672.158
2000	–	1 pc(s).	9672.150

For enclosure width 600 mm

Height mm	With viewing window	Packs of	Model No.
150	–	1 pc(s).	9672.161
200	–	1 pc(s).	9672.162
300	–	1 pc(s).	9672.163
400	–	1 pc(s).	9672.164
600	–	1 pc(s).	9672.166
600	■	1 pc(s).	9672.167
800	–	1 pc(s).	9672.168
800	■	1 pc(s).	9672.169
1000	–	1 pc(s).	9672.160
1600	–	1 pc(s).	9672.176
1800	–	1 pc(s).	9672.178
2000	–	1 pc(s).	9672.170

For enclosure width 800 mm

Height mm	With viewing window	Packs of	Model No.
150	–	1 pc(s).	9672.181
200	–	1 pc(s).	9672.182
300	–	1 pc(s).	9672.183
400	–	1 pc(s).	9672.184
600	–	1 pc(s).	9672.186
600	■	1 pc(s).	9672.187
800	–	1 pc(s).	9672.188
1000	–	1 pc(s).	9672.180
1600	–	1 pc(s).	9672.196
1800	–	1 pc(s).	9672.198
2000	–	1 pc(s).	9672.190

Installation accessories for modular front design TS

Perforated mounting strips

for partial doors

For retrospective external mounting. The perforated mounting strips have a 25 mm pitch pattern of holes and may be used for individual mountings on the rear side of the door, e.g. cable ducts, hose holders etc.

Hole diameter of perforated mounting strip: 4.5 mm

Material:

- Sheet steel, 1 mm

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

For enclosure width mm	Length mm	For partial door height mm	Packs of	Model No.
400	298	150 – 800	10 pc(s).	9671.204
600	498	150 – 800	10 pc(s).	9671.206
800	698	150 – 800	10 pc(s).	9671.208



Front trim panels, top

for TS

To finish off the modular front design at the top when using partial doors. The front trim panels may be removed from the outside by unscrewing. The cross member required for mounting is included with the supply of the mounted partial door.

Material:

- Sheet steel, 2 mm

Surface finish:

- Textured paint

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 54

Supply includes:

- Assembly parts

For enclosure width mm	Height mm	Packs of	Model No.
400	100	1 pc(s).	9672.314
400	300	1 pc(s).	9672.324
600	100	1 pc(s).	9672.316
600	300	1 pc(s).	9672.326
800	100	1 pc(s).	9672.318
800	300	1 pc(s).	9672.328



Front trim panels, bottom

for TS

To finish off the modular front design at the bottom when using partial doors. If version IP 2X is chosen, a roof plate with protection category IP 2X should be selected for top ventilation. The front trim panels may be removed from the outside by unscrewing.

Material:

- Sheet steel, 2 mm

Surface finish:

- Textured paint

Colour:

- RAL 7035

Supply includes:

- Front trim panel including cross member
- Assembly parts

Protection category IP 54

For enclosure width mm	Height mm	Packs of	Model No.
400	100	1 pc(s).	9672.334
400	300	1 pc(s).	9672.344
600	100	1 pc(s).	9672.336
600	300	1 pc(s).	9672.346
800	100	1 pc(s).	9672.338
800	300	1 pc(s).	9672.348

Protection category IP 2X

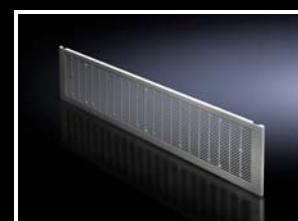
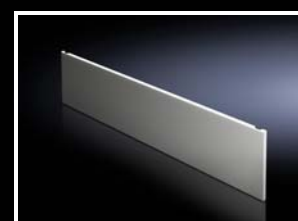
For enclosure width mm	Height mm	Packs of	Model No.
400	300	1 pc(s).	9672.354
600	300	1 pc(s).	9672.356
800	300	1 pc(s).	9672.358

Also required:

Roof plate IP 2X, see page 583

Accessories:

Upgrade kit IP 4X, see page 555



Doors/locks

Installation accessories for modular front design TS



Trim panel, hinged at the top

for TS

For the installation of control and display components, in conjunction with

- Modular front design
- Protective bar TS

Material:

- Sheet steel, 2 mm

Surface finish:

- Textured paint

Colour:

- RAL 7035

Supply includes:

- Hinges, cam locks with double-bit insert and assembly parts

Width mm	Height mm	Packs of	Model No.
600	300	1 pc(s).	8801.230
800	300	1 pc(s).	8801.240
1200	300	1 pc(s).	8801.250

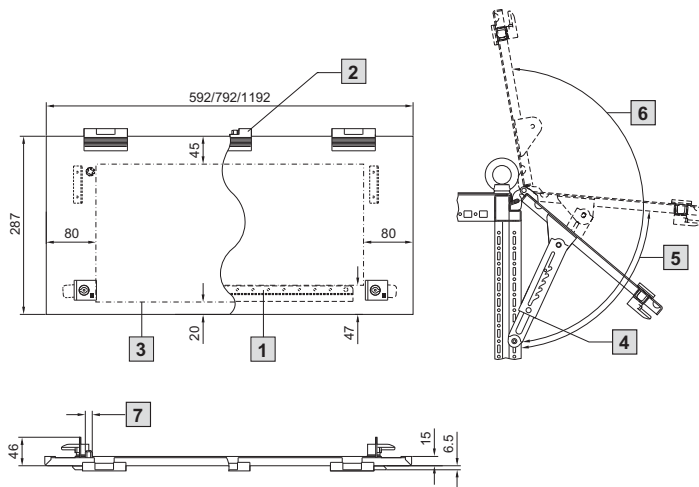
Note:

- Not in combination with top-mounted module for TS (see page 582)



Accessories:

- Stay for trim panel, hinged at the top see page 554
- Lock inserts, version A, see page 570



1 Only for width 800 mm and 1200 mm

2 Only for width 1200 mm

3 Usable interior area

4 Optional: Stay 8801.260

5 Maximum opening angle with stay approx. 85°

6 Maximum opening angle without stay approx. 190°

7 Earthing bolt M8



Drawer

for TS

For mouse and keyboard with a maximum width of 500/700 mm.

A high level of protection is retained, even with the flap open.

Standard double-bit lock insert may be exchanged for 27 mm lock inserts, type A, plastic handles, type B and T handles, type B.

Material:

- Sheet steel

Colour:

- RAL 7035

Height mm	Width mm	Model No.
200	600	8801.715
200	800	8801.915

Supply includes:

- Flap and assembly parts
- Cross member



Accessories:

- 27 mm lock inserts, type A, see page 570
- Plastic handle, type B, see page 569
- T handles, type B, see page 569



Stay

for trim panel, hinged at the top

5 pitch pattern positions up to a maximum opening angle of approx. 85°.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Packs of	Model No.
2 pc(s).	8801.260

Installation accessories for modular front design TS

Upgrade kit IP 4X

for front trim panels, bottom

To increase the protection category of the bottom front trim panel from IP 2X to IP 4X. The upgrade kit is attached to the front trim panel from the inside and secured.

Material:

- Sheet steel (expanded metal)

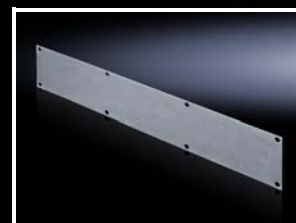
Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

For enclosure width mm	For front trim panel height mm	Packs of	Model No.
400	300	1 pc(s).	9672.384
600	300	1 pc(s).	9672.386
800	300	1 pc(s).	9672.388



Wiring system

for Ri4Power with internal compartmentalisation

The wiring system facilitates vertical and horizontal cable routing in conjunction with internal Form 2-4 separation.

For vertical cable routing, pre-punched cut-outs are provided in the mounting brackets for compartment dividers, which can easily be knocked out and used to install a vertical wiring channel.

Horizontal cable routing occurs behind the front trim panels. This entails fitting a wiring trim panel which is suitable for accommodating a wiring channel while at the same time concealing the busbar system.

Wiring trim panel

Inner front cover of the main busbar system with the option of mounting a wiring channel size W x D 40 x 20 mm. For use in Ri4Power switchgear with 300 mm high front trim panels.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

For enclosure width mm	Packs of	Model No.
400/600	1 set(s)	9674.550
800/1000/1200	1 set(s)	9674.560



Doors/locks

Viewing panels/operating panels



System window

To conceal display and operating instruments or cut-outs, and to protect against dirt and liquids as well as unauthorised access.

Consisting of the following 2 components:

1. Base frame:

- Easily screw-fastened to the door thanks to modified dimensions (tubular door frame may be used as a drilling template).
- Readily height-adjustable
- Stabilises the door cut-out
- Conceals the cut edge
- The rain canopy
 - prevents dirt from landing on the seal
 - protects the glass from being lifted out
 - prevents the ingress of dirt and moisture when opening the window
- Frame section height 30 mm or 60 mm

2. Viewing window:

- Made from single-pane safety glass:
 - High level of resistance to solvents and scratches
 - Anti-static
 - Reduced risk of injury if broken
- Cam lock with double-bit insert, may be exchanged for lock inserts, type A, and semi-cylinders in the Ergoform-S lock system (not with 2735.500 and .560)
- Hinge with 180° opening angle, easily inserted

Material:

- Extruded aluminium sections with die-cast zinc corner pieces and single-pane safety glass

Surface finish:

- Base frame: Powder-coated in RAL 7035
- Hinge and lock section: Natural anodised.

Protection category to IEC 60 529:

- IP 54

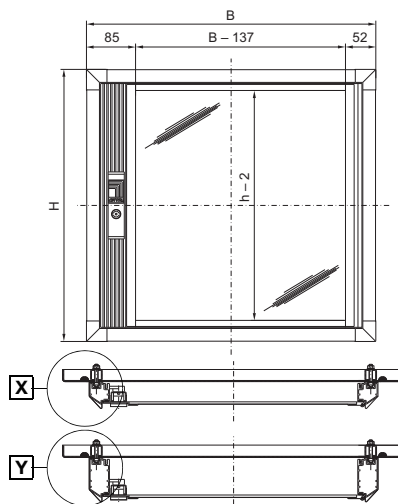
30 section

To fit TS, SE with width mm	Window size, exterior mm		Model No.
	W	H	
600	500	270	2735.500
		370	2735.510
		470	2735.520
		570	2735.530
800	700	670	2735.540
		270	2735.560
		370	2735.570
		470	2735.580
		570	2735.590
		670	2735.250

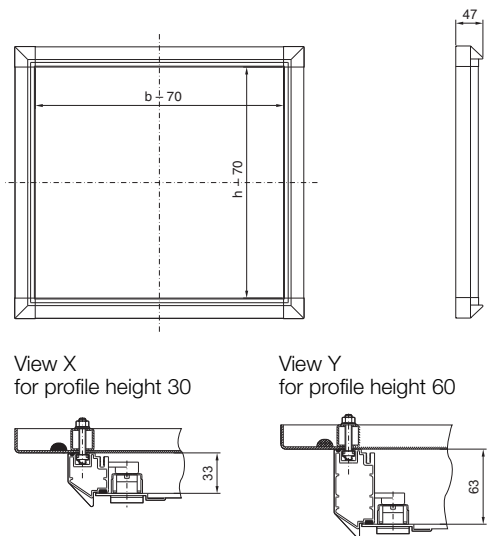
60 section

To fit TS, SE with width mm	Window size, exterior mm		Model No.
	W	H	
600	500	370	2736.510
		470	2736.520
		570	2736.530
		670	2736.540
800	700	670	2736.500

Standard double-bit lock insert may be exchanged for 27 mm lock inserts, version A, see page 570 and Ergoform-S lock system (except H = 270 mm), see page 568



Viewing area (B - 137) offset by 16.5 mm towards the hinge side



View X for profile height 30

View Y for profile height 60

Viewing panels/operating panels

Viewing window

For mounting on

- AE instead of door
- Surfaces

Max. installation depth: (depth -4 mm)

Visible area: (width -60 mm) x (height -60 mm)

Material:

- Frame: Aluminium, natural anodised
- Glass panel: Acrylic

Protection category IP to IEC 60 529:

- IP 54

Supply includes:

- Plastic handle with lock insert no. 3524 E

Depth = 34 mm

For use as door variant with	Width mm	Height mm	Model No.
1050.500, 1350.500 1007.600	497	497	2733.000
-	597	197	2734.000
1039.500, 1339.500 1009.600, 7641.000	597	377	2730.000
1010.500, 1054.500 1060.500, 1360.500 7643.000	597	597	2731.000
1012.500, 1076.500 1376.500, 7645.000	597	757	2732.000

Depth = 60 mm

For use as door variant with	Width mm	Height mm	Model No.
1050.500, 1350.500 1007.600	497	497	2763.000
1039.500, 1339.500 1009.600, 7641.000	597	377	2760.000
1010.500, 1054.500 1060.500, 1360.500 7643.000	597	597	2761.000
1012.500, 1076.500 1376.500, 7645.000	597	757	2762.000



Horizontally hinged FT stay

A gas pressurised spring holds the viewing window securely open (top or side).

When the viewing window is closed, the gas pressurised spring disappears into the frame section.

Packs of	Model No.
2 pc(s).	2772.000



Acrylic glazed cover

With security lock, lock no. 3524 E

Material:

- Frame: Extruded aluminium sections with die-cast corner pieces
- Glass panel: Smoked acrylic

Protection category IP to IEC 60 529:

- IP 54

Acrylic glazed covers, 482.6 mm (19')

U	Width mm	Height mm	Depth mm	Model No.
3	320	158	47.5	2780.000
3	534	158	47.5	2781.000
6	534	291.5	47.5	2782.000
9	534	425	47.5	2796.000

Max. installation depth: 43 mm

Visible area:

(width -40 mm) x (height -20.5 mm)

Metric acrylic glazed covers

Width mm	Height mm	Depth mm	Model No.
400	200	47.5	2784.000
400	400	47.5	2785.000
500	200	47.5	2786.000
500	400	47.5	2787.000
600	200	47.5	2788.000
600	400	47.5	2789.000

Max. installation depth: 43 mm

Visible area: (width -40 mm) x (height -20.5 mm)



Doors/locks

Viewing panels/operating panels



Viewing window

Stainless steel

Fitted as standard with internal 130° hinges and all-round seal.

The double-bit lock insert may be exchanged for 27 mm lock inserts, type A, and Ergoform-S handle 2452.000.

Material:

- Stainless steel 1.4301 (AISI 304)
- Single-pane safety glass

Protection category IP to IEC 60 529:

- IP 54

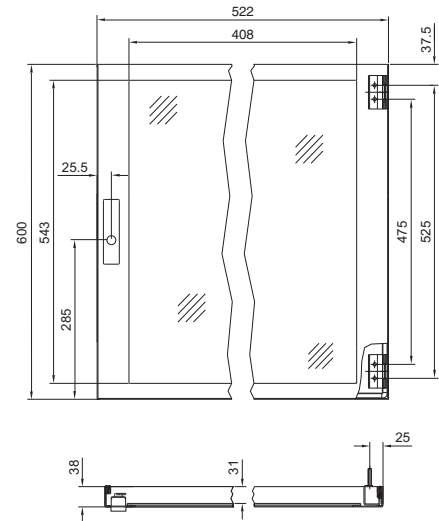
Supply includes:

- Assembly parts

Width mm	Height mm	Depth mm	Model No.
522	600	38	2793.560

Accessories:

- Lock inserts 27 mm, version A, see page 570
- Ergoform-S handle 2452.000, see page 568



Monitor frame

for door width 600 and 800 mm

For covering a door cut-out, for all standard monitors up to 482.6 mm (19').

Protection category IP to IEC 60 529:

- IP 54

Supply includes:

- Security glass panel

Dimensions	Width mm	Height mm	Model No.
External dimensions	470	430	2305.000
Viewing area	375	325	
Cut-out required	415	375	

Identification strips

For individual field identifiers on the door, including transparent cover and assembly parts.

For labels:

Width: Enclosure width - 150 mm
Height: 29 mm
Thickness: 0.75 mm

Colour:

- RAL 7033

For enclosure width mm	Model No.
600	2403.000
800	2404.000

Viewing panels/operating panels

Operating panel

For mounting on

- AE instead of door
- Surfaces

Frame construction with corner connectors on the inside, 3 mm aluminium plate secured from the inside and sealed against the frame

Material:

- Aluminium, natural anodised

Protection category to IEC 60 529:

- IP 54

Supply includes:

- Aluminium frame
- Display panel
- Hinges
- Brackets

For use as door variant for AE	Width mm	Height mm	Depth mm	Model No.
1001.600 1002.600 1002.600 1032.500 1035.500	197	297	34	2740.000¹⁾
1004.600 1011.600 1030.500 1031.500	377	297	34	2741.000
1006.500 1006.600 1380.500	377	377	34	2742.000
1008.600 1011.600 1338.500	377	597	34	2743.000
1007.600 1013.600 1050.500 1350.500	497	497	34	2745.000
1009.600 1039.500 1339.500	597	377	34	2744.000
1010.500 1010.600 1060.500 1360.500	597	597	34	2746.000

¹⁾ With AE, only for use on the rear panel

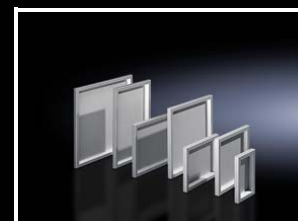
Area available for population:
(width -70 mm) x (height -70 mm)

Dimensions of aluminium plate:
(width -54 mm) x (height -54 mm)



Accessories:

- Cam lock 2749.000, see page 559



Cam lock

May be retrofitted to the operating area or enclosure panel of operating panels.

Standard double-bit lock insert may be exchanged for type C lock inserts and type C plastic handle.

Packs of	Model No.
1 pc(s).	2749.000



Accessories:

- Lock inserts, type C, see page 570
- Plastic handle, type C, see page 569



Viewing window

for operating panel

For the protection of display and control components. With a build height of max. 35 mm.

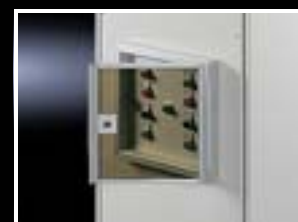
Material:

- Frame: Aluminium, natural anodised
- Glass panel: Smoked acrylic

Supply includes:

- Lock insert no. 3524 E

For operating panel	Model No.
2741.000	2791.000
2742.000	2792.000



Doors/locks

Allocation of lock systems

Compact enclosures, sheet steel

		Enclosure series								
		EB	BG	AE, wall-mounted enclosures AE		CM	KS		EL 3-part	
Application		-				-				
	from page	34	36	46	48	50	52	53	100	100

Handle systems for enclosures

Comfort handle										
For lock inserts	564	-	-	-	-	-	-	-	-	■
For padlock and lock inserts	564	-	-	-	-	-	-	-	-	■
With security lock insert E1	564	-	-	-	-	-	-	-	-	■
For semi-cylinder	564	-	-	-	-	-	-	-	-	■
Prepared for ASSA lock system	564	-	-	-	-	-	-	-	-	■
Mini-comfort handle (from AE enclosure height 380 mm, from AE enclosure width 300 mm)										
For lock inserts	567	-	-	■	-	-	-	-	■	-
For semi-cylinder	567	-	-	■	-	-	-	-	■	-
Ergoform-S handle										
Standard	568	-	-	-	■	-	-	-	-	-
Special with lock insert, lock E1	568	-	-	-	■	-	-	-	-	-
Special, prepared for ASSA lock system	568	-	-	-	■	-	-	-	-	-
Standard for KS plastic enclosures	568	-	-	-	-	-	-	■	-	-
Folding lever handle										
For lock inserts	565	-	-	-	-	■	-	-	-	-
For padlock and lock inserts	565	-	-	-	-	■	-	-	-	-
With security lock insert E1	565	-	-	-	-	■	-	-	-	-
Semi-cylinder lock										
For AE	571	-	-	■	-	-	-	-	-	-
Plastic handles										
Version B	569	■	■	■	-	-	-	-	-	-
Version E	569	-	-	-	-	-	■	-	-	-
T handles										
Version B	569	■	■	■	-	-	-	-	-	-
Lock inserts for enclosures										
Lock inserts										
Version A	570	■	■	■	■	-	-	-	-	-
Version E	570	-	-	-	-	-	■	■	-	-
Version F	570	-	-	-	-	■	-	-	■	■
Lock cylinder inserts										
Version B	571	■	■	■	-	-	-	-	-	-

Lock inserts for handle systems				
Semi-cylinder		Lock inserts		
Lock and push-button inserts	DIN 18 252	Version A	Version F	Lock and push-button inserts
565	565	570	570	565

-	-	-	■	■
-	-	-	■	■
-	-	-	-	-
■	■	-	-	-
-	-	-	-	-
■	■	■	-	-
-	-	-	■	■
■	■	-	-	-
-	-	-	-	-
-	■	-	-	-

Large enclosures, sheet steel

		Enclosure series		
		TS, SE	PC case	
Application			Door	For keyboard drawer or fold-out tray
	from page	62	118	118

Handle systems for enclosures


Comfort handle				
For lock inserts	564	■	■	-
For padlock and lock inserts	564	■	■	-
For semi-cylinder	564	■	■	-
With security lock insert E1	564	■	■	-
Prepared for ASSA lock system	564	■	■	-
With code	566	■	■ ¹⁾	-
Ergoform-S handle				
Standard	568	-	-	-
Special with lock insert, lock E1	568	-	-	-
Special, prepared for ASSA lock system	568	-	-	-
Lock inserts for enclosures				
Lock inserts				
Version A	570	-	-	■
Version F	570	■	■	-

¹⁾ Only suitable for use with rear door

Lock inserts for handle systems				
Semi-cylinder		Lock inserts		
Lock and push-button inserts	DIN 18 252	Version A	Version F	Lock and push-button inserts
565	565	570	570	565

-	-	-	■	■
-	-	-	■	■
■	■	-	-	-
-	-	-	-	-
-	-	-	-	-
■	■	-	-	-
■	■	■	-	-
-	-	-	-	-
-	-	-	-	-

New



TS IT network/ server enclosures

see page 87

Doors/locks

Allocation of lock systems

Console systems and industrial workstation, sheet steel

		Enclosure series						
		TopConsole TP		One-piece console TP		Universal consoler TP	IW	IW enclosure for tower PC
Application	from page	Desk section and console	Pedestal	Console cover	Console door			
		111	111	115	115	116	120	119

Handle systems for enclosures

Handle system	from page	Desk section and console	Pedestal	Console cover	Console door	Universal consoler TP	IW	IW enclosure for tower PC
Comfort handle								
For lock inserts	564	-	-	-	-	-	■	-
For padlock and lock inserts	564	-	-	-	-	-	■	-
For semi-cylinder	564	-	-	-	-	-	■	-
With security lock insert E1	564	-	-	-	-	-	■	-
Prepared for ASSA lock system	564	-	-	-	-	-	■	-
With code	566	-	-	-	-	-	■	-

Ergoform-S handle

Standard	568	-	■	-	■	■	-	-
Special with lock insert, lock E1	568	-	■	-	■	■	-	-
Special, prepared for ASSA lock system	568	-	■	-	■	■	-	-

T handles

Version B	569	■	-	■	-	-	-	-
-----------	-----	---	---	---	---	---	---	---

Lock inserts for enclosures

Lock inserts		Desk section and console	Pedestal	Console cover	Console door	Universal consoler TP	IW	IW enclosure for tower PC
Version A	570	■	■	■	■	■	-	-
Version D	570	-	-	-	-	-	-	■
Version F	570	-	-	-	-	-	■	-
Lock cylinder inserts								
Version B	571	-	-	-	-	-	■	-

Lock inserts for handle systems				
Semi-cylinder		Lock inserts		
Lock and push-button inserts	DIN 18 252	Version A	Version F	Lock and push-button inserts
565	565	570	570	565

-	-	-	■	■
-	-	-	■	■
■	■	-	-	-
-	-	-	-	-
-	-	-	-	-
■	■	-	-	-
■	■	■	-	-
-	-	-	-	-
-	-	-	-	-



Operating housing with handle strips

see page 129

New

Enclosures and cases, stainless steel

Application	Enclosure series					TS, SE
	AE		One-piece console			
	with cam	with 3-point lock	Console cover	Console door		
Page	179/180	181	186	186	182/185	

Handle systems for enclosures

Comfort handle						
For lock inserts	564	-	-	-	-	■
For padlock and lock inserts	564	-	-	-	-	■
For semi-cylinder	564	-	-	-	-	■
With security lock insert E1	564	-	-	-	-	■
Prepared for ASSA lock system	564	-	-	-	-	■
Ergoform-S handle						
Standard	568	-	■	-	■	-
Special with lock insert, lock E1	568	-	■	-	■	-
Special, prepared for ASSA lock system	568	-	■	-	■	-
Plastic handles						
Version C	569	■ ¹⁾	-	■	-	-
T handles						
Version C	569	■ ¹⁾	-	■	-	-
Semi-cylinder lock						
For AE	571	■ ²⁾	-	-	-	-

Lock inserts for enclosures

Lock inserts						
Version A	570	-	■	-	-	-
Version C	570	■	-	■	-	-
Version F	570	-	-	-	-	■
Lock cylinder inserts						
Version C	571	■	-	■	-	-

¹⁾ Not with 1018.600

²⁾ Not with enclosures made from stainless steel 1.4401 (AISI 316L) and use of cam lock 2304.000

Lock inserts for handle systems				
Semi-cylinder		Lock inserts		
Lock and push-button inserts	DIN 18 252	Version A	Version F	Lock and push-button inserts
565	565	570	570	565

-	-	-	■	■
-	-	-	■	■
■	■	-	-	-
-	-	-	-	-
-	-	-	-	-
■	■	■	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	■	-	-	-



Stainless steel

see page 175

Doors/locks

Lock systems



Comfort handle

for TS, TS IT, SE, PC, IW

As the handle does not take up any swing space, due to its folding action, the door surface area may be maximised for installed equipment.

Material:

- Die-cast zinc






Surface finish:

- Powder-coated



Also required:

- Handle adaptor, see page 549, for mounting on TS glazed door, PC bottom door, IW designer door

					
	For lock inserts	For padlock and lock inserts	With lock insert, lock E1 ¹⁾	For semi-cylinder	Prepared for ASSA lock system
	Model No.				
RAL 7035	8611.020	8611.290	8611.045	8611.070	8611.280
RAL 9005	8611.350	–	–	8611.360	–
Matt nickel-plated	8611.330	–	–	8611.340	–
Lock inserts, type F					
7 mm square	8611.100	8611.100	–	–	–
8 mm square	8611.110	8611.110	–	–	–
7 mm triangular	8611.120	8611.120	–	–	–
8 mm triangular	8611.130	8611.130	–	–	–
Screwdriver	8611.140	8611.140	–	–	–
Daimler insert	8611.150	8611.150	–	–	–
3 mm double-bit	8611.160	8611.160	–	–	–
Fiat	8611.170	8611.170	–	–	–
6.5 mm triangular (CNOMO)	8611.220	8611.220	–	–	–
Lock and push-button inserts					
Lock insert, lock no. 3524 E ²⁾	8611.180	8611.180	–	2467.000	–
Push-button insert	8611.190	8611.190	–	2468.000	–
Push-button and lock insert ²⁾	8611.200 ³⁾	8611.200 ³⁾	–	2469.000 ⁴⁾	–
Semi-cylinder					
to DIN 18 252 ⁵⁾	–	–	–	9785.040	–
	–	–	–	9785.042 ⁶⁾	–

¹⁾ Only for use with VW, Audi, SEAT, SkodaAuto, supplied without key

²⁾ With two keys

³⁾ Lock no. 12321; no other lock is possible




⁴⁾ Lock no. 2123; no other lock is possible

⁵⁾ With 3 keys for each lock insert

⁶⁾ Packs of two, simultaneous locking within the same pack, no simultaneous locking for different packs

Lock inserts

for installation in comfort handle, mini-comfort handle, Ergoform-S standard, folding lever handle

Installation in			
	Lock and push-button inserts		Semi-cylinder
	Comfort handle ⁶⁾ , Mini-comfort handle ⁶⁾	Comfort handle ⁷⁾ , Mini-comfort handle ⁷⁾ , Ergoform-S standard, Folding lever handle for CM	Comfort handle, Mini-comfort handle, Ergoform-S standard, Folding lever handle for CM
Model No.			
Security lock insert Lock no. 3524 E ¹⁾	8611.180	2467.000	-
Push-button insert	8611.190	2468.000	-
Push-button and lock insert ¹⁾	8611.200²⁾	2469.000³⁾	-
to DIN 18 252 ⁴⁾	-	-	9785.040
	-	-	9785.042⁵⁾

¹⁾ With two keys

²⁾ Lock no. 12321; no other lock is possible

³⁾ Lock no. 2123; no other lock is possible

⁴⁾ With 3 keys for each lock insert

⁵⁾ Packs of two, simultaneous locking within the same pack, no simultaneous locking for different packs

⁶⁾ For lock inserts

⁷⁾ For semi-cylinders



Folding lever handle

for CM




As the handle does not take up any swing space, due to its folding action, the door surface area may be maximised for installed equipment.

Size:

- Length: 242 mm (with inserted trim panel)
- Width: 50 mm
- Depth: 17.5 mm

Colour:

- Body: Similar to RAL 9005
- Handle: Similar to RAL 9006

			
	for lock inserts	for padlock and lock inserts	with lock insert, lock E1 ¹⁾
	Model No.		
	5001.060	5001.062	5001.061

Lock inserts, type F			
7 mm square	8611.100	8611.100	-
8 mm square	8611.110	8611.110	-
7 mm triangular	8611.120	8611.120	-
8 mm triangular	8611.130	8611.130	-
Screwdriver	8611.140	8611.140	-
Daimler insert	8611.150	8611.150	-
3 mm double-bit	8611.160	8611.160	-
Fiat	8611.170	8611.170	-
6.5 mm triangular (CNOMO)	8611.220	8611.220	-

Lock and push-button inserts			
Lock insert, lock no. 3524 E ²⁾	2467.000	2467.000	-
Push-button insert	2468.000	2468.000	-
Push-button and lock insert ²⁾	2469.000 ³⁾	2469.000 ³⁾	-

Semi-cylinder			
to DIN 18 252 ⁴⁾	9785.040	9785.040	-
	9785.042 ⁵⁾	9785.042 ⁵⁾	-

¹⁾ Only for use with VW, Audi, SEAT, SkodaAuto, supplied without key

²⁾ With two keys

³⁾ Lock no. 2123; no other lock is possible

⁴⁾ With 3 keys for each lock insert

⁵⁾ Packs of two, simultaneous locking within the same pack, no simultaneous locking for different packs



Doors/locks

Lock systems



Comfort handle

with code for TS, TS IT, SE

Flexible access opportunities with

- individual 3-digit code without key
- or
- with master key function by additionally using a semi-cylinder of 40 or 45 mm to DIN 18 252, independently of the code

Colour	Model No.
RAL 7035	7200.800
RAL 9005	7200.801

Accessories:

- Lock and push-button inserts, see page 565
- Semi-cylinder, see page 565



Adjacent door latch

for TS

For optimum operation of the adjacent door from the outside if the handle on the inside is difficult to access due to swing frames or 482.6 mm (19") installed equipment. Retrospective conversion of the adjacent door is easily achieved using the supplied drilling template. The handle on the inside is no longer required.

Packs of	Model No.
1 pc(s).	8611.370

Accessories:

- Standard double-bit lock insert may be exchanged for 27 mm lock inserts, type A, see page 570



Colour:

- RAL 7035

Supply includes:

- Assembly parts



Locking bar latch to CNOMO¹⁾

To fit all locking bars in TS doors and glazed doors with standard lock or comfort handle

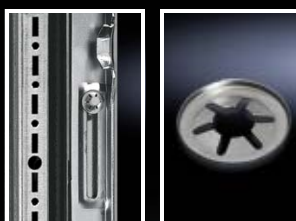
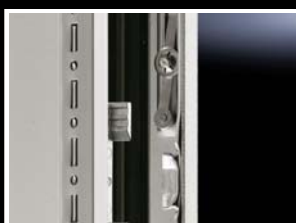
The latch prevents the locking bars from moving when the door is open. For mounting on the bolt of the bar guide.

Packs of	Model No.
10 pc(s).	8611.210

Also required:

¹⁾ CNOMO is a French automobile industry standard. For safety reasons, it must not be possible to lock the handle whilst the door is open.

- for CNOMO¹⁾
Lock inserts, type F, 6.5 mm triangular insert 8611.220, see page 570



Spring washer

Upon dismantling the TS locking rods, the spring washers cannot be reused.

Material:

- Spring steel

Surface finish:

- Zinc-plated

	Packs of	Model No.
Spring washer	100 pc(s).	8800.070

Mini-comfort handle

for AE with cam, EL 3-part

Prepared for the installation of lock inserts and for the installation of standard commercially available 40 or 45 mm semi-cylinders, as well as lock and push-button inserts.



Material:

– Die-cast zinc

Colour:

– RAL 7035



				
	For lock inserts		For semi-cylinder	
Model No.				
For enclosure system	EL	AE	EL	AE
	7705.110	2537.010	7705.120	2537.000
Lock inserts, type F				
7 mm square	8611.100	8611.100	–	–
8 mm square	8611.110	8611.110	–	–
7 mm triangular	8611.120	8611.120	–	–
8 mm triangular	8611.130	8611.130	–	–
Screwdriver	8611.140	8611.140	–	–
Daimler insert	8611.150	8611.150	–	–
3 mm double-bit	8611.160	8611.160	–	–
Fiat	8611.170	8611.170	–	–
6.5 mm triangular (CNOMO)	8611.220	8611.220	–	–
Lock and push-button inserts				
Lock insert, lock no. 3524 E ¹⁾	8611.180	8611.180	2467.000	2467.000
Push-button insert	8611.190	8611.190	2468.000	2468.000
Push-button and lock insert ¹⁾	8611.200 ²⁾	8611.200 ²⁾	2469.000 ³⁾	2469.000 ³⁾
Semi-cylinder				
to DIN 18 252 ⁴⁾	–	–	9785.040	9785.040
	–	–	9785.042 ⁵⁾	9785.042 ⁵⁾

¹⁾ With two keys

²⁾ Lock no. 12321; no other lock is possible

³⁾ Lock no. 2123; no other lock is possible

⁴⁾ With 3 keys for each lock insert

⁵⁾ Packs of two, simultaneous locking within the same pack, no simultaneous locking for different packs

Doors/locks

Lock systems



Ergoform-S lock system

The unlocked handle folds down forwards, and the lock is opened by swivelling.

Material:

- Die-cast zinc

Surface finish:

- Powder-coated

				
	Standard	Standard for KS plastic enclosures	Special with lock insert, lock E1 ¹⁾	Specially prepared for ASSA lock system
Model No.				
RAL 7035 with brown handle	–	–	2456.500	–
Brown	–	–	–	2453.000
Matt nickel-plated	2452.000	–	–	–
RAL 7035	2435.000	1490.010	–	–
RAL 7035 With brown handle and bracket	2455.010	–	–	–
Lock inserts, version A				
7 mm square	2460.000	2460.000	–	–
8 mm square	2461.000	2461.000	–	–
7 mm triangular	2462.000	2462.000	–	–
8 mm triangular	2463.000	2463.000	–	–
Screwdriver	2464.000	2464.000	–	–
Daimler insert	2465.000	2465.000	–	–
3 mm double-bit	2466.000	2466.000	–	–
Fiat	2307.000	2307.000	–	–
6.5 mm triangular (CNOMO)	2460.650	2460.650	–	–
Lock and push-button inserts				
Lock insert, lock no. 3524 E ²⁾	2467.000	2467.000	–	–
Push-button insert	2468.000	2468.000	–	–
Push-button and lock insert ²⁾	2469.000 ³⁾	2469.000 ³⁾	–	–
Semi-cylinder				
to DIN 18 252 ⁴⁾	9785.040	9785.040	–	–
	9785.042 ⁵⁾	9785.042 ⁵⁾	–	–

¹⁾ Only for use with VW, Audi, SEAT, SkodaAuto, supplied without key

²⁾ With two keys

³⁾ Lock no. 2123; no other lock is possible

⁴⁾ With 3 keys for each lock insert








⁵⁾ Packs of two, simultaneous locking within the same pack, no simultaneous locking for different packs

Plastic handles

With or without lock cylinder insert.

Supply includes:

- Assembly parts and seal

Version	B		C		E		G
							
	With lock cylinder insert, lock no. 3524 E ¹⁾	Without lock cylinder insert	With lock cylinder insert, lock no. 3524 E ¹⁾	Without lock cylinder insert	With lock cylinder insert, lock no. 3524 E ¹⁾	Without lock cylinder insert	With lock cylinder insert, lock no. 3524 E ¹⁾
	Model No.						
RAL 9011	2576.000	2533.000	2485.000	2485.100	-	-	2599.000
RAL 8019	-	-	-	-	1484.000	1484.001	-

¹⁾ With two keys







T-handles

With or without lock cylinder insert.

Supply includes:

- Seal

Version	B		C	
				
	With lock cylinder insert ¹⁾	Without lock cylinder insert	With lock cylinder insert ¹⁾	Without lock cylinder insert
	Model No.			
	2575.000²⁾	2572.000	2535.000²⁾	2536.000

¹⁾ With two keys

²⁾ Lock no. 3524 E



Doors/locks

Lock systems



Cam locks

	With double-bit insert	With lock cylinder insert ³⁾	With double-bit insert,	With lock cylinder insert ³⁾	With lock insert, lock E1 ¹⁾ RAL 7035	With double-bit insert
Material: Enclosure	Die-cast zinc, nickel-plated		Fibreglass-reinforced polyamide			Made entirely from stainless steel 1.4404 (AISI 316L)
	Model No.					
	2520.000	2530.000	2420.000	2430.000	2540.500	2304.000

Lock inserts

7 mm square	2523.000	-	2460.000	-	-	-
8 mm square	2526.000	-	2461.000	-	-	-
7 mm triangular	2527.000	-	2462.000	-	-	-
8 mm triangular	2528.000	-	2463.000	-	-	-
Screwdriver	-	-	2464.000	-	-	-
Daimler insert	2522.000	-	2465.000	-	-	-
3 mm double-bit	2483.000	-	2466.000	-	-	-
Fiat	-	-	2307.000	-	-	-
6,5 mm triangular (CNOMO)	-	-	2460.650	-	-	-

Lock cylinder inserts

With lock no. 3524 E ²⁾	-	-	2571.000	-	-	-
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¹⁾ Only for use with VW, Audi, SEAT, SkodaAuto, supplied without key

²⁾ With two keys



³⁾ Lock no. 3524 E



Lock inserts

Version	A	C	D	E	F
Material	Die-cast zinc	Die-cast zinc	Die-cast zinc	Plastic	Die-cast zinc
Length	27 mm	41 mm	47 mm		
	Model No.				
7 mm square	2460.000	2523.000	-	-	8611.100
8 mm square	2461.000	2526.000	-	1488.000	8611.110
7 mm triangular	2462.000	2527.000	-	-	8611.120
8 mm triangular	2463.000	2528.000	-	1486.000	8611.130
Screwdriver	2464.000	-	-	-	8611.140
Daimler insert	2465.000	2522.000	-	-	8611.150
3 mm double-bit	2466.000	2483.000	2484.000	1492.000	8611.160
Fiat	2307.000	-	-	-	8611.170
6,5 mm triangular (CNOMO)	2460.650	-	-	-	8611.220

Lock cylinder inserts

Version	B	C
		
	With lock no. 3524 E ¹⁾	With lock no. 3524 E ¹⁾
Material	Die-cast zinc	Die-cast zinc
	Model No.	
	2571.000	2525.000

¹⁾ With two keys



Semi-cylinder lock

for compact enclosures AE

For retro-fitting to all single-door enclosures with cam lock.

The cover plate is locked by semi-cylinders with a total length of 40/45 mm (to DIN 18 252). An additional cover protects the cylinder against dirt. The protection category of the enclosure is not impaired. Supplied without semi-cylinder.

Material:

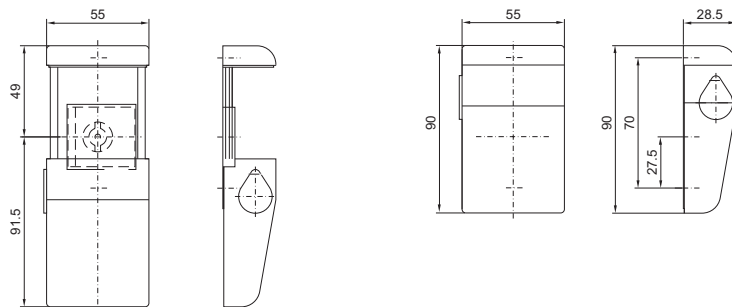
- Die-cast zinc

Version	Model No.
RAL 7035	2534.100
Nickel-plated (matt)	2534.500



Accessories:

- Semi-cylinder, see page 565



Lock cover

for padlocks or multiple locks

For retrospective mounting on all compact enclosures AE, sheet steel, with cam lock.

Material:

- Die-cast zinc

Surface finish:

- Nickel-plated

Packs of	Model No.
1 pc(s).	2493.000



Doors/locks

Lock systems



Multiple lock

for 6 cam locks

The ideal solution in cases where individual access for several persons is required for maintenance and repair purposes.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Packs of	Model No.
2 pc(s).	2493.500



Lock cover

Prepared for lead seal

For use in all enclosure types with Rittal-specific locks, such as AE and EB.

Material:

- Polyamide

Colour:

- RAL 7035

Packs of	Model No.
2 pc(s).	2476.000



Security lock

Fitted to doors, to protect against contact with live electrical equipment whilst the master switch is ON.

Function:

- Locks the door when the master switch is ON
- Mains power (voltage) is only enabled whilst the door is closed
- Monitoring of the lock magnet via an additional closing contact

Supply includes:

- Lock
- Actuator
- Angle bracket
- Assembly parts

Connection voltage for lock magnet	Model No.
230 V AC 11 VA	2416.000
24 V DC 8 W	2418.000
120 V AC 8 VA	2419.000







Also required:

- For twin-door enclosures (for the overlapping door, to indicate "enclosure door closed"): Door-operated switch 4127.010, see page 639

Enclosure keys

For lock inserts (one double-bit key is supplied with every enclosure).

				
	Model No.			
	-	-	2549.000	2549.500²⁾³⁾
Double-bit key no. 5	2531.000	-	■	■
Security key no. 3524 E	-	2532.000¹⁾	-	-
7 mm triangular	2545.000	-	-	■
8 mm triangular	2546.000	-	■	■
7 mm square	2547.000	-	-	■
8 mm square	2548.000	-	■	■
For HD locks	2549.600	-	-	-
For Daimler	2521.000	-	-	-
For Fiat	2308.000	-	-	-

¹⁾ Packs of 2

²⁾ With bit adaptor and reversible bit for:
Multi-tooth size 25 and Phillips-head (Ph 2)

³⁾ Bit 2549.510 for HD lock insert, see page 172



Doors/locks

Hinges



130°/180° hinges

Supply includes:
– Assembly parts

! Also required:

– ¹⁾ Lock components for frame 8800.040, see page 550

Enclosure type	Door variant	Material	Colour	Packs of	130°	180°
					Model No.	
TS 8, SE	Sheet steel door	Die-cast zinc	–	4 pc(s).	8800.020¹⁾	–
TS 8, SE	Sheet steel door	Die-cast zinc	RAL 7035	4 pc(s).	–	8800.190
			RAL 9005		–	8800.950
			Matt nickel-plated		–	8701.180
TS 8, SE	Doors with high dynamic loads, door installations up to 900 N	Precision casting/ die-cast zinc	RAL 7035	4 pc(s).	–	8800.710
TS 8 bayed enclosure suites with comfort handle	Sheet steel door	Die-cast zinc	RAL 7035	4 pc(s).	–	7824.520
	Glazed door	Die-cast zinc	RAL 7035			7824.525²⁾
AE	Standard door	Die-cast zinc	–	2 pc(s).	–	2449.000
CM	Standard door	Die-cast zinc	RAL 9011/9006	3 pc(s).	–	5001.000

²⁾ max. 140°



Hinge pin removal tool

For safe and easy removal of hinge pins.

For enclosure	Model No.
AE/CM	2432.000



Cover hinge

for KL

The cover hinge is simply screwed to the enclosure protection channel and to the edge fold.

Supply includes:
– Assembly parts

Material	Packs of	Model No.
Die-cast zinc	6 pc(s).	1592.000
Stainless steel 1.4404 (AISI 316L)	2 pc(s).	1592.010



Cover retainer

for KL

The cover retainer is easily fitted without drilling, and allows the covers to be opened, even when the terminal box below is bayed.

Packs of	Model No.
3 pairs	1591.000

Support strips

For attachment of

- Cable ducts
- Cable conduit holders
- Contact hazard protection covers
- Equipment installed on the door
- Cable clamping and attachment

4.5 mm diameter hole on a 25 mm DIN pitch pattern

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts



Accessories:

- Screws and self-tapping screws M5, see page 625

For TS, SE, CM, TP

For door width mm	Length mm	Packs of	Model No.
400	290	20 pc(s).	4594.000
500	390	20 pc(s).	4309.000
600	490	20 pc(s).	4596.000
800	690	20 pc(s).	4598.000
900	790	20 pc(s).	4579.000
1000	890	20 pc(s).	4599.000

For AE

For enclosures AE	Packs of	Model No.
1018.600 ²⁾ , 1019.500 ²⁾ 1050.500 ¹⁾ , 1057.500 1100.500, 1110.500 1114.500 ¹⁾ , 1130.500 1213.500 ¹⁾ , 1350.500 ¹⁾	20 pc(s).	2325.000
1012.500 ²⁾ , 1376.500 1054.500, 1039.500 1060.500, 1058.500 1090.500, 1076.500 1339.500, 1260.500 ¹⁾ 1360.500	20 pc(s).	2326.000
1014.500 ²⁾ , 1073.500 1077.500	20 pc(s).	2327.000
1016.500 ²⁾ , 1017.500 ²⁾ 1055.500, 1180.500 1280.500 ¹⁾	20 pc(s).	2328.000

¹⁾ For these AE models, the door rails should be cut to length at the knockout.

²⁾ Only in conjunction with perforated mounting strips (see page 576)



Spacers

The universal assembly component for all situations where a distance from the mounting level is required. With self-tapping thread for diameter 4.5 mm. The following components may be attached to the rear using 5.5 x 13 mm screws:

- Top-hat/cross rails
 - Contact hazard protection covers
 - Master switch trim panels
 - Cable clamp rails
- etc.

Material:

- Hexagonal steel (SW8)

Surface finish:

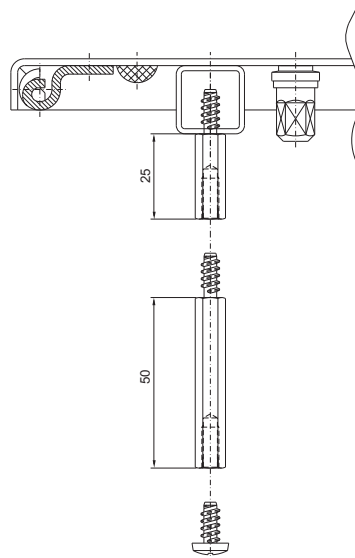
- Zinc-plated



Accessories:

- Screws 5.5 x 13 mm, see page 625

Length mm	Packs of	Model No.
25	12 pc(s).	2311.225
50	12 pc(s).	2311.250



Doors/locks

Door, internal



Perforated mounting strip

for AE stainless steel

For vertical mounting on the threaded bolts of the door, for attaching

- Support strips for AE, see page 575
- Door stay 2519.000, see page 578

3.7 mm diameter hole on a 25 mm DIN pitch pattern

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Packs of 20 (nuts and serrated washers included)

To match AE	Length mm	Model No.
1012.600, 1014.600	698	2310.076
1016.600, 1018.600	938	2310.100
1017.600, 1019.500, 1019.600	1138	2310.120



Accessories:

- Screws, see page 625



Utility lectern

For programming units etc. Prepared for mounting on the tubular door frame of TS, SE, CM, PC or on any sufficiently large surface.

When required for servicing, it folds down quickly with a maximum support area, and after use is stowed between the tubular door frames in a space-saving design.

Load capacity:

- max. 30 kg.

Material:

- Sheet steel

Colour:

- RAL 7035

Support area		For door width mm	Model No.
Width mm	Depth mm		
413	400	600	4638.600
613	400	800	4638.800



Wiring plan lectern

Holds wiring plans during fault finding and maintenance work. The wiring plan lecterns can be bayed according to the door width. For mounting on the tubular door frame.

Material:

- Utility lectern: Polypropylene
- Mounting bracket: Die-cast zinc

Colour:

- Similar to RAL 7035

Supply includes:

- Wiring plan lectern (width 210 mm)
- Assembly parts

For enclosures	Packs of	Model No.
TS, SE, CM, TP, PC	1 pc(s).	4120.000

For door width mm	Required/possible number of wiring plan lecterns	
	min.	max.
400	1	1
500	1	1
600	2	2
800	2	3
1000	3	3



CD/DVD box

For fixing to all flat, clean surfaces with double-sided adhesive tape.

Capacity:

- Max. 10 CDs/DVDs

Material:

- Polyamide

Colour:

- RAL 7033

Packs of	Model No.
1 pc(s).	2446.000

Plastic wiring plan pockets

for AE

For installation options, refer to table

- B = Screw-fastened to the perforated door strip on both sides
- E = Screw-fastened on one side, other side stuck with adhesive or stuck entirely with adhesive

Supply includes:

- 2 holders with double-sided adhesive tape
- Acrylic glazed pane
- Assembly parts

Note:

- The acrylic glazed pane may be shortened to any required size for shorter doors

Model No.	2514.500	2514.600	2514.800
Usable width mm	340	415	615
Usable depth mm	18	18	18
Height of acrylic glazed pane mm	167	167	167

Installation options

For Model No. AE	Width mm			
1050.500	500	B	-	-
1054.500	600	E	E	-
1055.500	800	E	E	E
1057.500	500	B	-	-
1058.500	600	E	E	-
1060.500	600	E	E	-
1073.500	760	E	E	-
1076.500	600	E	E	-
1077.500	760	E	E	-
1090.500	600	E	E	-
1100.500	1000	B	-	-
1110.500	1000	B	-	-
1114.500	1000	B ¹⁾	-	-
1130.500	1000	B	-	-
1180.500	800	E	E	E
1213.500	1000	B ¹⁾	-	-
1260.500	600	E	B	-
1280.500	800	E	E	B
1350.500	500	B	-	-
1360.500	600	E	E	-
1376.500	600	E	E	-

¹⁾ Prepared for mounting on the l/h side door; for installation in the r/h side door, the acrylic glazed pane may be shortened



Plastic wiring plan pockets

For affixing to the inside surfaces of doors.

Material:

- Polystyrene with self-adhesive fastening strips

Colour:

- Similar to RAL 7035

For format	Clearance openings mm			Model No.
	W	H	D	
A3 landscape	438	286	45	2513.000
A4 portrait	228	254	17	2514.000
A5 landscape	228	174	17	2515.000



Wiring plan pockets with transparent pouch

With welded-on transparent pouch and self-adhesive backing.

For format	Model No.
DIN A4	2510.000
DIN A3	2512.000



Doors/locks

Door, internal



Sheet steel wiring plan pockets

for TS, SE, CM, TP pedestal, PC

For fastening to tubular door frames at any height.

Colour:

– RAL 7035

Supply includes:

– Assembly screws



D = 90 mm

To fit door width mm	Clearance openings mm		Model No.
	W	H	
400	255	210	4114.000
500	355	210	4115.000
600	455	210	4116.000
800	655	210	4118.000
900	755	210	4123.000
1000	855	210	4124.000

D = 35 mm

To fit door width mm	Clearance openings mm		Model No.
	W	H	
500	355	210	4115.500
600	455	210	4116.500
800	655	210	4118.500



Door stay

To secure the door in the open position.

Supply includes:

– Assembly parts

For	Mounting	Packs of	Model No.
TS, SE, TP universal console, PC	Bottom	5 pc(s).	4583.000
CM, TP	Top	2 pc(s).	2519.200
AE (except 1032.500 and 1035.500) and all AE stainless steel enclosures ¹⁾	Top	5 pc(s).	2519.000

¹⁾ With AE stainless steel, only in conjunction with perforated mounting strips, see page 576



Door stay for escape routes

for TS, SE, PC

In case of an emergency, conventional door stays can block the escape route. This stay is actuated automatically in the event of pressure, releasing the door in both directions. In conjunction with 180° hinges, this ensures that no escape routes are blocked by open doors in the event of an emergency.

Supply includes:

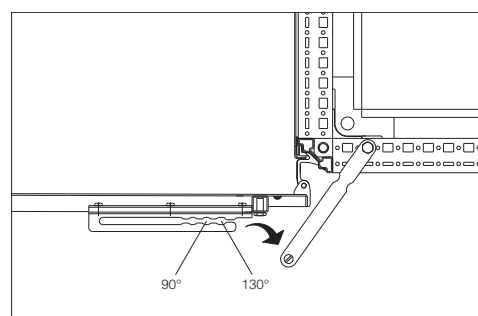
– Assembly parts

Packs of	Model No.
1 pc(s).	4583.500

+ Accessories:

– 180° hinge, see page 574

180° hinge



Ride-up roller

for TS, SE, PC

Lifts the door with heavy installed equipment (e.g. cooling unit) as a closing aid. For attaching to the tubular door frame.

Packs of	Model No.
10 pc(s).	4538.000



Transport and mounting handle

for doors TS, SE

For safe installation and removal of the door and during relocation in the workshop. The matching hinge pin removal tool for 130° hinges is pre-integrated, and supplied loose for 180° hinges.

Packs of	Model No.
1 pc(s).	2415.100



Document clip, magnetic

For simple attachment of installation documentation as a reminder or for flexible accommodation of a wide range of documents, measurement records, test reports etc. May be attached to any magnet-compatible surface via a permanent magnet.

Material:

- Plastic: Transparent
- Handle pieces: Black

Packs of	Model No.
2 pc(s).	7950.200



Alternate frame, magnetic

For individual marking or labelling of the existing network infrastructure. The magnetic surface facilitates flexible mounting on all magnet compatible surfaces. Adhesive strips are supplied for non-magnetic surfaces. The maximum size of the labels is 130 x 50 mm.

Packs of	Model No.
10 pc(s).	7950.150



Roof/wall mounting

Roof

Rain canopies

for AE, CM

Reliable protection for outdoor siting – with water run-off to the rear. Easily retro-fitted.

Supply includes:

- Assembly parts



Accessories:

- Condensate discharge, see page 533
- Pressure relief stopper, see page 533
- Wall mounting brackets 2503.010 and 2508.010, see page 587

Note:

- For outdoor siting, we generally recommend a rain canopy above the enclosure or the gap between the door and the enclosure, in order to protect against water and UV radiation
- Testing of IP protection categories for water protection (2nd code number to IEC 60 529) cannot be compared with an enclosure sited outdoors or under similar conditions
- Depending on the ambient conditions, additional measures may be required (see “Technical Information”)



For AE, sheet steel version

Material:

- Sheet steel

Surface finish:

- Powder-coated, textured paint

Colour:

- RAL 7035

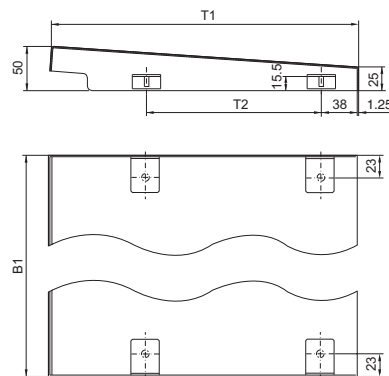
For AE, stainless steel version

Material:

- Stainless steel 1.4301 (AISI 304)

Surface finish:

- Brushed, grain 240



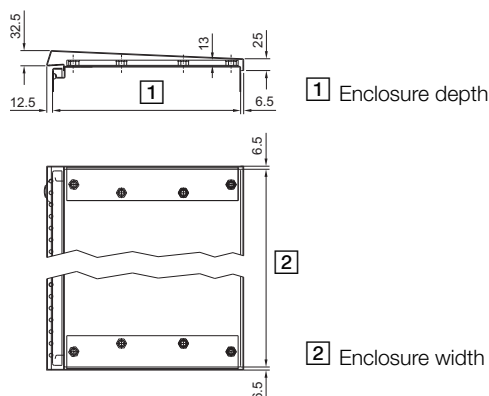
B1 = Enclosure width + 11 mm
 T1 = Enclosure depth + 25 mm
 T2 = Enclosure depth – 90 mm, from enclosure width 600 mm: Enclosure depth – 115 mm

For		Model No.
Enclosure width mm	Enclosure depth mm	
380	210	2501.500
600	210	2502.500
600	350	2511.500

For		Model No.
Enclosure width mm	Enclosure depth mm	
200	155	2470.000
300	210	2361.000
380	155	2471.000
380	210	2472.000
500	210	2362.000
600	210	2473.000
760	300	2474.000
800	300	2475.000
1000	300	2363.000



For CM, sheet steel version



Width mm	Depth mm	Model No.
600	400	5001.310
800	400	5001.330
1000	400	5001.350
1200	400	5001.360

Material:

- Sheet steel

Surface finish:

- Powder-coated, textured paint

Colour:

- RAL 7035

Roof/wall mounting

Roof

Dust guard trim

for AE, CM, EB, KL and BG

To protect against deposits on the upper edge of the door and between the enclosure and the door/cover. Cut the dust guard trim to length according to the enclosure width. Drill the enclosure and fit the dust guard trim using the adhesive strips and screws.

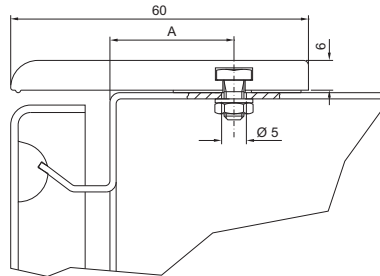
Material:

- Plastic, resistant to UV

Colour:

- Similar to RAL 7024

For enclosure	Length mm	A mm	Model No.
AE	1200	25	2426.500
CM		20	
KL, EB, BG		20.5	



Dust guard trim

for TS, SE

To protect against dust deposits on the upper edge of the door and between the door and upper horizontal enclosure section. The dust guard trim provides space for texts or company logos.

Colour:

- RAL 7035

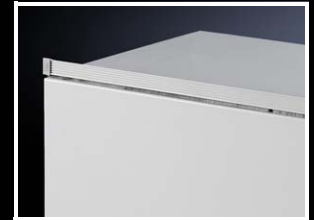
Supply includes:

- Clear plastic strip for text labels (height 29.5 mm)

Length mm	Model No.
600	2424.100
800	2425.100
1000	2427.100
1200	2426.100

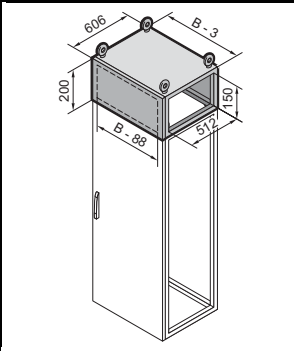
Note:

- Also suitable for use in conjunction with top baying cover, see page 548



Roof/wall mounting

Roof



Top-mounting module

for TS

As a cable chamber for cable infeed from above or for power distribution with busbar systems across bayed enclosures. The TS cover plate supplied as standard is used to finish off at the top. The enclosure height is increased by 200 mm with the top module fitted.

The top baying cover cannot be fitted. Installation accessories for top and bottom, see diagram and explanations below.

Material:

– Sheet steel, 1.5 mm

Surface finish:

– Spray-finished, textured paint

Colour:

– RAL 7035

Protection category IP to IEC 60 529:

– IP 55

Protection category NEMA:

– NEMA 12

For enclosures		Model No.
Width (B) mm	Depth mm	
600	600	8801.735
800	600	8801.745
1000	600	8801.755
1200	600	8801.765

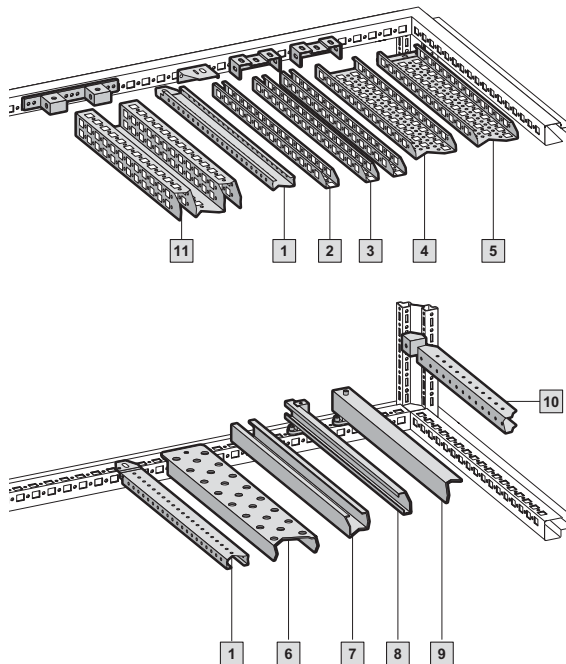
Supply includes:

- 1 frame module
- 2 trim panels (front and rear)
- 8 holders with automatic potential equalisation
- 4 tapped rods with eyebolts



Also required:

- Side panel for top-mounting module, 8801.775, see page 582



Accessories:

Description	Page
1 TS punched rail 18 x 38 mm	609
2 PS punched rail 23 x 23 mm with angle bracket	610
3 PS punched rail 23 x 23 mm with support bracket PS	610
4 PS punched section without mounting flange 23 x 73 mm with support bracket PS	611
5 PS punched section with mounting flange 23 x 73 mm	612
6 Support rail	613
7 System support rails	613
8 C rail 30/15 with support bracket or spacer	612
9 Cable clamp rail	665
10 TS punched rail 25 x 38 mm	608
11 TS punched section without mounting flange 45 x 88 mm	608



Side panel

for top-mounting module

To finish off the side of a top-mounting module or bayed suite.

Material:

– Sheet steel, 1.5 mm

Surface finish:

– Spray-finished, textured paint

Colour:

– RAL 7035

Supply includes:

– Assembly parts

Packs of	Model No.
2 pc(s).	8801.775

Roof plates

for TS

For enclosures without roof plate and in exchange for the standard roof in other TS enclosures.

Material:

– Sheet steel, 1.5 mm

Surface finish:

– Textured paint

Colour:

– RAL 7035

Supply includes:

– Assembly parts



IP 55, solid

For enclosures		Packs of	Model No.
Width mm	Depth mm		
400	600	1 pc(s).	9671.646
600	600	1 pc(s).	9671.666
800	600	1 pc(s).	9671.686
400	800	1 pc(s).	9671.648
600	800	1 pc(s).	9671.668
800	800	1 pc(s).	9671.688

For cable entry glands

For enclosures		Required number of glands	Packs of	Model No.
Width mm	Depth mm			
600	400	2 pc(s).	1 pc(s).	9665.943
850	400	3 pc(s).	1 pc(s).	9665.953
1100	400	4 pc(s).	1 pc(s).	9665.963
400	600	3 pc(s).	1 pc(s).	9671.546
600	600	4 pc(s).	1 pc(s).	9665.903
800	600	8 pc(s).	1 pc(s).	9671.586
850	600	6 pc(s).	1 pc(s).	9665.913
1100	600	8 pc(s).	1 pc(s).	9665.923
400	800	4 pc(s).	1 pc(s).	9671.548
600	800	8 pc(s).	1 pc(s).	9671.568
800	800	8 pc(s).	1 pc(s).	9671.588

IP 4X

In order to achieve a protection category of IP 41, a roof plate IP 55 should be fitted above the existing roof plate using four spacers 7967.000.

For enclosures		Packs of	Model No.
Width mm	Depth mm		
400	600	1 pc(s).	9671.364
600	600	1 pc(s).	9671.366
800	600	1 pc(s).	9671.368
400	800	1 pc(s).	9671.384
600	800	1 pc(s).	9671.386
800	800	1 pc(s).	9671.388

Also required:

Cable entry gland, see page 584

IP 2X with ventilation hole, build height: 72 mm

For enclosures		Packs of	Model No.
Width mm	Depth mm		
400	600	1 pc(s).	9671.846
600	600	1 pc(s).	9660.235
800	600	1 pc(s).	9660.245
1000	600	1 pc(s).	9660.255
1200	600	1 pc(s).	9660.265
400	800	1 pc(s).	9671.848
600	800	1 pc(s).	9659.525
800	800	1 pc(s).	9659.535
1000	800	1 pc(s).	9659.545
1200	800	1 pc(s).	9659.555

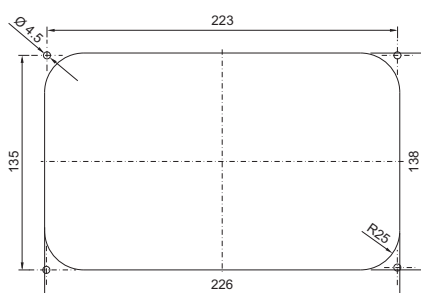
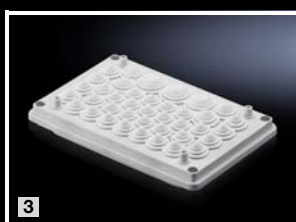
Roof/wall mounting

Roof

Cable entry gland

- Including seal
- External dimensions 250 x 160 mm
- Protection category IP 55

Version	Material	Colour	Packs of	Model No.
1 14 x M25/32	Insulating material	RAL 7035	1 pc(s).	9665.750
2 2 x M25/32/40, 1 x M32/40/50, 2 x M40/50/63	Insulating material	RAL 7035	1 pc(s).	9665.760
3 With sealing membranes 32 x Ø 7 – 16 mm, 4 x Ø 10 – 20 mm, 3 x Ø 14 – 26 mm	Insulating material	RAL 7035	1 pc(s).	9665.770
4 With entry glands up to Ø 66 mm	Insulating material	RAL 7035	1 pc(s).	9665.780
5 Solid	Sheet steel, spray-finished	RAL 7035	4 pc(s).	9665.785



Cut-out dimensions for 9665.750 to 9665.785



Roof/wall mounting

Roof

Roof plate

for cable entry, two-piece for TS, TS IT

In exchange for the standard roof. Equipped with a sliding angular bracket in the rear section. Rubber cable clamp strip on both sides for attaching cable bundles and bunched cables.

Thanks to the symmetrical design of the TS frame, side cable entry can also be achieved by rotating the roof plate. The two-piece design allows convenient retrofitting.

Material:

– Sheet steel

Colour:

– RAL 7035

For enclosures		Model No.
Width mm	Depth mm	
600	600	7826.665
600	800	7826.685
600	1000	7826.605
800	600	7826.865
800	800	7826.885
800	1000	7826.805
800	1200	7826.825



Roof plate, vented

for TS, TS IT

In exchange for the standard roof.

72 mm high roof plate, all-round vent slots and clamp strip for cable entry. The two-piece design allows convenient retrofitting.

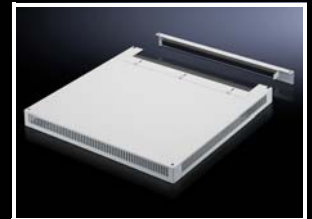
Material:

– Sheet steel

Colour:

– RAL 7035

For enclosures		Model No.
Width mm	Depth mm	
600	600	7826.669
600	800	7826.689
800	600	7826.869
800	800	7826.889
800	1000	7826.809



Roof mounting screw

For screw-fastening the roof plate instead of eye-bolts. With contact washers for potential equalisation.

Thread: M12

Material:

– Steel

Surface finish:

– Zinc-plated

Supply includes:

- 20 panhead Allen screws M 12 x 20
- 20 serrated sealing washers A 12.5

Packs of	Model No.
20 pc(s).	4198.000



Roof/wall mounting

Roof



Spacers

for roof plate TS

To raise the TS roof for ventilation purposes, in three different heights.

Not suitable for crane transportation!

Thread: M12

Material:

- Hexagonal sectional steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

Height mm	Packs of	Model No.
10	4 pc(s).	2422.000
20	4 pc(s).	2423.000
50	4 pc(s).	7967.000



Eyebolts

for TS, SE

For crane transportation of enclosures, where not already included in the supply.

Thread: M12

Supply includes:

- 4 eyebolts M12
- 4 serrated lock washers A 12.5

Material	Packs of	Model No.
Sheet steel, zinc-plated C 15E	4 pc(s).	4568.000
Stainless steel 1.4301 (AISI 304)	4 pc(s).	4568.500



Eyebolts

for CM

For crane transportation of enclosures, with reinforcement plate to be inserted underneath.

Mounting via the two holes in the top of the CM.

Thread: M12

Supply includes:

- Eyebolts
- Reinforcement plates

Packs of	Model No.
2 pc(s).	2509.500



Eyebolts

for AE

For crane transportation of enclosures, with reinforcement plate to be inserted underneath.

Thread: M12

Supply includes:

- Eyebolts
- Reinforcement plates

Packs of	Model No.
4 pc(s).	2509.000

Roof/wall mounting

Wall mounting

Wall mounting bracket

For the attachment of KL, EB, BG and IT enclosures based on EL.

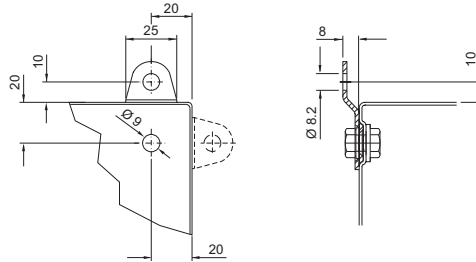
Supply includes:

- Assembly parts for mounting on the enclosure.

Note:

- For hygiene reasons, and in view of the protection category, the stainless steel enclosures do not have any drilled holes for the wall mounting brackets.

Material	Wall distance mm	Packs of	Model No.
Brass nickel-plated	8	4 pc(s).	1580.000
Sheet steel zinc-plated	8	4 pc(s).	1590.000
Stainless steel 1.4301 (AISI 304)	8	4 pc(s).	1594.000



Wall mounting bracket

for AE

For attaching to the enclosure from the outside. Simply insert the expandable dowel into the enclosure hole from the outside, and screw-fasten the wall bracket from the outside.

Material:

- Sheet steel

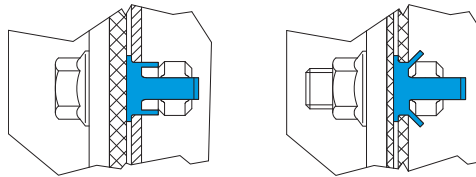
Surface finish:

- Zinc-plated

Supply includes:

- Wall bracket pre-fitted with seal and expandable dowel

Wall distance mm	Packs of	Model No.
15	4 pc(s).	2508.100



Wall mounting bracket

For mounting KL, EB, BG, AE, CM, IT enclosures based on EL and AE, TP consoles and small fibre-optic distributors.

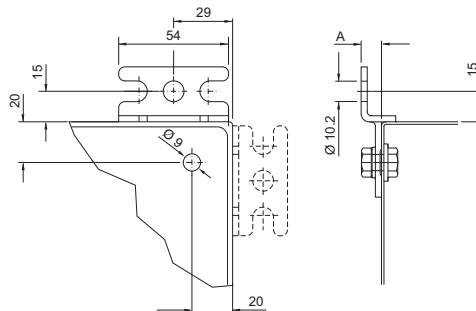
Supply includes:

- Assembly parts for mounting on the enclosure

Note:

- Item 2503.010 is only suitable up to a depth of 600 mm

Material	Wall distance (A) mm	Packs of	Model No.
Sheet steel, zinc-plated	40	4 pc(s).	2503.010
	10	4 pc(s).	2508.010
Stainless steel 1.4301 (AISI 304)	10	4 pc(s).	2433.000
Stainless steel 1.4404 (AISI 316L)	10	4 pc(s).	2433.500



Possible alternative:

- Hygienic Design wall spacer bracket, see page 172

Roof/wall mounting

Wall mounting



Wall mounting bracket

for KS

For attachment to the wall, only possible from the outside of the enclosure.

Material:

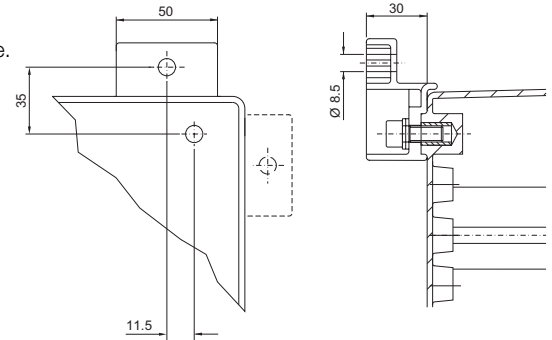
- Fibreglass-reinforced polyamide¹⁾

Supply includes:

- Assembly parts for mounting on the enclosure.

Colour	Packs of	Model No.
Similar to RAL 7035	4 pc(s).	1483.010
Similar to RAL 9011	4 pc(s).	9266.000¹⁾

¹⁾ With graphite additive for Ex applications



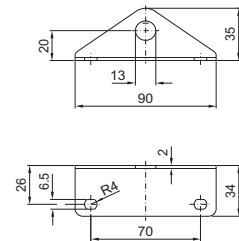
Wall angle

For compact enclosures (additional holes required in the enclosure).

Supply includes:

- Assembly parts for mounting on the enclosure

Material	Colour	Packs of	Model No.
Sheet steel	RAL 7035	4 pc(s).	2505.510
Stainless steel 1.4301 (AISI 304)	-	4 pc(s).	2583.010



Wall bracket

For roof-side wall attachment of TS and SE with a low depth and e.g. heavy components on the door or built-in swing frame.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Packs of	Model No.
4 pc(s).	4595.000

Possible alternative:

- With TS 8 inside the enclosure (without mounting plate), buying bracket 800.470, see page 546

Roof/wall mounting

Wall mounting

Pole clamp

for KL, EB, BG, AE, KS

For reliable, convenient fastening to round or square poles.

For pole diameter/size:

- Ø from 40 to 190 mm
- □ from 50 to 150 mm

Material:

- Mounting angles, clamping section: Sheet steel
- Clamping strap: Stainless steel 1.4301 (AISI 304)

Surface finish:

- Mounting angle, clamping section: Zinc-plated

Supply includes:

- 2 mounting angles, 600 mm long
- 4 clamping sections
- 2 clamping straps
- 4 clamping brackets
- 4 screws and captive nuts M8 for mounting on the enclosure

Packs of	Model No.
1 set(s)	2584.000



Enclosure connectors

Adjustable

Between Command Panels, terminal boxes, compact enclosures and horizontal or vertical surfaces. Pre-mount the connector halves on both sides, screw together and secure with a locking screw, and/or adjust the angle of rotation.

Rotation range:

- ±105° adjustable in 7.5° stepped increments

Material:

- Die-cast zinc

Surface finish:

- Powder-coated

Colour:

- RAL 7035

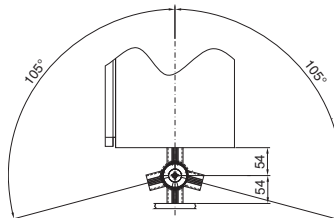
Supply includes:

- Assembly parts for both sides.

Packs of	Model No.
1 set(s)	6016.200

Note:

- The locking screws may be exchanged for standard, commercially available clamping levers (M10 x 50 mm)



Roof/wall mounting

Wall mounting



Frame connector, adjustable for Comfort Panel

Between the command panel and keyboard housing and horizontal or vertical surfaces.

Rotation range:

- Adjustable in 8° stepped increments, see drawing

Material:

- Die-cast zinc

Surface finish:

- Powder-coated

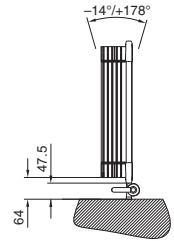
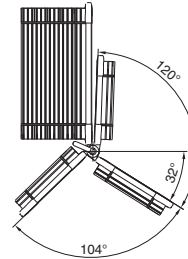
Colour:

- RAL 7024

Supply includes:

- Assembly parts and clamping levers for both sides

Packs of	Model No.
1 set(s)	6005.500



Wall mounting bracket

Vertically hinged

Between the Compact Panel and horizontal or vertical surfaces.

Rotation range:

- 180° adjustable on a 7.2° pitch pattern

Material:

- Wall mounting bracket: Sheet steel
- Knurled screw: Steel with plastic knurled handle

Supply includes:

- Knurled screw and assembly parts for mounting on the Compact Panel

Packs of	Model No.
1 set(s)	6341.000

Interior installation

Mounting plates

Mounting plates

for KL and KL-HD

For component installation outside of the enclosure. Assembly screws included as accessories with the enclosure.

Material:

- Sheet steel, 2 mm

Surface finish:

- Zinc-plated



Accessories:

- Self-tapping screws 2487.000, see page 625

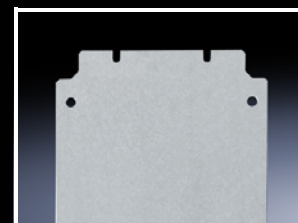


Possible alternative:

- Support rails, see page 614

Technical details:

Available on the Internet



For size mm	For Model No. KL and KL-HD	Model No.
150 x 150	1500.510, 1514.510, 1521.010, 1527.010, 1670.600, 1671.600	1560.700
200 x 150	1528.510, 1529.510	1575.700
300 x 150	1501.510, 1515.510, 1522.010, 1530.510	1561.700
400 x 150	1589.510	1576.700
200 x 200	1502.510, 1516.510, 1523.010, 1528.010, 1672.600	1562.700
300 x 200	1503.510, 1517.510, 1524.010, 1529.010, 1531.510, 1674.600	1563.700
400 x 200	1504.510, 1518.510, 1525.010, 1532.510, 1675.600	1564.700
500 x 200	1505.510, 1533.510	1565.700
600 x 200	1506.510, 1519.510, 1534.510	1566.700
800 x 200	1527.510, 1542.510	1574.700
300 x 300	1507.510, 1526.010, 1535.510	1567.700
400 x 300	1508.510, 1530.010, 1536.510, 1676.600	1568.700
500 x 300	1509.510, 1537.510	1569.700
600 x 300	1510.510, 1538.510	1570.700
400 x 400	1511.510, 1539.510	1571.700
600 x 400	1512.510, 1540.510	1572.700
800 x 400	1513.510, 1541.510	1573.700

Mounting plate

for TS, 400 mm wide

Depth-adjustable on a 25 mm pitch pattern.

Material:

- Sheet steel, 3 mm

Surface finish:

- Zinc-plated

Supply includes:

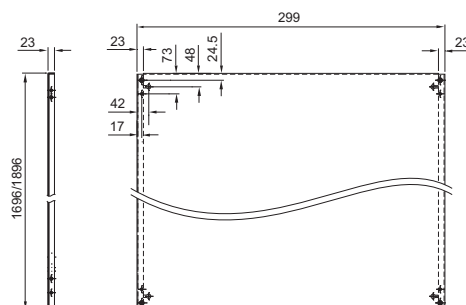
- Assembly parts



Accessories:

- TS 18 x 38 mm punched rail, used as mounting plate slide rail, see page 609
- TS width divider, for installation in wider enclosures, see page 523

For enclosure height mm	Model No.
1800	8614.180
2000	8614.200



Mounting plate infill

for TS

For a continuous mounting surface in bayed suites where the mounting plate is set forward.

Material:

- Sheet steel, 2 mm

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

For enclosure height mm	Model No.
1800	4590.700
2000	4591.700
2200	4592.700



Interior installation

Mounting plates

Mounting plate attachment

For additional clamping and to reduce potential vibration of the mounting plate. Select according to mounting position, installation type and enclosure.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts



For TS, SE

Installation options:

- Side, at half height in conjunction with mounting plate infill
- In the penultimate position
- Set forward (supplied state)

Benefit:

No impairment to the mounting surface, but mounting is only possible from the enclosure rear

Packs of	Model No.
10 pc(s).	8800.630

+ Accessories:

- Mounting plate infill, see page 591



For TS, SE

Installation options:

- Side
- Rear, flush with enclosure frame

Benefit:

No impairment to the mounting surface, but mounting is only possible from the enclosure rear

Packs of	Model No.
10 pc(s).	8800.610



For TS, SE

Installation options:

- Side
- Rear, flush with enclosure frame
- Set forward on a 25 mm pitch pattern

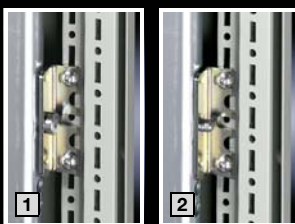
Benefit:

No impairment to the mounting surface, for optional use as attachment or screw-fastening

Packs of	Model No.
10 pc(s).	8800.090

! Also required:

- Punched section with mounting flange 17 x 73 mm for the inner mounting level, see page 606 (for fig. 3)



1 Mounting plate attached in the rearmost installation position

2 Mounting plate screw-fastened from the rear in the rearmost installation position

3 Mounting plate in a set forward position, either attached or screw-fastened (not shown)



For TS, SE

Installation options:

- Side
- Rear, flush with enclosure frame

Slide over the plate at the side and secure with screws. Additionally, the mounting plate may be drilled and screw-fastened at the rear C-edge.

Packs of	Model No.
10 pc(s).	8800.050

Interior installation

Mounting plates

Mounting plate attachment

For additional clamping and to reduce potential vibration of the mounting plate. Select according to mounting position, installation type and enclosure.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

For TS, SE

Installation options:

- All-round
- Set forward on a 25 mm pitch pattern

Slide in between the bar and plate from below or above or from the side, and secure with screws.

Packs of	Model No.
10 pc(s).	4593.000

**Also required:**

- Support strip (with TS for inner level), see page 609 or
- Punched section with mounting flange (with TS for inner level), see page 606 or
- Punched rails and punched sections, see page 610/611

**For TS, SE**

Installation options:

- On the top and bottom of the mounting plate
- Rear, flush with enclosure frame

Screw in the clip behind the plate and secure with screws.

Packs of	Model No.
10 pc(s).	4576.000



Installation kit

for mounting plates TS, SE, back-to-back

The minimal distance between the two mounting plates ensures a maximum installation depth for installed equipment on both sides.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Note:

Build height front and rear, with central installation = (enclosure depth - 48 mm) : 2

Example:

8806.521 = Depth 600 mm

Build depth = 2 x 276 mm

Packs of	Model No.
1 set(s)	8800.280



Interior installation

Mounting plates



Slide rails

for mounting plate TS

Slides in from the side.

- Attachment of the mounting plate to the slide rails via captive nuts and screws.
- Mounting of the slide rails directly on the enclosure frame, depth-adjustable on a 25 mm pitch pattern

Technical specifications:

- Possible mounting depth T6 -25 mm, refer to the Internet

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

For enclosure width mm	Packs of	Model No.
600	2 pc(s).	8802.260
800	2 pc(s).	8802.280
1200	2 pc(s).	8802.220

Mounting plate adjustment bracket

for KS

Infinitely adjustable.

Other equipment can also be installed on a rail system in this way, instead of the mounting plate.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

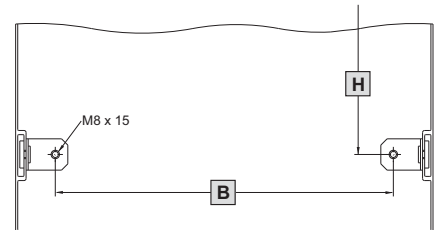
Supply includes:

- Assembly parts

- B** Enclosure width:
 - 76 mm (1481.000)
 - 104 mm (1491.000)

- H** Enclosure height:
 - 150 mm

For enclosures KS	Packs of	Model No.
1423.500, 1432.500, 1434.500, 1444.500, 1446.500, 1448.500, 1449.500, 1466.500, 1467.500	4 pc(s).	1481.000
1400.500, 1453.500, 1454.500, 1468.500, 1469.500, 1479.500, 1480.500	4 pc(s).	1491.000



Interior installation

Mounting plates

Mounting plate attachment

for CM, TP one-piece console, TP pedestal
for high dynamic loads

For example, if a direct connection between the mounting plate and the enclosure is required for mobile use (cranes etc.). Tested as per DIN EN 60 721 severity 3 M4, with a weight of 150 kg evenly distributed over the mounting plate. Simply screw-fasten to the existing holes in the mounting plate to pre-assemble for:

Wall mounting from the inside

Direct, using a bracket and wall/support mounted enclosure

Wall mounting from the outside

Screws for wall mounting brackets (see page 587) are easily screwed into the plate nuts from the outside

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

Packs of	Model No.
1 set(s)	5001.075



Cross-brace for mounting plates

for TS, SE

Additional horizontal rigidity for vibration resistance and/or stabilisation of wide mounting plates. This brace may also be used as an attachment aid for heavy components.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- 2 sections
- 4 clamping sections
- 4 grub screws M10 x 16 mm

For enclosure width mm	Model No.
1200	4333.120
1600	4333.160
1800	4333.180



Transport handles for mounting plates

for TS, SE

May be used at any given position in the side C-fold.

Benefits include

- Can be used for people of different heights
- Optimised force transmission
- Easy handling

Packs of	Model No.
2 pc(s).	2415.500



Interior installation

Mounting plates



Partial mounting plates

for TS, SE

For

- Universal interior installation, also in conjunction with punched sections with mounting flanges and support strips; defective assemblies are easily and quickly replaced
- Additional mounting levels

Partial mounting plates are fastened directly onto the vertical enclosure sections via the inner mounting level using the assembly parts supplied loose. In this mounting position (in both the width and the depth) they form one level with TS punched sections with mounting flanges 17 x 73 mm and TS support strips for the inner mounting level.

Material:

- Sheet steel, 2.5 mm

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

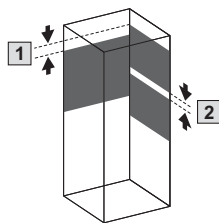


Accessories:

- TS punched section with mounting flange 17 x 73 mm for the outer mounting level, see page 606
- TS support strip, see page 609
- Hinge attachment, see page 597
- Self-tapping screws, 2487.000, see page 625

For installation in								Size mm	Packs of	Model No.	
Enclosure width mm				Enclosure depth (side) mm							
400	600	800	1000	1200	400	500	600	800			
■	■				■		■		500 x 300	1 pc(s).	8614.640
	■					■	■		500 x 400	1 pc(s).	8614.650
	■						■		500 x 500	1 pc(s).	8614.660
	■	■					■	■	500 x 700	1 pc(s).	8614.680
	■						■		500 x 775	1 pc(s).	8614.675¹⁾
■		■			■			■	700 x 300	1 pc(s).	8614.840
		■				■		■	700 x 400	1 pc(s).	8614.850
		■						■	700 x 700	1 pc(s).	8614.880
■			■		■				900 x 300	1 pc(s).	8614.040
			■			■			900 x 400	1 pc(s).	8614.050
	■		■				■		900 x 500	1 pc(s).	8614.060
■				■	■				1100 x 300	1 pc(s).	8614.240
				■		■			1100 x 400	1 pc(s).	8614.250
	■			■			■		1100 x 500	1 pc(s).	8614.260

¹⁾ Also suitable for installing in
 - PC enclosures based on SE behind the lower front door
 - IW enclosures, height 900 and 1000 mm

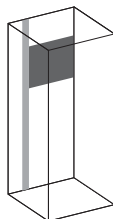


When **installing around corners** due to collision between the assembly components

- 1** At least 75 mm (adjustable on a 25 mm pitch pattern)

Maximum space utilisation

- 2** 1 mm (adjustable on a 25 mm pitch pattern)



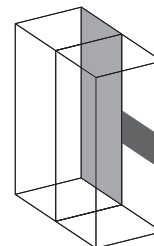
Partial installation

Partial utilisation of the enclosure depth or width is possible, in this case using a PS punched section without mounting flange 23 x 73 mm, see page 611



Set forward installation position

Quickly and easily achieved with four TS punched sections with mounting flanges 17 x 73 mm for the outer mounting level, see page 606



Continuously flush

In bayed enclosures, the partial mounting plate is in the rearmost position flush with the standard mounting plate; this facilitates continuous component mounting

Interior installation

Mounting plates

Hinge attachment

for partial mounting plate TS, SE

Material:

– Steel

Surface finish:

– Zinc-plated

Supply includes:

– Assembly parts

Packs of	Model No.
1 set(s)	8614.100

! Also required:

- 1 Installation kit for swing frame, small, for enclosure width 600 mm 2377.860, 800 mm 2377.880, see page 678
- 2 PS punched section without mounting flange 23 x 73 mm according to the enclosure depth, see page 611, Support brackets 8800.330, see page 620, depending on the installation position

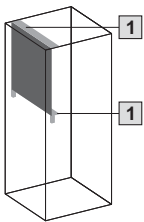
Side installation:

In conjunction with hinge, for side panel, see page 535, for an enclosure depth of 600 or 800 mm, side installation is identical to installation parallel to the front.

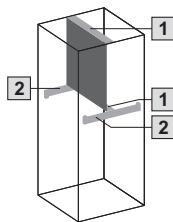
Examples

In the highest or lowest position

At the front

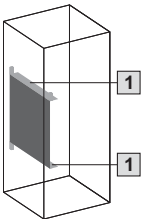


Set back

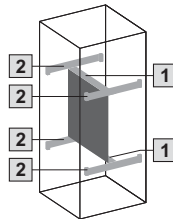


In a central position

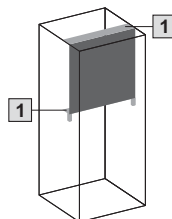
At the front



Set back



Side installation



Partial mounting plates, locatable into rails

for TS, SE, TP

For installation in

- Console and desk unit on the interior installation system rails
- Punched sections with mounting flanges or support strips fitted to the side of the pedestal in the depth
- Other enclosures mounted on rails with 25 mm pitch pattern punchings

For easy mounting on pre-fitted assembly screws. Bayable by screw-fastening at the sides.

Material:

– Sheet steel

Surface finish:

– Zinc-plated

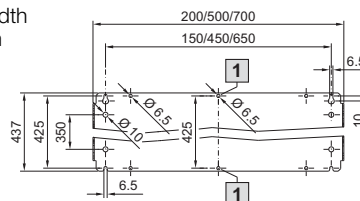
Supply includes:

– Assembly parts

Width mm	Height mm	Packs of	Model No.
200	437	1 pc(s).	6730.310
500	437	1 pc(s).	6730.330
700	437	1 pc(s).	6730.340

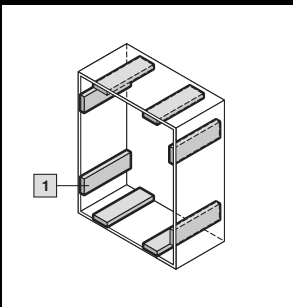
For console/desk unit Width mm	Max. partial mounting plates that may be installed
600	1 x 6730.330
800	1 x 6730.340
1200	2 x 6730.310 1 x 6730.340
1600	1 x 6730.330 1 x 6730.340

1 From width 500 mm



Interior installation

Rail systems

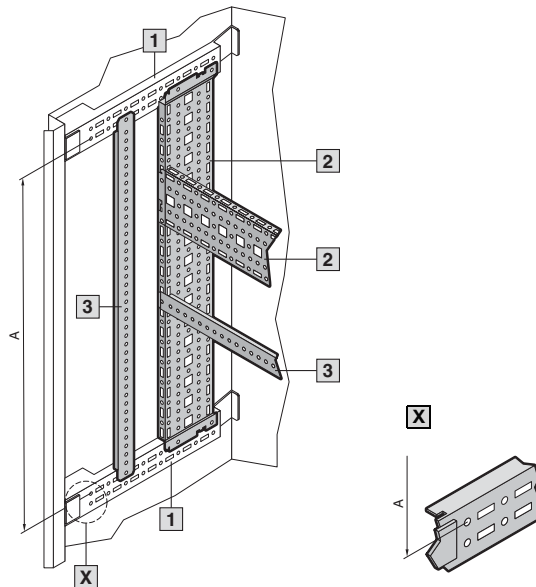


AE installation examples with TS system rails

1 Rails for interior installation (preparing for installation)						
For enclosure depth mm	Packs of	210	250	300	350	Page
Model No.	4 pc(s).	2383.210	2383.250	2383.300	2383.350	605

Interior installation in the width and height								
2 TS punched section with mounting flange, 17 x 73 mm	AE from enclosure width/height mm	A ¹⁾ mm	Packs of	Model No.				
606	380	225	4 pc(s).	8612.130	8612.130	8612.130	8612.130	
	500	325	4 pc(s).	8612.140	8612.140	8612.140	8612.140	
		375	4 pc(s).	8612.040	8612.040	8612.040	8612.040	
	600	425	4 pc(s).	8612.150	8612.150	8612.150	8612.150	
		475	4 pc(s).	8612.050	8612.050	8612.050	8612.050	
	760	525	4 pc(s).	8612.160	8612.160	8612.160	8612.160	
		575	4 pc(s).	8612.060	8612.060	8612.060	8612.060	
	1000	725	4 pc(s).	8612.180	8612.180	8612.180	-	
		775	4 pc(s).	8612.080	8612.080	8612.080	-	
		875	4 pc(s).	8612.090	8612.090	8612.090	-	
	1200	925	4 pc(s).	-	-	8612.100	-	
		975	4 pc(s).	-	-	8612.000	-	
1400	1125	4 pc(s).	-	-	8612.120	-		
	1175	4 pc(s).	-	-	8612.020	-		
3 TS support strip	400	325	20 pc(s).	4694.000	4694.000	4694.000	4694.000	
	500	425	20 pc(s).	4695.000	4695.000	4695.000	4695.000	
	600	525	20 pc(s).	4696.000	4696.000	4696.000	4696.000	
	800	725	20 pc(s).	4697.000	4697.000	4697.000	4697.000	

¹⁾ A = Rail mounting distance



CM installation examples with TS system rails

1 Rails for interior installation (preparing for installation)

For enclosure width/height mm	Packs of	600	800	1000	1200	1400	Page
Model No.	4 pc(s).	5001.050	5001.051	5001.052	5001.053	5001.054	605

2 Base configuration rail (preparing for installation)

For enclosure depth	Packs of	300	400	-	-	-	
Model No.	2 pc(s).	5001.371	5001.370	-	-	-	608

Installation in the width

For enclosure width mm	Packs of	Model No.					
		600	800	1000	1200	1400	
A ¹⁾ mm		575	775	975	1175	-	
3 TS punched section with mounting flange, 17 x 73 mm	4 pc(s).	8612.060	8612.080	8612.000	8612.020	-	606
4 TS support strips	20 pc(s).	8800.130	4579.000	-	-	-	609
5 Support rail	Slotted	4 pc(s).	4396.000	4398.000	-	-	613
	Unslotted	4 pc(s).	4396.500	4398.500	-	-	613
6 System support rails	2 pc(s).	4361.000	4362.000	4347.000	4363.000	-	613
7 C rails 30/15	6 pc(s).	4944.000	4945.000	4946.000	4947.000	-	612
8 Cable clamp rail	2 pc(s).	4191.000	4192.000	4336.000	4196.000	-	665

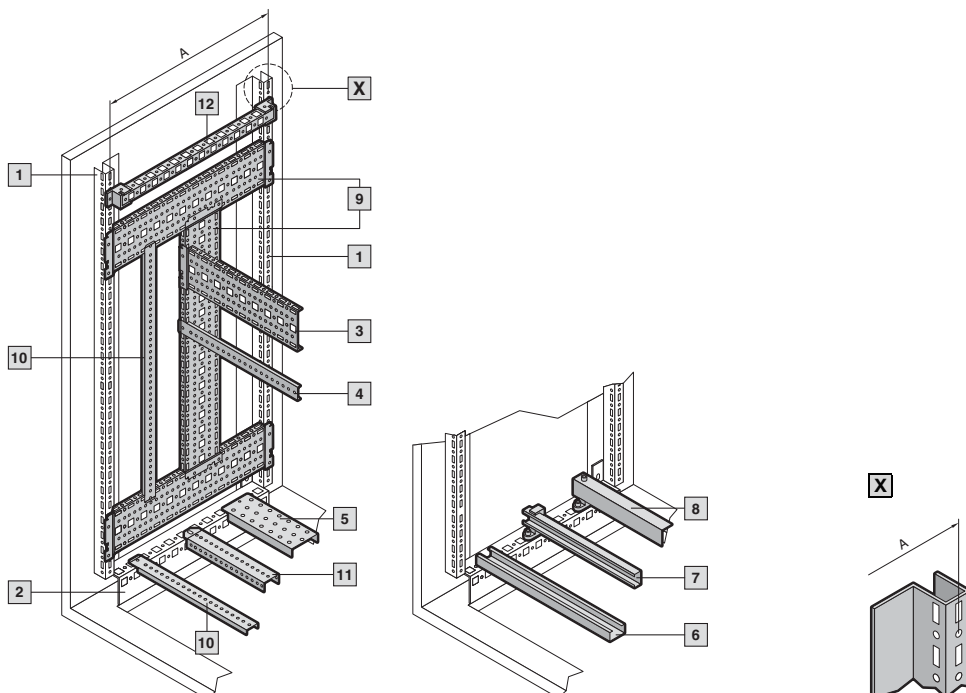
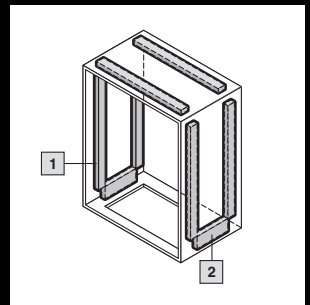
Installation in the height (individual installation e.g. with)

TS punched section with mounting flange, 17 x 73 mm	see page 606
TS support strips	see page 609

Installation in the depth

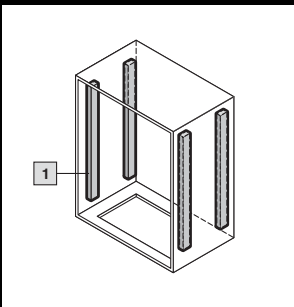
	For enclosure depth mm	A ¹⁾ mm	Packs of	Model No.					
				600	800	1000	1200	1400	
9 TS punched section with mounting flange, 17 x 73 mm	300	225	4 pc(s).	8612.130	8612.130	8612.130	8612.130	8612.130	606
	400	325	4 pc(s).	8612.140	8612.140	8612.140	8612.140	8612.140	
10 TS support strips	400	325	20 pc(s).	4694.000	4694.000	4694.000	4694.000	4694.000	609
11 TS punched rail, 18 x 38 mm	400	325	4 pc(s).	8612.240	8612.240	8612.240	8612.240	8612.240	609
12 PS punched rail, 23 x 23 mm with mounting bracket TS (2 per rail)	400	275	12 pc(s).	4169.000	4169.000	4169.000	4169.000	4169.000	610
			24 pc(s).	8800.370	8800.370	8800.370	8800.370	8800.370	619

¹⁾ A = Rail mounting distance



Interior installation

Rail systems



TP pedestal/one-piece console Installation examples with TS system rails

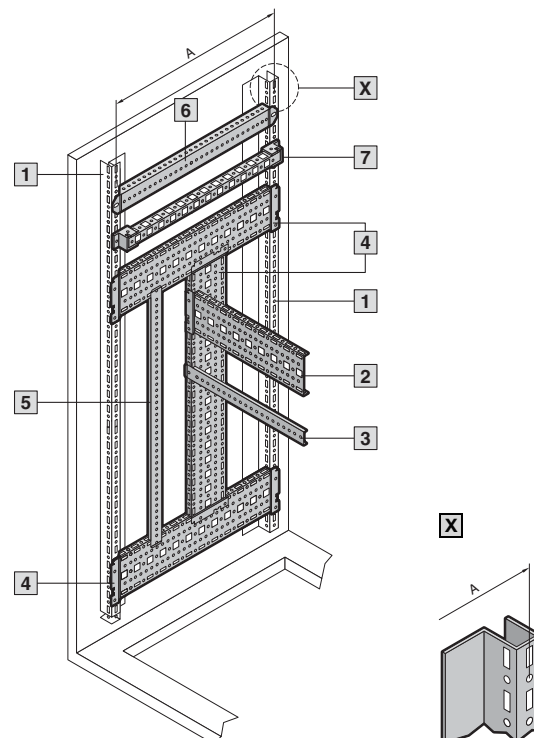
1 Rails for interior installation (preparing for installation)						
For enclosure width mm	Packs of	600	800	1200	1600	Page
For enclosure height mm		675	675	675	675	
Model No.	4 pc(s).	5001.050	5001.050	5001.050	5001.050	605

Installation in the width						
	Packs of	Model No.				
For enclosure width mm		600	800	1200	1600	
A ¹⁾ mm		575	775	1175	1575	
2 TS punched section with mounting flange, 17 x 73 mm	4 pc(s).	8612.060	8612.080	8612.020	-	606
3 TS support strips	20 pc(s).	8800.130	4579.000	-	-	609

Installation in the height (individual installation e.g. with)	
TS support strips	see page 609
TS punched rail, 18 x 38 mm	see page 609

Installation in the depth								
	For enclosure depth mm	A ¹⁾ mm	Packs of	Model No.				
4 TS punched section with mounting flange, 17 x 73 mm	400	325	4 pc(s).	8612.140	8612.140	8612.140	8612.140	606
	500	425	4 pc(s).	8612.150	8612.150	8612.150	8612.150	
5 TS support strips	400	325	20 pc(s).	4694.000	4694.000	4694.000	4694.000	609
	500	425	20 pc(s).	4695.000	4695.000	4695.000	4695.000	
6 TS punched rail, 18 x 38 mm	400	325	4 pc(s).	8612.240	8612.240	8612.240	8612.240	609
	500	425	4 pc(s).	8612.250	8612.250	8612.250	8612.250	
7 PS punched rail, 23 x 23 mm	400	325	12 pc(s).	4169.000	4169.000	4169.000	4169.000	610
	500	425	12 pc(s).	4170.000	4170.000	4170.000	4170.000	
with mounting bracket TS (2 per rail)			24 pc(s).	8800.370	8800.370	8800.370	8800.370	619

¹⁾ A = Rail mounting distance



TP console Installation examples with TS system rails

1 Rails for interior installation (preparing for installation)						
For enclosure width mm	Packs of	600	800	1200	1600	Page
Model No.	4 pc(s).	5001.050	5001.051	5001.053	5001.054	605

Installation in the height						
	A ¹⁾ mm	Packs of	Model No.			
For enclosure width mm			600	800	1200	1600

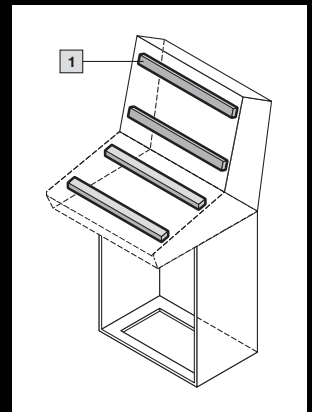
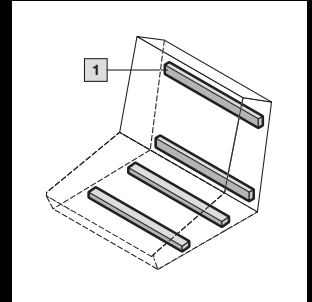
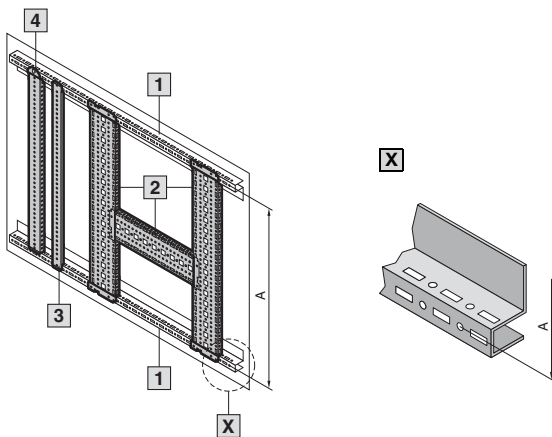
2 TS punched section with mounting flange, 17 x 73 mm							
For cover	375	4 pc(s).	8612.040	8612.040	8612.040	8612.040	606
For enclosure	425	4 pc(s).	8612.150	8612.150	8612.150	8612.150	606

3 TS support strips							
For cover	375	4 pc(s).	4309.000	4309.000	4309.000	4309.000	609
For enclosure	425	4 pc(s).	4695.000	4695.000	4695.000	4695.000	609

4 TS punched rail, 18 x 38 mm							
For enclosure	425	4 pc(s).	8612.250	8612.250	8612.250	8612.250	609

¹⁾ A = Rail mounting distance

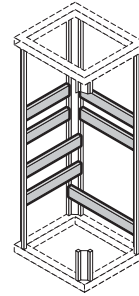
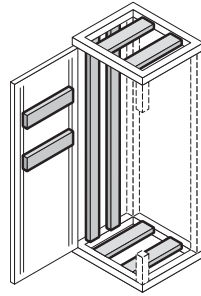
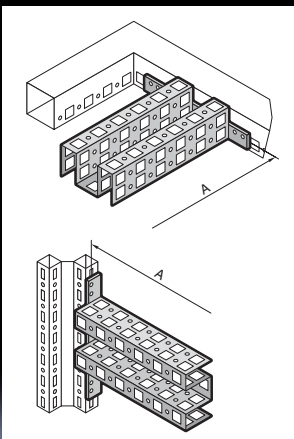
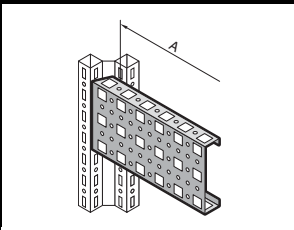
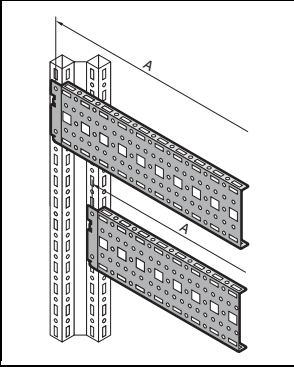
Console/desk unit/console lid



Interior installation

Rail systems

TS/SE installation examples with TS system rails



	Installation in roof and base frame in the width and depth	Installation between vertical sections in the width and depth	
		Inner level	Outer level

TS punched section with mounting flange, 17 x 73 mm

For enclosure width/depth mm	Packs of	A ¹⁾ mm	Model No.	A ¹⁾ mm	Model No.	A ¹⁾ mm	Model No.	Page
300	4 pc(s).	–	–	275	8612.030	225	8612.130	606
400	4 pc(s).	–	–	375	8612.040	325	8612.140	
500	4 pc(s).	–	–	475	8612.050	425	8612.150	
600	4 pc(s).	–	–	575	8612.060	525	8612.160	
800	4 pc(s).	–	–	775	8612.080	725	8612.180	
1000	4 pc(s).	–	–	975	8612.000	925	8612.100	
1200	4 pc(s).	–	–	1175	8612.020	1125	8612.120	

¹⁾ A = Rail mounting distance

TS punched section with mounting flange, 23 x 73 mm

For enclosure width/depth mm	Packs of	A ¹⁾ mm	Model No.	A ¹⁾ mm	Model No.	A ¹⁾ mm	Model No.	Page
500	4 pc(s).	–	–	425	8612.550	–	–	607
600	4 pc(s).	–	–	525	8612.560	–	–	
800	4 pc(s).	–	–	725	8612.580	–	–	
1000	4 pc(s).	–	–	925	8612.500	–	–	
1200	4 pc(s).	–	–	1125	8612.520	–	–	

¹⁾ A = Rail mounting distance

TS punched section without mounting flanges, 45 x 88 mm

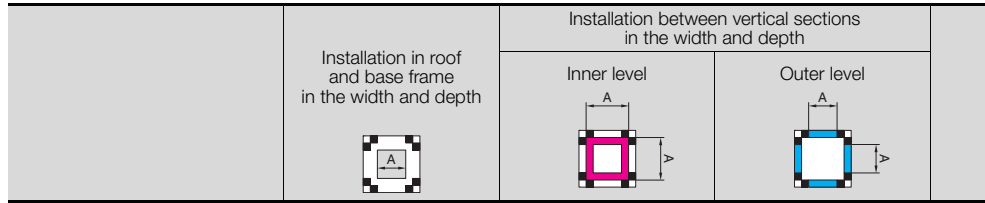
For enclosure width/depth mm	Packs of	A ¹⁾ mm	Model No.	A ¹⁾ mm	Model No.	A ¹⁾ mm	Model No.	Page
500	2 pc(s).	375	8612.650	375	8612.650	–	–	608
600	2 pc(s).	475	8612.660	475	8612.660	–	–	
800	2 pc(s).	675	8612.680	675	8612.680	–	–	

¹⁾ A = Rail mounting distance

Interior installation

Rail systems

TS/SE installation examples with TS system rails



TS punched rail 25 x 38 mm (with snap-on nut M8)								
For enclosure width/depth mm	Packs of	A ¹⁾ mm	Model No.	A ¹⁾ mm	Model No.	A ¹⁾ mm	Model No.	Page
500	2 pc(s).	-	-	435	8612.750	-	-	608
600	2 pc(s).	-	-	535	8612.760	-	-	
800	2 pc(s).	-	-	735	8612.780	-	-	

¹⁾ A = Rail mounting distance

TS punched rail, 18 x 38 mm								
For enclosure width/depth mm	Packs of	A ¹⁾ mm	Model No.	A ¹⁾ mm	Model No.	A ¹⁾ mm	Model No.	Page
400	4 pc(s).	335	8612.240	-	-	325	8612.240	609
500	4 pc(s).	435	8612.250	-	-	425	8612.250	
600	4 pc(s).	535	8612.260	-	-	525	8612.260	
800	4 pc(s).	735	8612.280	-	-	725	8612.280	

¹⁾ A = Rail mounting distance

Two TS punched rails 18 x 38 mm are included in the supply of enclosures with a mounting plate to serve as an installation aid. After installing the mounting plate, the TS punched rail may be inserted, as shown here.

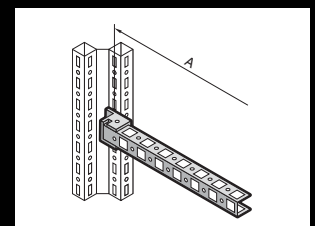
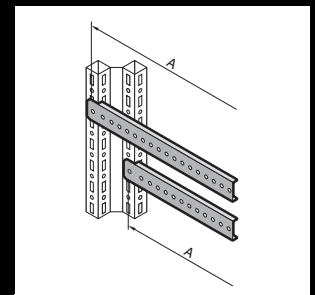
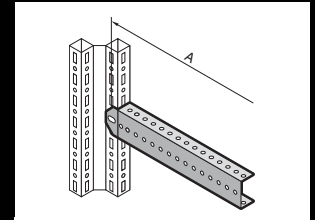
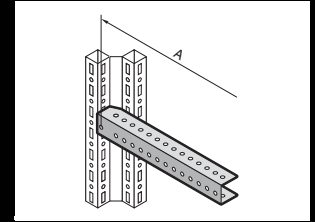
TS support strips								
For enclosure width/depth mm	Packs of	A ¹⁾ mm	Model No.	A ¹⁾ mm	Model No.	A ¹⁾ mm	Model No.	Page
400	20 pc(s).	-	-	-	-	325	4694.000	609
500	20 pc(s).	-	-	-	-	425	4695.000	
600	20 pc(s).	-	-	-	-	525	4696.000	
800	20 pc(s).	-	-	-	-	725	4697.000	
400	20 pc(s).	-	-	375	4309.000	-	-	
500	20 pc(s).	-	-	475	4596.000	-	-	
600	20 pc(s).	-	-	575	8800.130	-	-	
-	20 pc(s).	-	-	675	4598.000	-	-	
800	20 pc(s).	-	-	775	4579.000	-	-	
-	20 pc(s).	-	-	875	4599.000	-	-	

¹⁾ A = Rail mounting distance

Alternatively, the TS support strip for the inner mounting level may also be used for mounting on the door.

PS punched rails 23 x 23 mm (For installation options see support bracket TS/PS, angle bracket, mounting bracket)								
For enclosure width/depth mm	Packs of	A ¹⁾ mm	Model No.	A ¹⁾ mm	Model No.	A ¹⁾ mm	Model No.	Page
400	12 pc(s).	275	4169.000	275	4169.000	-	-	610
500	12 pc(s).	375	4170.000	375	4170.000	-	-	
600	12 pc(s).	475	4171.000	475	4171.000	-	-	
800	12 pc(s).	675	4172.000	675	4172.000	-	-	
1000	12 pc(s).	875	4173.000	875	4173.000	-	-	
1200	6 pc(s).	1075	4174.000	1075	4174.000	-	-	
1400	6 pc(s).	1275	4393.000	1275	4393.000	-	-	
1600	6 pc(s).	1475	4175.000	1475	4175.000	-	-	
1800	6 pc(s).	1675	4176.000	1675	4176.000	-	-	
2000	6 pc(s).	1875	4177.000	1875	4177.000	-	-	
2200	6 pc(s).	2075	4178.000	2075	4178.000	-	-	

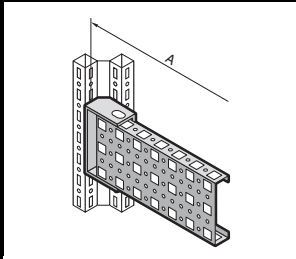
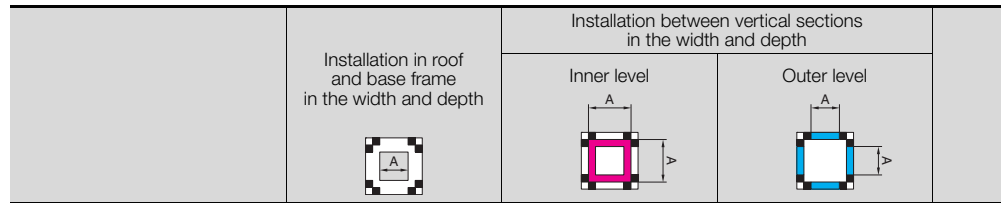
¹⁾ A = Rail mounting distance



Interior installation

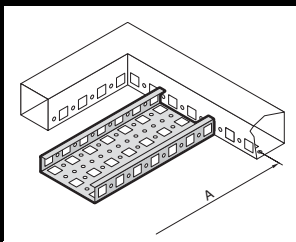
Rail systems

TS/SE installation examples with TS system rails



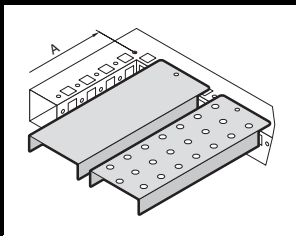
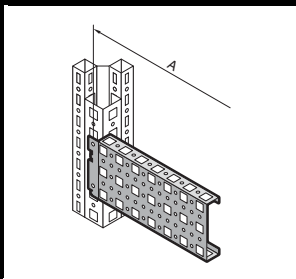
PS punched section without mounting flange 23 x 73 mm (installation option with support bracket TS)								
For enclosure width/depth mm	Packs of	A ¹⁾ mm	Model No.	A ¹⁾ mm	Model No.	A ¹⁾ mm	Model No.	Page
400	4 pc(s).	275	4374.000	275	4374.000	-	-	611
500	4 pc(s).	375	4375.000	375	4375.000	-	-	
600	4 pc(s).	475	4376.000	475	4376.000	-	-	
800	4 pc(s).	675	4377.000	675	4377.000	-	-	
1000	4 pc(s).	875	4382.000	875	4382.000	-	-	
1200	4 pc(s).	1075	4378.000	1075	4378.000	-	-	
1800	4 pc(s).	1675	4379.000	1675	4379.000	-	-	
2000	4 pc(s).	1875	4380.000	1875	4380.000	-	-	
2200	4 pc(s).	2075	4381.000	2075	4381.000	-	-	

¹⁾ A = Rail mounting distance



PS punched section with mounting flange 23 x 73 mm (installation options with TS adaptor rail when mounting on the vertical TS enclosure section)								
For enclosure width/depth mm	Packs of	A ¹⁾ mm	Model No.	A ¹⁾ mm	Model No.	A ¹⁾ mm	Model No.	Page
400	4 pc(s).	335	8800.640	-	8800.640	-	-	612
500	4 pc(s).	435	8800.650	-	8800.650	-	-	
600	4 pc(s).	535	4364.000	-	4364.000	-	-	
800	4 pc(s).	735	4365.000	-	4365.000	-	-	
1000	4 pc(s).	935	4373.000	-	4373.000	-	-	
1200	4 pc(s).	1135	4367.000	-	4367.000	-	-	

¹⁾ A = Rail mounting distance



Support rails, slotted								
For enclosure width/depth mm	Packs of	A ¹⁾ mm	Model No.	A ¹⁾ mm	Model No.	A ¹⁾ mm	Model No.	Page
400	4 pc(s).	335	4394.000	-	-	-	-	613
500	2 pc(s).	435	4395.000	-	-	-	-	
600	2 pc(s).	535	4396.000	-	-	-	-	
800	2 pc(s).	735	4398.000	-	-	-	-	
Support rails, unslotted								
400	4 pc(s).	335	-	-	-	-	-	613
500	2 pc(s).	435	-	-	-	-	-	
600	2 pc(s).	535	4396.500	-	-	-	-	
800	2 pc(s).	735	4398.500	-	-	-	-	

¹⁾ A = Rail mounting distance

Alternatively, the slotted and unslotted support rail may also be fitted on the vertical TS enclosure section using the snap-on nut M8, adaptor rail or TS punched rail 25 x 38 mm.

Interior installation

Rail systems

Rails for interior installation

for AE

For mounting in the enclosure, no machining required. Suitable for all-round mounting on the sides, base and roof areas.

Variable with 2 rows of system punchings, creates additional mounting space e.g. for

- TS punched section with mounting flange
- Enclosure lights
- Door-operated switch
- Door stay
- Cable conduit holder

Benefits:

- Only one screw for attaching the rail inside the enclosure
- Larger mounting space than with the previous rail, thanks to separate adaptor for door-operated switches (included with the supply)
- Compatibility with TS 8 system accessories
- Enclosure protection category is retained (no machining required)
- Automatic potential equalisation
- May be retrospectively installed even with the mounting plate in situ. Suitable for installation via gland plates

Material:

- Sheet steel

Surface finish:

- Zinc-plated

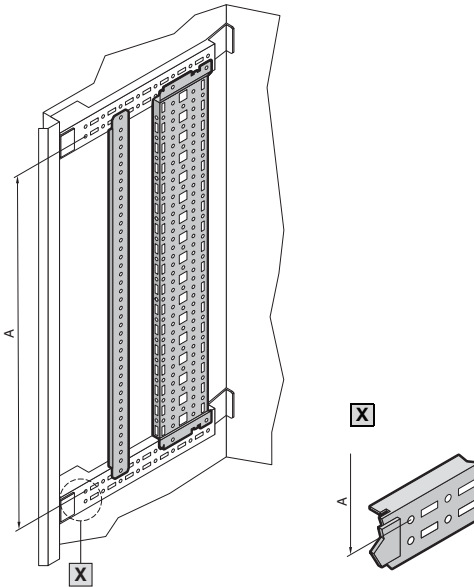
Note:

Other mounting options:

- Mounting plates, locatable, 8612.400, see page 616
- Mounting plates, screw-fastening, large, 8612.410, see page 616
- Mounting plates, screw-fastening, small, 4532.000, see page 617
- Mounting brackets, 4597.000, see page 617

For enclosure depth mm	Packs of	Model No.
210	4 pc(s).	2383.210
250	4 pc(s).	2383.250
300	4 pc(s).	2383.300
350	4 pc(s).	2383.350

Configuration examples:



A = Bar centre distance



Rails for interior installation

for CM, TP

For mounting on the existing threaded bolts. With TS system punchings on three sides.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

Width mm		Height mm		Packs of	Model No.
CM	TP ¹⁾	CM	TP ²⁾		
600	600	-	675	4 pc(s).	5001.050
800	800	800	960	4 pc(s).	5001.051
1000	1000	1000	-	4 pc(s).	5001.052
1200	1200	1200	-	4 pc(s).	5001.053
-	1600	1400	-	4 pc(s).	5001.054

¹⁾ Only with TP console and desk unit (cover or rear panel/base), one-piece console in cover

²⁾ Only with TP pedestal/one-piece console

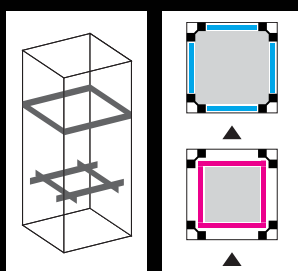
Configuration examples:

See page 599



Interior installation

Rail systems



TS punched section with mounting flange, 17 x 73 mm

Variable, with 5 rows of holes for universal skeleton structures or partial assembly. Simply locate into the TS punchings and secure.

Installation options:

- On the vertical TS enclosure section
 - On the outer mounting level, all-round, at the same height
 - On the inner mounting level, all-round, height-offset
- In the tubular door frame for TS, SE and PC
- For SE, may additionally be mounted on the top horizontal section in the depth
- In CM and TP via rail for interior installation
 - In the depth, for outer mounting level
 - In the width, for inner mounting level

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly screws



Also required:

- For installation in CM, TP:
Rail for interior installation, see page 605



Accessories:

- Screws, see page 625
- Cable tie for fast assembly 2597.000, see page 667

For the outer mounting level

For enclosure width/depth mm	Packs of	Model No.
300	4 pc(s).	8612.130
400	4 pc(s).	8612.140
500	4 pc(s).	8612.150
600	4 pc(s).	8612.160
800	4 pc(s).	8612.180
1000	4 pc(s).	8612.100
1200	4 pc(s).	8612.120

For the inner mounting level or for tubular door frames

For door width (for tubular door frame) mm	For enclosure width/depth (for inner mounting level) mm	Length mm	Packs of	Model No.
400	300	290	4 pc(s).	8612.030
500	400	390	4 pc(s).	8612.040
600	500	490	4 pc(s).	8612.050
–	600	590	4 pc(s).	8612.060
800	–	690	4 pc(s).	8612.070
900	800	790	4 pc(s).	8612.080
1000	–	890	4 pc(s).	8612.090
–	1000	990	4 pc(s).	8612.000
–	1200	1190	4 pc(s).	8612.020

Configuration examples:

See from page 598



Attachment TS

for TS punched section with mounting flange, 17 x 73 mm

Benefits:

- For attaching the TS punched section with mounting flange where access to installed equipment, such as mounting plates, is blocked by the screw fastening
- May also be screw-fastened onto the punched section with mounting flange or enclosure frame and used as a support for contact hazard protection covers or master switch trim panels

Packs of	Model No.
12 pc(s).	8612.010

Material:

- Sheet steel

Surface finish:

- Zinc-plated

TS punched section with mounting flange, 17 x 73 mm

Depth-variable

To fit the outer and inner mounting level.

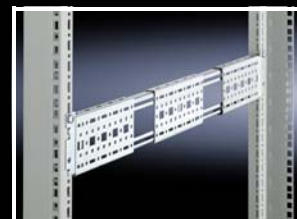
Length mm	Packs of	Model No.
530 – 700	2 pc(s).	7000.678

Material:

– Sheet steel

Surface finish:

– Zinc-plated



TS punched section with mounting flange, 23 x 73 mm

The alternative to the TS punched section with mounting flange 17 x 73 mm, see page 606, with punchings for captive nuts/threaded blocks instead of the slotted holes top and bottom. Simply locate and secure.

Installation options:

- On the vertical TS, SE enclosure section

Material:

– Sheet steel

Surface finish:

– Zinc-plated

Supply includes:

– Assembly screws

For the inner mounting level

For enclosure width/depth mm	Packs of	Model No.
500	4 pc(s).	8612.550
600	4 pc(s).	8612.560
800	4 pc(s).	8612.580
1000	4 pc(s).	8612.500
1200	4 pc(s).	8612.520

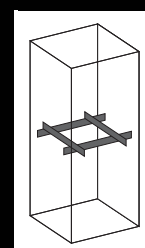
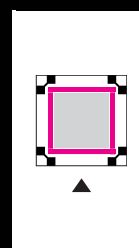
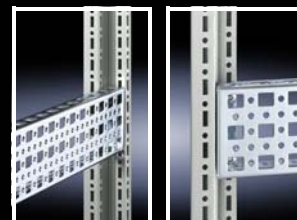


Accessories:

- Screws, see page 625
- Threaded blocks, captive nuts, see page 624

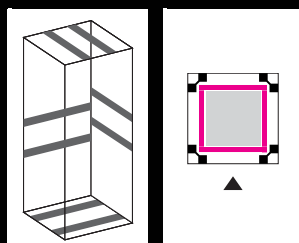
Configuration examples:

See page 598



Interior installation

Rail systems



TS punched sections without mounting flanges 45 x 88 mm

Heavy top-mounted equipment mounted directly on the internal surfaces (e.g. roof) is supported. Mounted on the side or rear, the enclosure can then be screw-fastened securely to the machine. The twin profile with 11 rows of holes offers numerous additional opportunities for interior installation.

Installation options:

- On the vertical and horizontal TS, SE enclosure section

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

For the inner mounting level

For enclosure width/depth mm	Packs of	Model No.
500	2 pc(s).	8612.650
600	2 pc(s).	8612.660
800	2 pc(s).	8612.680



Accessories:

- Screws, see page 625
- Threaded blocks, captive nuts, see page 624

Configuration examples:

See page 598



TS punched rail 25 x 38 mm

For heavy installed equipment, with attachment holes.

Installation options:

- On the vertical TS, SE enclosure section

With 9 mm round holes on a 25 mm pitch pattern on all sides, for mounting

- Support rails, see page 614
- System support rails, see page 613
- C rails 30/15, see page 612
- Cable clamp rails (right angle section), see page 665
- Customer assemblies

Material:

- Sheet steel, 3.0 mm

Surface finish:

- Zinc-plated

Supply includes:

- Assembly screws

For enclosure width/depth mm	Packs of	Model No.
500	2 pc(s).	8612.750
600	2 pc(s).	8612.760
800	2 pc(s).	8612.780



Also required:

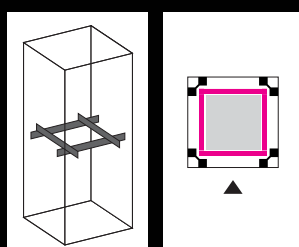
- Snap-on nut M8, 8800.808, see page 618

Note:

- In conjunction with the snap-on nut, particularly well-suited for dynamic connections

Configuration examples:

See page 598



Base configuration rail

for CM, TP

For mounting in the enclosure depth, on the existing threaded bolts, no machining required. TS system punchings on 2 sides. Creates additional installation options.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

For enclosure depth mm	Packs of	Model No.
400	2 pc(s).	5001.370
300	2 pc(s).	5001.371

Interior installation

Rail systems

TS punched rail 18 x 38 mm

Simply locate and secure with a screw. The location system makes assembly and dismantling easier. It only needs to be secured on one side, but may be secured on both sides if required.

Installation options:

- On the vertical TS, SE enclosure section
 - On the outer mounting level
- On the horizontal TS, SE enclosure section
- On base configuration rail for CM

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly screws

Note:

- In enclosures with a mounting plate, 2 punched rails are already included with the supply

For enclosure width/depth mm	Packs of	Model No.
400	4 pc(s).	8612.240
500	4 pc(s).	8612.250
600	4 pc(s).	8612.260
800	4 pc(s).	8612.280

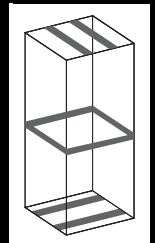
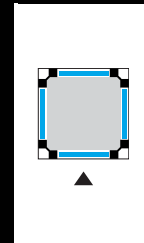


Accessories:

- Screws, see page 625
- Cable tie for fast assembly 2597.000, see page 667
- Cable clamps, see page 666

Configuration examples:

See from page 598



TS support strips

Installation options:

- On the vertical and horizontal TS, SE enclosure section
 - On the outer mounting level, all-round, at the same height
 - On the inner mounting level, all-round, height-offset
- On the tubular door frame TS, SE
- On the perforated door strip CM, TP

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly screws

For the outer mounting level

For enclosure width/depth mm	Length mm	Packs of	Model No.
400	340	20 pc(s).	4694.000
500	440	20 pc(s).	4695.000
600	540	20 pc(s).	4696.000
800	740	20 pc(s).	4697.000

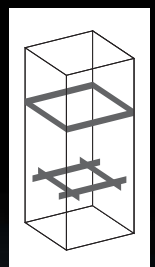
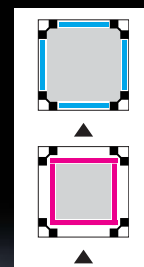


Accessories:

- Screws, see page 625
- Cable tie for fast assembly 2597.000, see page 667

Configuration examples:

See from page 598

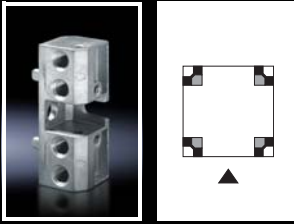


For the inner mounting level and for mounting on doors

For enclosure width/depth mm	For door width mm	Length mm	Packs of	Model No.
–	400	290	20 pc(s).	4594.000
400	500	390	20 pc(s).	4309.000
500	600	490	20 pc(s).	4596.000
600	–	590	20 pc(s).	8800.130
–	800	690	20 pc(s).	4598.000
800	900	790	20 pc(s).	4579.000
–	1000	890	20 pc(s).	4599.000

Interior installation

Rail systems



TS assembly block

Installation in the vertical TS, SE enclosure sections for mounting PS-compatible individual components.

Material:

- Die-cast zinc

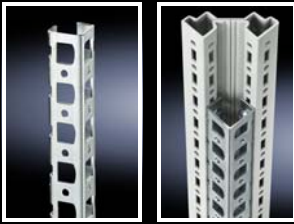
Supply includes:

- Assembly screws

Packs of	Model No.
4 pc(s).	8800.310

Possible alternative:

- Snap-on nut, see page 618



Adaptor rail

for PS compatibility

Installation in the vertical TS, SE enclosure sections (across the entire enclosure height or in sub-sections), and in the case of SE, may additionally be fitted to the top horizontal section in the width (must be cut to length depending on the width of the enclosure), in order to achieve compatibility with:

- PS punched rail, 23 x 23 mm
- PS punched section without mounting flange, 23 x 73 mm
- PS punched section with mounting flange, 23 x 73 mm

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly screws

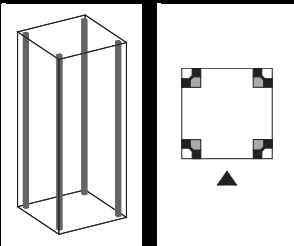
For enclosure height mm	Packs of	Model No.
1800	4 pc(s).	8800.380
2000	4 pc(s).	8800.300
2200	4 pc(s).	8800.320

Accessories:

- Screws, see page 625

Possible alternative:

- Snap-on nut, see page 618



PS punched rails 23 x 23 mm

for TS, SE

Installation options:

- On the vertical enclosure section
 - Directly via support brackets TS
 - Via adaptor rail for PS compatibility in conjunction with angle brackets, mounting brackets or support brackets PS
- On the horizontal enclosure section
 - Directly via angle brackets, mounting brackets or support brackets PS

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Length mm	For WHD mm	Packs of	Model No.
295	400	12 pc(s).	4169.000
395	500	12 pc(s).	4170.000
495	600	12 pc(s).	4171.000
695	800	12 pc(s).	4172.000
895	1000	12 pc(s).	4173.000
1095	1200	6 pc(s).	4174.000
1295	1400	6 pc(s).	4393.000
1495	1600	6 pc(s).	4175.000
1695	1800	6 pc(s).	4176.000
1895	2000	6 pc(s).	4177.000
2095	2200	6 pc(s).	4178.000

Also required:

- U nuts, see page 624
- Mounting brackets TS/PS, see page 619 or
- Angle brackets, support brackets TS/PS, see page 620

Accessories:

- Cable attachment, see page 667
- Screws, see page 625
- Cable tie for fast assembly 2597.000, see page 667

Configuration examples:

See from page 598



Interior installation

Rail systems

Punched rail 23 x 23 mm

for Flex-Block

Supports tool-free installation in two levels via a plug-in system in the Flex-Block depth. For the installation of cable clamp rails.

Installation options:

- In the width and depth

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- 12 punched rails
- Assembly parts for mounting

Length mm	For width/depth mm	Packs of	Model No.
245	400	12 pc(s).	4169.500
345	500	12 pc(s).	4170.500
445	600	12 pc(s).	4171.500
645	800	12 pc(s).	4172.500



Accessories:

- Cable clamp rail (4193.000 etc.), see page 665



PS punched section without mounting flange 23 x 73 mm

for TS, SE

Installation options:

- On the vertical enclosure section
 - Directly via support brackets TS
 - Via adaptor rail for PS compatibility in conjunction with support brackets PS
- On the horizontal enclosure section
 - Directly via support brackets PS

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Length mm	For WHD mm	Packs of	Model No.
295	400	4 pc(s).	4374.000
395	500	4 pc(s).	4375.000
495	600	4 pc(s).	4376.000
695	800	4 pc(s).	4377.000
895	1000	4 pc(s).	4382.000
1095	1200	4 pc(s).	4378.000
1695	1800	4 pc(s).	4379.000
1895	2000	4 pc(s).	4380.000
2095	2200	4 pc(s).	4381.000



Also required:

- Support brackets PS/TS, see page 620

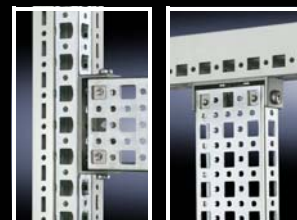


Accessories:

- Screws, see page 625
- Cable tie for fast assembly 2597.000, see page 667
- U nuts, see page 624

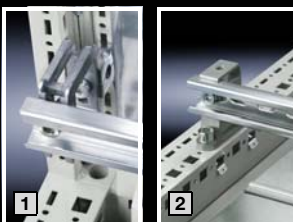
Configuration examples:

See page 598



Interior installation

Rail systems



PS punched section with mounting flange, 23 x 73 mm

for TS, SE

Variable, with 5 rows of holes for universal skeleton structures or partial assembly. Simply locate into the system punchings and secure.

Installation options:

- On the vertical TS enclosure section
 - Via adaptor rail for PS compatibility
- On the horizontal TS enclosure section
- In the case of SE, may additionally be fitted to the horizontal section at the bottom (width/depth) and top (width)

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly screws

Installation in the enclosure width/depth TS mm	Packs of	Model No.
400	4 pc(s).	8800.640
500	4 pc(s).	8800.650
600	4 pc(s).	4364.000
800	4 pc(s).	4365.000
1000	4 pc(s).	4373.000
1200	4 pc(s).	4367.000



Also required:

- Adaptor rail for PS compatibility (when mounting on the vertical TS, SE enclosure section), see page 610

Configuration examples:

See page 598

C rails 30/15

to EN 60 715 for TS, SE

Installation options:

- On the vertical TS, SE enclosure section
 - Via snap-on nut 8800.808 (Fig. 1)
 - Via adaptor rail for PS compatibility
- On the horizontal TS enclosure section (Fig. 2)
- In the case of SE, additionally on the horizontal section
 - In the width, bottom/top
 - In the depth, bottom (without mounting plate)
 - In the depth, top using snap-on nuts 8800.808 (Fig. 1)
- On base configuration rail for CM

Material:

- Sheet steel

Surface finish:

- Zinc-plated

For enclosure width/depth mm	Length mm	Packs of	Model No.
500	455	6 pc(s).	4943.000
600	555	6 pc(s).	4944.000
800	755	6 pc(s).	4945.000
1000	955	6 pc(s).	4946.000
1200	1155	6 pc(s).	4947.000



Accessories:

- Cable clamps, see page 666
- Support bracket or spacer, see page 621
- Quick-assembly block, see page 621
- Snap-on nut M8, 8800.808, see page 618
- Adaptor rail, see page 610



Possible alternative:

- Rail for EMC shielding bracket and strain relief, see page 641

Interior installation

Rail systems

C rails

for TS, SE

For direct external mounting between the horizontal or vertical TS, SE enclosure sections. Thanks to the universal mounting piece, the C rails may optionally be attached to the inner or outer level of the TS 8 frame.

Material:

– Sheet steel

Surface finish:

– Zinc-plated

Supply includes:

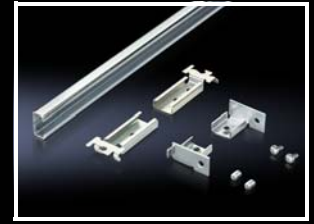
– Assembly parts

For enclosure width/depth mm	Length mm	Packs of	Model No.
400	298	4 pc(s).	7828.040
500	398	4 pc(s).	7828.050
600	498	4 pc(s).	7828.060
800	698	4 pc(s).	7828.080
1000	898	4 pc(s).	7828.100
1200	1098	4 pc(s).	7828.120



Accessories:

– Cable clamps, see page 666



System support rails

For heavy installed equipment such as transformers. T-head screw and slot in the support rail accommodate all mounting dimensions.

Installation options:

- On the vertical TS, SE enclosure section
 - Via snap-on nut 8800.808 (Fig. 1)
 - Via adaptor rail for PS compatibility
 - Height-offset, via TS punched rail 25 x 38 mm (Fig. 2)
- On the horizontal TS enclosure section
 - In the width
 - In the depth (without mounting plate)
- In the case of SE, additionally on the horizontal section
 - In the width, bottom/top
 - In the depth, bottom (without mounting plate)
 - In the depth, top (without mounting plate) using snap-on nuts 8800.808 (Fig. 1)
- On base configuration rail for CM

Material:

– Sheet steel

Surface finish:

– Zinc-plated

Supply includes:

– 2 system support rails (45 x 25 mm)
 – 4 T-head screws M12 x 60 mm
 – Assembly parts

For enclosure width mm	Packs of	Model No.
600	2 pc(s).	4361.000
800	2 pc(s).	4362.000
1000	2 pc(s).	4347.000
1200	2 pc(s).	4363.000



Accessories:

– Width divider e.g. for the installation of 2 system support rails (for 600 mm width) in 1200 mm wide enclosures, see page 523
 – Snap-on nut M8, 8800.808, see page 618
 – Adaptor rail, see page 610
 – TS punched rail 25 x 38 mm, see page 608



Support rails

for TS, SE, CM

For heavy installed equipment. Particularly suitable for the installation of base isolators.

Installation options:

- On the vertical TS, SE enclosure section
 - Via snap-on nut 8800.808 (Fig. 1)
 - Via adaptor rail for PS compatibility
 - Height-offset, via TS punched rail 25 x 38 mm (Fig. 2)
- On the horizontal TS enclosure section
 - In the width
 - In the depth
- In the case of SE, additionally on the horizontal section
 - In the width
 - In the depth, top using snap-on nut 8800.808
- On base configuration rail for CM

For enclosure width/depth mm	Packs of	Model No.	Model No.
		Slotted	Unslotted
400	4 pc(s).	4394.000	–
500	4 pc(s).	4395.000	–
600	4 pc(s).	4396.000	4396.500
800	4 pc(s).	4398.000	4398.500

Material:

– Sheet steel

Surface finish:

– Zinc-plated

Supply includes:

– Assembly parts



Accessories:

– Snap-on nut M8, 8800.808, see page 618
 – Adaptor rail, see page 610
 – TS punched rail 25 x 38 mm, see page 608

Configuration examples:

See from page 598



Interior installation

Rail systems



Support rail 65 x 42 mm for TS, SE

Benefits:

- For heavy assemblies up to 5000 N per support rail

Permissible static load:

- 10000 N per enclosure

Material:

- Steel

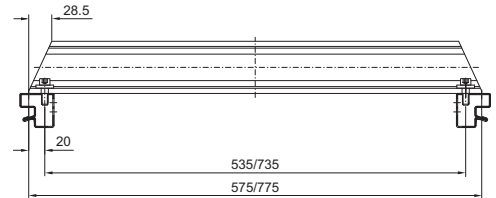
Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

For enclosure width mm	Packs of	Model No.
600	2 pc(s).	8612.960
800	2 pc(s).	8612.980



Support rails TS 35/15

to EN 60 715 for TS, SE

- Mounting on the TS vertical section via
- Snap-on nut M8, 8800.808, see page 618
 - Assembly block see page 610 or
 - Adaptor rail, see page 610

For enclosure width/depth mm	Support rails length mm	Packs of	Model No.
500	455	6 pc(s).	4933.000
600	555	6 pc(s).	4934.000
800	755	6 pc(s).	4935.000
1200	1155	6 pc(s).	4937.000

Support rails TS 35/7.5 and TS 35/15

to EN 60 715 for KL, KL-HD, AE

Length sized to the enclosure width

For enclosure width mm	Support rails length mm	Version	Packs of	Model No.
150	137	TS 35/7.5	10 pc(s).	2314.000
200	187		10 pc(s).	2315.000
300	287		10 pc(s).	2316.000
400	387	TS 35/15	10 pc(s).	2317.000
500	487		10 pc(s).	2318.000
600	587		10 pc(s).	2319.000

Support rails

to EN 60 715

Standard length 2 m

Version	Length	Packs of	Model No.
TS 35/15	2 m	6 pc(s).	2313.150
TS 35/7.5	2 m	6 pc(s).	2313.750

Mounting clip

for support rails

For fast, secure attachment of

- Cable ducts
- Mounting plates
- Mounting angles

on support rail TS 35/7.5 and TS 35/15 to EN 60 715.

Simply pre-assemble the mounting clip on the part to be installed, then snap into position on the support rail.

Packs of	Model No.
30 pc(s).	2309.000

TS punched rail 17 x 17 mm

for TS

Mounting angle with TS pitch on three sides.

Suitable for

- Building an auxiliary construction for dividing the busbar space
- Individual use as mounting frame for low and medium loads
- Fastening to the internal or external mounting level of the TS 8 enclosure

Material:

- Sheet steel, 1.5 mm

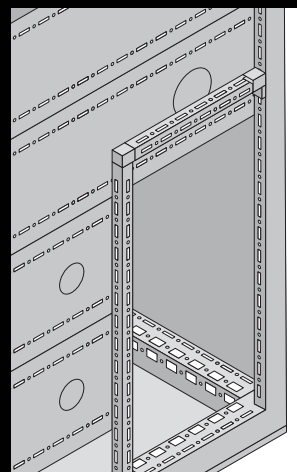
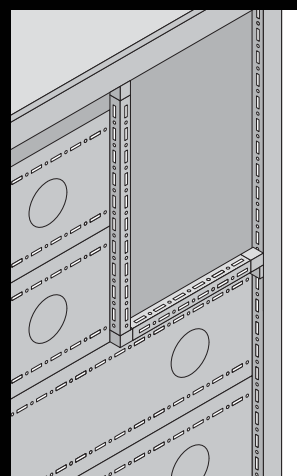
Surface finish:

- Zinc-plated

Note:

- Where necessary, punched rails should be shortened to the applicable mounting dimension

Length	For compartment depth mm	For compartment height Top mm	For compartment height Bottom mm	For enclosure width/depth mm		Packs of	Model No.	Page
				Inner mounting level	Outer mounting level			
62.5	425	-	-	-	-	12 pc(s).	9673.915	
137.5	600	-	-	-	-	12 pc(s).	9673.920	
262.5	425/800	-	-	-	400	12 pc(s).	9673.940	
487.5	-	350 - 500	350 - 400	400/500	500/600	12 pc(s).	9673.953	
787.5	-	550 - 800	450 - 700	600/800	800	12 pc(s).	9673.983	
862.5	-	-	750 - 800	-	-	12 pc(s).	9673.995	
Also required								
Frame connector piece						24 pc(s).	9673.901	622
T-connector piece						24 pc(s).	9673.903	622
Corner connector						10 pc(s).	9673.902	622



Interior installation

Rail systems



C rails

for TS, SE

For attaching cables and lines and for mounting stacking insulators.

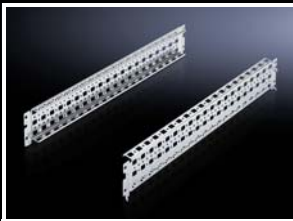
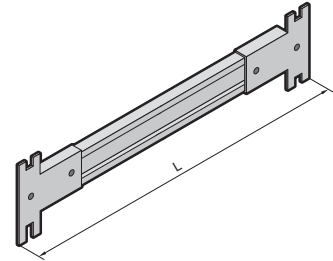
Material:

- Sheet steel

Supply includes:

- 4 C rails
- 8 brackets
- Assembly parts

For enclosure width/depth mm	Length (L) mm	Packs of	Model No.
600	600	4 pc(s).	9660.210
800	800	4 pc(s).	9660.220



Punched sections with mounting flanges

for coupling section

For assembling a Maxi-PLS or Flat-PLS busbar system directly beneath or above the circuit-breaker. This punched section with mounting flange may be used without conflict in conjunction with the compartment space side panel modules.

It is attached to the outer level of the TS 8 enclosure system, but the PS punchings support a mounting level as in the roof or base frame, thereby facilitating the use of busbar system attachment for the roof/base section.

Material:

- Sheet steel

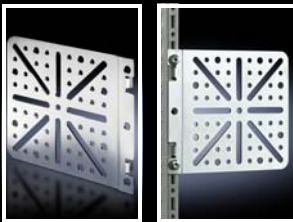
Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

For enclosure width/depth mm	Packs of	Model No.
600	2 pc(s).	9674.056
800	2 pc(s).	9674.058



Mounting plates

Locatable

on

- The vertical TS, SE enclosure section
- TS punched section with mounting flange, 17 x 73 mm

Material:

- Sheet steel

Surface finish:

- Zinc-plated

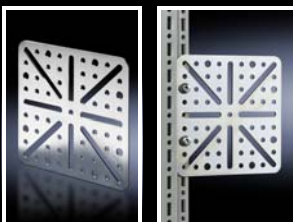
Supply includes:

- Assembly screws

Packs of	Model No.
4 pc(s).	8612.400

Technical details:

Available on the Internet



Mounting plates

Screw-fastened, large

On all enclosures and mounting parts with system punchings on a 25 mm pitch pattern.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly screws

Packs of	Model No.
4 pc(s).	8612.410

Technical details:

Available on the Internet

Mounting plates

Screw-fastened, small

Material:

- Sheet steel

Surface finish:

- Zinc-plated

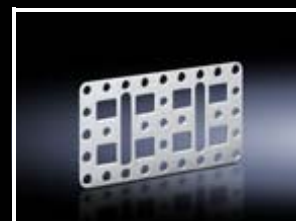
Supply includes:

- Assembly screws

Packs of	Model No.
4 pc(s).	4532.000

Technical details:

Available on the Internet



Mounting plate TS

with integral top-hat rail

For direct snap-mounting of components such as speed control, enclosure internal thermostat and hygrostat.

Material:

- Sheet steel

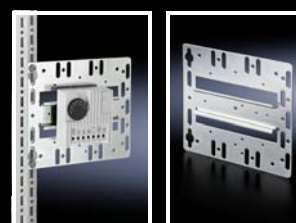
Surface finish:

- Zinc-plated

Supply includes:

- Mounting plate (mounting accessories included)

Packs of	Model No.
1 pc(s).	7526.964



Mounting bracket

May be screw-fastened onto all enclosures and mounting parts with system punchings on a 25 mm pitch pattern.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly screws

Packs of	Model No.
4 pc(s).	4597.000

+ **Accessories:**

- Screws, see page 625
- Cable tie for fast assembly 2597.000, see page 667

Technical details:

Available on the Internet



Mounting bracket

for interior installation

For installing punched sections with mounting flanges and support strips in:

- Comfort Panel horizontal/vertical from 74 mm installation depth

or for installing in:

- Optipanel from an installation depth of 100 mm

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

Packs of	Model No.
4 pc(s).	6205.100

Technical details:

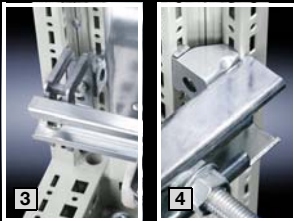
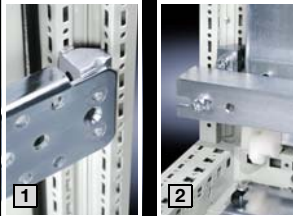
Available on the Internet



		Comfort Panel/Optipanel	Page
		Front panel width 482.6 mm (19")	
Punched sections with mounting flanges	Horizontal	8612.150	606
	Vertical		
Support strips	Horizontal	4695.000	609
	Vertical		

Interior installation

Assembly components



Snap-on nut TS

Metric thread for vertical TS, SE enclosure section. To install, insert into slot and clip into position. The snap-on nut is then secure. By tightening the screw, it is securely tightened against the section, and potential equalisation is automatically created.

Installation options:

- On the vertical TS, SE enclosure section and on the horizontal SE enclosure section (top, in the width)
 - With metric thread M6 or M8
 - The alternative to metal screws
 - Particularly well-suited for dynamically loaded connections

Material:

- Precision-cast stainless steel

Accessories for interior installation

- 1 Support rails, see page 613
- 2 Cable clamp rails, see page 665
- 3 C rails 30/15, see page 612
- 4 System support rails, see page 613
- 5 TS punched rail, 25 x 38 mm, see page 608

Thread	Packs of	Model No.
M6	20 pc(s).	8800.806
M8	20 pc(s).	8800.808



Also required:

- Multi-tooth screw M6 x 12 or M8 x 12, see page 625



Adaptor bracket TS

For external mounting of

- System lights
 - Cable ducts
- on the vertical TS enclosure section and on the horizontal SE enclosure section (top, in the width)

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly screws

Packs of	Model No.
6 pc(s).	8800.360

Interior installation

Assembly components

Mounting bracket TS

Offers variable mounting options for the punched rail 23 x 23 mm, e.g. for supporting external surfaces or creating an additional internal level.

Material:

- Die-cast zinc

Supply includes:

- 24 screws 5.5 x 13 mm

Packs of	Model No.
24 pc(s).	8800.370

+ **Accessories:**

- U nuts (recommendation: M6), see page 624

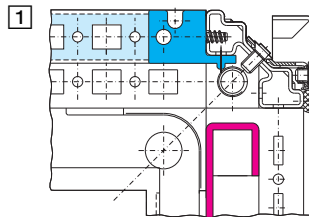


Installation options:

- On the vertical TS, SE enclosure section
 - flush with the outer edge of the enclosure or
 - flush with the enclosure clearance width

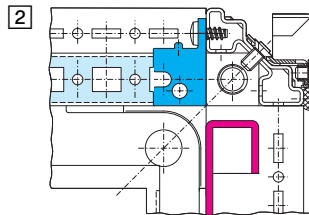
- 1** Support of the external surfaces with two mounting options:

- Without mounting plate (photograph)
- With mounting plate (drawing)

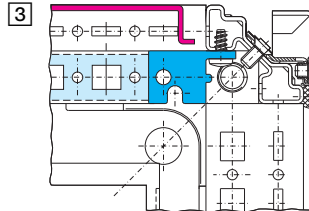


Two installation options for the inner mounting level:

- 2** If there is no divider panel fitted



- 3** With a divider panel fitted, and without or with a mounting plate in a set forward position



Mounting bracket PS

For variable attachment of punched rail 23 x 23 mm.

Installation options:

- Optionally flush with:
 - Outer enclosure edge or
 - Enclosure clearance width
- On the vertical TS, SE enclosure section via
 - Adaptor rail for PS compatibility, see page 610
- On the horizontal TS enclosure section
- On the horizontal SE enclosure section, bottom
- On the horizontal SE enclosure section, top in the depth
- On enclosures and rails with rectangular system punching 12.5 x 10.5 mm

Material:

- Die-cast zinc

Supply includes:

- 1 set =
 - 1 mounting bracket,
 - 1 screw M6 x 12 mm,
 - 1 captive nut M6

Packs of	Model No.
24 set(s)	4182.000

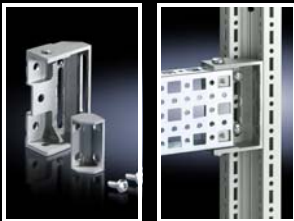
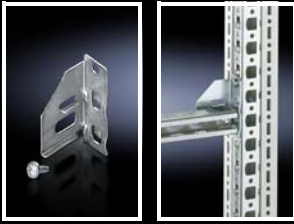
! **Also required:**

- U nuts (recommended: M6), see page 624
- Multi-tooth screws M6 x 12 mm, see page 625



Interior installation

Assembly components



Angle bracket PS

For quick attachment of punched rails 23 x 23 mm.

Installation options:

- On the vertical TS, SE enclosure section via
 - Adaptor rail for PS compatibility, see page 610
- On the horizontal TS enclosure section
- On the horizontal SE enclosure section, bottom
- On the horizontal SE enclosure section, top in the depth
- On enclosures and rails with rectangular system punching 12.5 x 10.5 mm

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- 1 set =
 - 1 angle bracket, left,
 - 1 angle bracket, right,
 - 2 screws 5.5 x 13 mm

Packs of	Model No.
12 set(s)	4181.000



Also required:

- U nuts (recommended: M6), see page 624
- Multi-tooth screws M6 x 12 mm, see page 625

Support bracket TS

For the attachment of

- Punched sections without mounting flanges 23 x 73 mm or
- Punched rails 23 x 23 mm

Installation options:

- On the vertical TS, SE enclosure section
 - on a 25 mm pitch pattern
 - in 2 mm increments
- On the horizontal SE enclosure section, in the width, top

Material:

- Die-cast zinc

Supply includes:

- 1 set =
 - 1 support bracket,
 - 1 stay,
 - 3 screws 5.5 x 13 mm

Packs of	Model No.
6 set(s)	8800.330



Also required:

- U nuts (recommended: M6), see page 624
- Multi-tooth screws M6 x 12 mm, see page 625

Support bracket PS

For the attachment of

- Punched sections without mounting flanges 23 x 73 mm or
- Punched rails 23 x 23 mm

Installation options:

- On the vertical TS enclosure section via
 - Snap-on nut 8800.806, see page 618 or
 - Adaptor rail for PS compatibility, see page 610
- On the horizontal TS enclosure section
- On the horizontal SE enclosure section, bottom
- On the horizontal SE enclosure section, top in the depth
- On enclosures and rails with square system punchings 12.5 x 10.5 mm

Material:

- Die-cast zinc

Supply includes:

- 1 set =
 - 1 support bracket,
 - 2 countersunk screws,
 - 2 serrated lock washers

Packs of	Model No.
24 set(s)	4183.000



Also required:

- U nuts (recommended: M6), see page 624
- Multi-tooth screws M6 x 12 mm, see page 625
- Adaptor rail for PS compatibility (when mounting on the vertical enclosure section), see page 610

Interior installation

Assembly components

Bracket/spacer

For the attachment of C rails, punched rails or cable clamp rails (angle section). On the sides, to accommodate square sections or cable tubes (Ø 20 mm). Attachment points with M8 thread.

Installation options:

- On the vertical TS, SE enclosure section via
 - Snap-on nut 8800.808, see page 618 or
 - Adaptor rail for PS compatibility, see page 610
- On the horizontal TS enclosure section
- On the horizontal SE enclosure section, bottom
- On the horizontal SE enclosure section, top in the depth
- On enclosures and rails with rectangular system punching 12.5 x 10.5 mm

Packs of	Model No.
6 set(s)	4199.000

Material:

- Die-cast zinc

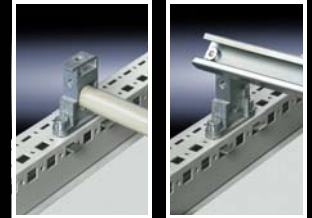
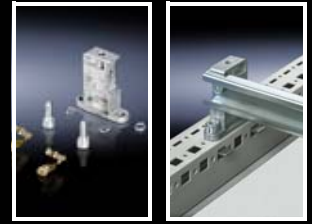
Supply includes:

- 1 set =
 - 1 bracket or spacer,
 - 2 screws M8 x 16 mm,
 - 2 spring lock washers,
 - 2 captive nuts M8,
 - 2 serrated lock washers,
 - 2 screws



Accessories:

- Angle piece 4134.000, see page 621



Quick-assembly block

For a variety of installation options.

Installation options:

- On the vertical TS, SE enclosure section via
 - Snap-on nut 8800.808, see page 618 or
 - Adaptor rail for PS compatibility, see page 610
- On the horizontal TS enclosure section
- On the horizontal SE enclosure section, bottom
- On the horizontal SE enclosure section, top in the depth
- On enclosures and rails with rectangular system punching 12.5 x 10.5 mm

Packs of	Model No.
12 pc(s).	4133.000

Material:

- Die-cast zinc

Supply includes:

- 12 quick-assembly blocks
- 12 threaded blocks M8
- 24 screws M8 x 12 mm
- 24 square nuts M8



Angle piece

For assembling punched rails and mounting surfaces with a 45° incline.

Installation options:

- On the vertical TS, SE enclosure section via
 - Snap-on nut 8800.806, see page 618 or
 - Adaptor rail for PS compatibility, see page 610
- On the horizontal TS enclosure section
- On the horizontal SE enclosure section, bottom
- On the horizontal SE enclosure section, top in the depth
- On enclosures and rails with rectangular system punching 12.5 x 10.5 mm

Packs of	Model No.
12 set(s)	4134.000

Material:

- Angle pieces: Die-cast zinc
- Insulating pieces: Plastic

Supply includes:

- 1 set =
 - 1 angle piece,
 - 1 insulating piece,
 - 1 insulating screw,
 - 2 assembly screws,
 - 1 threaded block M6



Interior installation

Assembly components



Frame connector piece

for TS punched rail 17 x 17 mm

Mounting part with integral M4 threads for attaching the TS punched rail 17 x 17 mm to the horizontal and vertical TS frame section (outer level). The frame adaptor piece can be used as a self-holding construction aid in the TS pitch and fastened with a screw to the frame. Can also be used for fastening other sections with TS pitch.

Material:

- Die-cast zinc

Supply includes:

- Assembly parts

Packs of	Model No.
24 pc(s).	9673.901



T-connector piece

for TS punched rail 17 x 17 mm

Mounting piece with integral M4 threaded holes for attaching the TS punched rail 17 x 17 mm

- to the horizontal and vertical TS chassis
- to TS punched rail 17 x 17 mm
- to the vertical TS frame section (internal level).

The T-connector piece may be inserted into the TS pitch pattern as a self-holding construction and attached to the frame with a screw. Can also be used for fastening other sections with TS pitch.

Material:

- Die-cast zinc

Supply includes:

- Assembly parts

Packs of	Model No.
24 pc(s).	9673.903



Corner connector

for TS punched rail 17 x 17 mm

Mounting part with integral M4 threads for connecting two TS punched rails 17 x 17 mm at an angle of 90° across the corner. Required for building the auxiliary construction for the busbar space separation.

Material:

- Die-cast zinc

Supply includes:

- Assembly parts

Packs of	Model No.
10 pc(s).	9673.902

Interior installation

Assembly components

Universal bracket

For the installation of

- Enclosure lights in
 - Compact enclosures AE
- Door-operated switches in
 - Compact enclosures AE
 - TopConsole system TP
- Cable conduit holders 2593.000 and 2591.000 in
 - Compact enclosures AE
- Support rails for terminals in
 - Command panels and command panel housings with door

Mounting screws are concealed when the door is closed. Existing holes for mounting blocks or hinges may be used with AE.

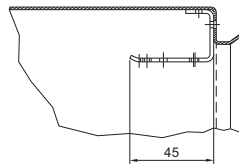
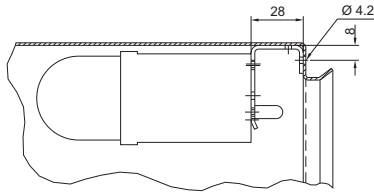
Material:

- Sheet steel, zinc-plated

Supply includes:

- Assembly parts

Packs of	Model No.
6 pc(s).	2373.000



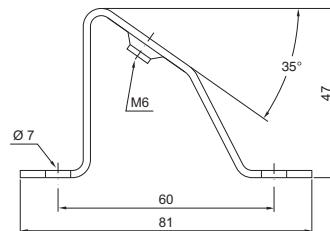
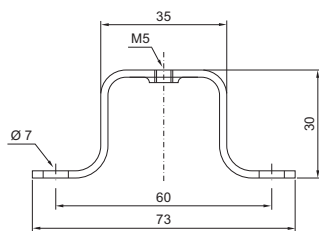
Cable retainer

For individual rail mounting.

Material:

- Sheet steel, zinc-plated

Cable retainer	Packs of	Model No.
Flat	20 pc(s).	2365.000
Inclined	20 pc(s).	2366.000



Mounting block for AE

As an accessory for additional interior installation, e.g. mounting of cable ties, PS punched rails, top hat rails and C rails (e.g. for a second pair of mounting angles).

Supply includes:

- Assembly parts

Packs of	Model No.
20 pc(s).	2574.000



Interior installation

Assembly components



U nuts

for

- Punched rail 23 x 23 mm
- Punched section without mounting flange, 23 x 73 mm
- Punched section without mounting flange, 45 x 88 mm
- Punched section with mounting flange, 23 x 73 mm

For mounting punched rails and punched sections without mounting flanges on angle brackets, mounting brackets and support brackets, we recommend U nuts with M6 thread (4179.000).

Thread	Packs of	Model No.
M4	20 pc(s).	4119.000
M5	20 pc(s).	4157.000
M6	20 pc(s).	4179.000
M8	20 pc(s).	4180.000



Accessories:

- Multi-tooth screws M6 x 12 mm, for 4179.000, see page 625

Captive nuts/threaded blocks

Installation options:

On enclosures and rails with rectangular system punching 12.5 x 10.5 mm for example on:

- TS, SE enclosure section,
 - vertically, via adaptor rail for PS compatibility
 - TS horizontally, direct
- SE horizontally, bottom, direct
- SE horizontally, top (in the depth only), direct
- Punched rails 23 x 23 mm
- Punched section without mounting flange, 23 x 73 mm
- Punched section without mounting flange, 45 x 88 mm
- Punched section with mounting flange, 23 x 73 mm



Possible alternative:

- On the vertical TS enclosure section TS snap-on nuts, see page 618



Captive nuts

The compression spring, designed as an insertion aid, ensures reliable mechanical and electrical connection in the system punchings.

Thread	Packs of	Model No.
M5	50 pc(s).	4166.000
M6	50 pc(s).	4164.000
M8	50 pc(s).	4165.000



Threaded block

With snap-off insertion aid, die-cast zinc.

Thread	Packs of	Model No.
M6	50 pc(s).	4162.000
M8	50 pc(s).	4163.000



Captive nuts

The nuts are inserted from the same side as screw-fastening takes place. Consequently, attachment points in the same height or width may also be used around corners.

The spring cage also ensures electrical connection in the system punchings.

Thread	Packs of	Model No.
M6	50 pc(s).	8800.340
M8	50 pc(s).	8800.350

Interior installation

Assembly components

Spring nut M5

For

- Comfort Panel from an installation depth of 74 mm
- Optipanel from an installation depth of 100 mm
- Compact Panel

The spring ensures reliable protection against unintentional displacement.

Other interior installation, e.g. with

- Mounting bracket 4597.000 (see page 617) or
- Mounting bracket for interior installation 6205.100 (see page 617)

Material:

- Sheet steel, zinc-plated

Packs of	Model No.
50 pc(s).	6108.000



Threaded inserts M6

for KS

For securing installed equipment to the moulded bosses in the door and in the enclosure rear panel. Screw length available for insertion: 8 mm.

Packs of	Model No.
20 pc(s).	1482.000



Multi-tooth screws

M6 x 12 to fit:

- Snap-on nuts (8800.806)
- U nuts for punched rails (4179.000)
- Captive nuts (4164.000)
- Threaded blocks (4162.000)

M8 x 12 to fit:

- Snap-on nut (8800.808)

Multi-tooth drive for optimum transmission of torque, an extended tool life and increased safety and reliability when tightening and loosening screw connections.

Type of screw	Size mm	Packs of	Model No.
Multi-tooth screws	M6 x 12 M8 x 12	300 pc(s). 300 pc(s).	2504.500 2504.800
Metal multi-tooth screws	5.5 x 13	300 pc(s).	2486.500
Metal multi-tooth screws for stainless steel	5 x 13	300 pc(s).	2486.300
Self-tapping screws:			
■ Hex screws	M5 x 10	500 pc(s).	2504.000
■ Posidrive raised countersunk screws	M5 x 12	500 pc(s).	2488.000
■ Pan-head screws, posidrive	M5 x 12	500 pc(s).	2489.000
■ Multi-tooth pan-head screws	M5 x 12	500 pc(s).	2489.500
Self-tapping screws	ST 4.8 x 16	300 pc(s).	2487.000



Metal multi-tooth screws

For the round holes 4.5 mm diameter in the enclosure section, punched rails and punched sections without mounting flanges.



Self-tapping screws

For the round holes 4.5 mm diameter in the enclosure section, punched rails and punched sections without mounting flanges.



Self-tapping screws

Mark, drill and tighten in a single operation using electric or pneumatic tools.

For metal thickness: 0.8 – 3 mm

Length: 16 mm

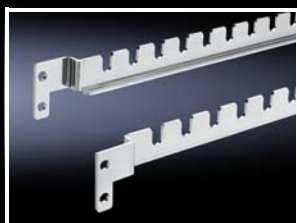
Usable length: 9.5 mm

Width across flats: 8 mm



Interior installation

Assembly components



TS adaptor for wiring systems

Adaptor rail for the Lütze LSC wiring system

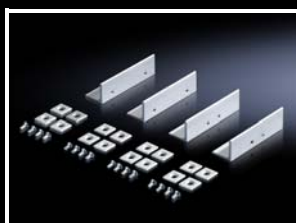
Supply includes:

- 1 set =
- 6 adaptor rails,
- 24 spring lock washers,
- 24 screws 5.5 x 13 mm

Note:

- Mounting parts for the LCS wiring system not included with the supply

For enclosure depth mm	Packs of	Model No.
500	1 set(s)	8800.150
600		8800.160
800		8800.180



Kit

for separate frame TS

Every TS 8 frame is easily converted to a rack suitable for dismantling. To this end, the frame sections in the roof and base frame are separated, optionally in the width or depth. The four connection components are inserted into the frame section and screw-fastened. The external dimensions of the frame remain unchanged.

Supply includes:

- Assembly parts

Note:

- The maximum achievable IP protection category is restricted by separation of the frame.

Packs of	Model No.
4 pc(s).	7829.400



Interior installation

Component shelves for frame attachment

Component shelf for frame attachment

Enclosure width 600 and 800 mm for TS and for upgrading existing DK-TS applications

For installation in enclosures **without** 482.6 mm (19") accommodation.

Max. depth of component shelves = Enclosure depth - 100 mm

Technical specifications:

- Mounting bolts or mounting rails may be installed on a 25 mm pitch pattern in the enclosure depth
- Mounting hole for handles provided
- Slotted component shelf

Material:

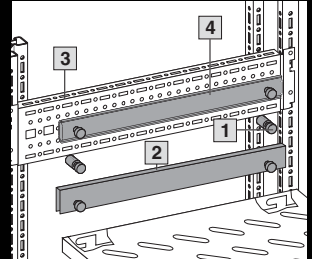
- Sheet steel

Colour:

- RAL 7035

Supply includes:

- Assembly parts



- 1 Fastening bolts
- 2 Mounting rails
- 3 Installation kit
- 4 Telescopic slides

Enclosure width 600 mm

Load capacity kg (surface load, static)	50	50	50	50	100	100	100	100
Component shelf depth mm	400	500	600	700	400	500	600	700
Component shelf height mm	29	29	29	29	45	45	45	45
Model No.	7164.035	7165.035	7166.035	7166.735	7464.035	7465.035	7466.035	7466.735

Enclosure width 800 mm

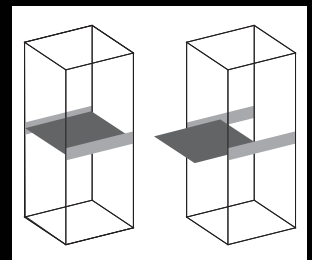
Load capacity kg (surface load, static)	50	50	50	50	100	100	100	100
Component shelf depth mm	400	500	600	700	400	500	600	700
Component shelf height mm	29	29	29	29	45	45	45	45
Model No.	7184.035	7185.035	7186.035	7186.735	7484.035	7485.035	7486.035	7486.735

! Also required:

TS punched section with mounting flange 17 x 73 mm as installation kit for enclosure depth mm, see page 606	500	8612.050	8612.050	8612.050	8612.050	8612.050	8612.050	8612.050	8612.050
	600	8612.060	8612.060	8612.060	8612.060	8612.060	8612.060	8612.060	8612.060
	800	8612.080	8612.080	8612.080	8612.080	8612.080	8612.080	8612.080	8612.080
	1000	8612.000	8612.000	8612.000	8612.000	8612.000	8612.000	8612.000	8612.000
	1200	8612.020	8612.020	8612.020	8612.020	8612.020	8612.020	8612.020	8612.020

+ Accessories:

Telescopic slides, see page 632	7061.000	7081.000	7161.000	7161.700	7064.000	7065.000	7066.000	7066.700
Handles for component shelves, see page 633	5501.730	5501.730	5501.730	5501.730	5501.730	5501.730	5501.730	5501.730
Hinged cable support	see page 633							



Component shelf, pull-out for TS, PC, IW

For direct mounting on the vertical TS enclosure section.

Load capacity:

- 40 kg surface load, static

Material:

- Sheet steel

Colour:

- RAL 7015

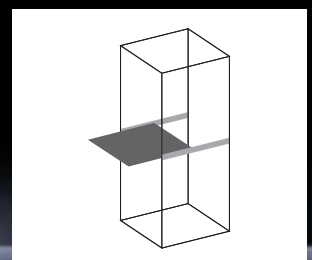
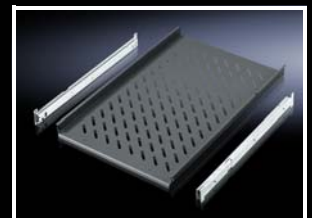
Supply includes:

- 2 telescopic slides.

For enclosures ¹⁾		Support area		Model No.
Width mm	Depth mm	Width mm	Depth mm	
600	600	465	545	6902.960²⁾
600	800	465	745	6902.980

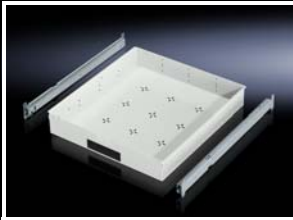
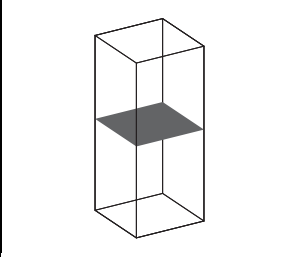
¹⁾ For enclosures without a mounting plate

²⁾ May also be installed in 800 mm deep enclosures based on TS (pull-out rear attachment)



Interior installation

Component shelves for frame attachment



Component shelf, static installation

for TS, PC, IW

prepared for fan expansion kit

For direct mounting on the vertical TS enclosure section. Simply locate into 4 pre-fitted screws and secure.

Load capacity:

- 40 kg surface load, static

Material:

- Sheet steel

Colour:

- RAL 7015

Supply includes:

- Assembly parts

For enclosures ¹⁾		Support area		Model No.
Width mm	Depth mm	Width mm	Depth mm	
600	600	507	550	8800.900
600	800	507	750	8800.910

¹⁾ For enclosures without a mounting plate



Accessories:

- Fan expansion kit 7980.XXX, see page 438

Drawer tray

Pull-out

For enclosures with TS frame construction in series IW, PC.

Width 600 mm and depth 600 – 800 mm

Tray height: 83 mm

Load capacity:

- 40 kg surface load, static

Material:

- Sheet steel

Colour:

- RAL 7035

Supply includes:

- 2 telescopic slides

Packs of	Model No.
1 pc(s).	6902.700

Interior installation

Component shelves for attachment to the 19" system punchings

Component shelf, 482.6 mm (19") installation

Enclosures with two 482.6 mm (19") mounting levels for TS and for upgrading existing DK-TS applications

Depending on their depth, the component shelves have several attachment points, so the distance between the 482.6 mm (19") mounting angles is variable within certain limits. Each component shelf secured in this way can be retrospectively upgraded to full withdrawal using telescopic slides. For this purpose, the telescopic slides are screw-fastened in place of the spacers.

Load capacity:

- 50 kg surface load, static

Material:

- Sheet steel

Colour:

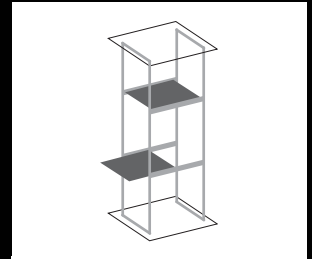
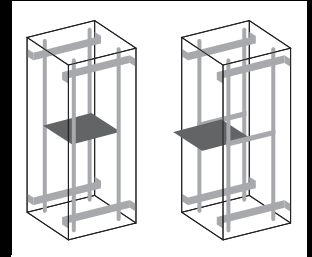
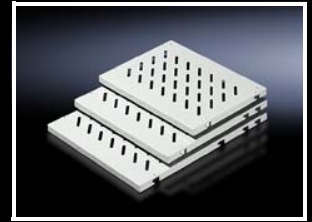
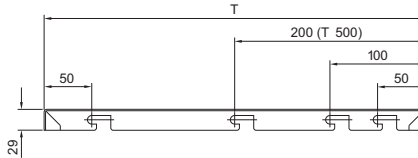
- RAL 7035

Supply includes:

- Assembly parts

! Also required:

- Adaptor for L-shaped mounting angles TS, see page 632
- Installation kit, depth variable 7063.850, for flexible mounting on L-shaped mounting angles, see page 631



Component shelf width mm	409	409	409	409
Component shelf depth mm	400	500	600	700
Distance between levels (X)	348/398	348/448/498	448/548/598	548/648/698
Model No.	7144.035	7145.035	7145.635	7145.735

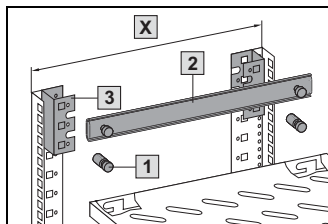
+ Accessories:

Telescopic slides for 50 kg, see page 632	7061.000	7081.000	7161.000	7161.700
Handles for component shelf, see page 633	5501.730	5501.730	5501.730	5501.730
Hinged cable support	see page 633			

For TS:

Note for installation in network enclosures based on TS, L-shaped mounting angle:

If L-shaped mounting angles are used, adaptor 7827.300, see page 632, is required.

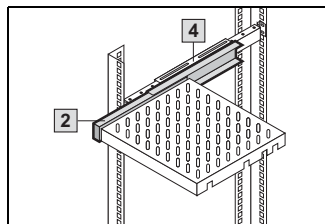


- 1 Spacers
- 2 Telescopic slides
- 3 Adaptors
- X Distance between levels

For TS, 482.6 mm (19") system punchings:

Note regarding flexible installation between two L-shaped mounting angles:

May be mounted directly on the 482.6 mm (19") system punchings using the depth-variable installation kit, 7063.850, see page 631.



- 2 Telescopic slides
- 4 Installation kit, depth-variable

Interior installation

Component shelves for attachment to the 19" system punchings



Component shelf, static installation

482.6 mm (19"), depth-variable for TS IT

For static installation between two 482.6 mm (19") mounting levels.

- Depth-variable to adapt to individual distances between levels
- Tool-free, time-saving one-man assembly

Material:

- Sheet steel

Surface finish:

- Spray-finished

Colour:

- RAL 9005

Supply includes:

- Assembly parts

Distance between levels mm	Load capacity, static kg	Height U	Packs of	Model No.
400 – 600	50	½	1 set(s)	5501.655
600 – 900	50	½	1 set(s)	5501.665
400 – 600	100	1	1 set(s)	5501.695
600 – 900	100	1	1 set(s)	5501.705



Component shelf, pull-out

482.6 mm (19") for TS IT

For mounting between two 482.6 mm (19") mounting levels.

- Depth-variable to adapt to individual distances between levels
- Tool-free, time-saving one-man assembly from the enclosure front
- Self-locking
- Full withdrawal

Material:

- Sheet steel

Surface finish:

- Spray-finished

Colour:

- RAL 9005

Supply includes:

- Component shelf, slotted
- Telescopic slide with mounting kit
- Assembly parts

Distance between levels mm	Load capacity, static kg	Height U	Depth mm	Packs of	Model No.
400 – 600	50	1	500	1 set(s)	5501.675
600 – 900	50	1	700	1 set(s)	5501.685
400 – 600	100	1½	500	1 set(s)	5501.715
600 – 900	100	1½	700	1 set(s)	5501.725

+ Accessories:

- Handle for component shelf 5501.730, see page 633



Component shelf 1 U, static installation

482.6 mm (19") for 482.6 mm (19") system punchings

The ideal support surface for small active components such as modems or mini-hubs in 482.6 mm (19") or metric levels.

Load capacity:

- 10 kg surface load, static

Material:

- Sheet steel

Colour:

- RAL 7035

Note:

- Cannot be combined with server telescopic slides
- Free installation height inside the U approx. 35 mm

Component shelf depth mm	Model No.
140	7119.140

! Also required:

- Captive nuts, see page 624
- Screws, see page 625



Interior installation

Component shelves for attachment to the 19" system punchings

Component shelf 2 U, static installation

482.6 mm (19")

for 482.6 mm (19") system punchings

For mounting between 482.6 mm (19") mounting angles.

Load capacity:

- 25 kg surface load, static

Material:

- Sheet steel

Surface finish:

- Spray-finished

Component shelf depth mm	Colour RAL	Packs of	Model No.
250	7035	1 pc(s).	7119.250
	9005	1 pc(s).	5501.615
400	7035	1 pc(s).	7119.400
	9005	1 pc(s).	5501.625

Note:

- Not suitable for combination with telescopic slides



Also required:

- Captive nuts, see page 624
- Screws, see page 625



Installation kit, depth-variable

for 482.6 mm (19") component shelves

Depending on the distance between the two 482.6 mm (19") levels, the installation kit is screw-fastened directly to the 482.6 mm (19") system punchings in the depth.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

Distance between 482.6 mm (19") levels mm	Packs of	Model No.
550 - 850	2 pc(s).	7063.850

Interior installation

Installation kits/accessories for component shelves



TS punched section with mounting flange, 17 x 73 mm

as installation kit for component shelves

Simply locate and secure. One pack is sufficient for 2 component shelves.

Load capacity:

- 100 kg surface load, static

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

Installation in enclosure depth mm	Packs of	Model No.
500	4 pc(s).	8612.050
600	4 pc(s).	8612.060
800	4 pc(s).	8612.080
1000	4 pc(s).	8612.000
1200	4 pc(s).	8612.020



Adaptor for L-shaped mounting angles

for TS network enclosures

For mounting component shelves and slide rails on L-shaped mounting angles.

Material:

- Sheet steel

Supply includes:

- Assembly parts

Packs of	Model No.
4 pc(s).	7827.300



Telescopic slides

for component shelves in TS and for upgrading existing DK-TS applications

Fixed component shelves are easily converted to full withdrawal. For this purpose, the existing fastening bolts or mounting rails (heavy-duty version) are exchanged for the telescopic slides.

Technical specifications:

- For installation and locking on a 25 mm pitch pattern in the enclosure depth

Load capacity:

- 50 kg/100 kg per set

Material:

- Sheet steel

Surface finish:

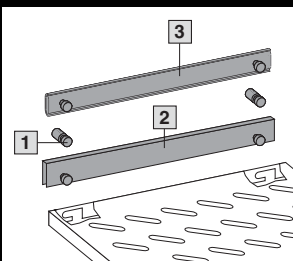
- Zinc-plated

Load capacity 50 kg

For component shelf depth mm	Packs of	Model No.
400	2 pc(s).	7061.000
500	2 pc(s).	7081.000
600	2 pc(s).	7161.000
700	2 pc(s).	7161.700

Load capacity 100 kg

For component shelf depth mm	Packs of	Model No.
400	2 pc(s).	7064.000
500	2 pc(s).	7065.000
600	2 pc(s).	7066.000
700	2 pc(s).	7066.700



- 1 Assembly bolts
- 2 Mounting rails
- 3 Telescopic slides

Interior installation

Accessories for component shelves

Cable support

hinged, with quick-release fastener

For secure routing of connection cables from the component shelf to the clamping point. The attachment may be released on both sides thanks to the quick-release fastener.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

For enclosure depth mm	Model No.
< 600	7163.500
> 600	7163.550



Cable support

hinged, with anti-kink device and quick-release fastener

For secure routing of connection cables from the component shelf to the clamping point. Kink-free cable routing in the central part via mobile chain links. The attachment may be released on both sides, thanks to the quick-release fastener.

Material:

- Sheet steel, zinc-plated
- Centre part: Plastic

Supply includes:

- Assembly parts

For enclosure depth mm	Model No.
< 600	7163.560
> 600	7163.565



Handles

for pull-out component shelves

The component shelves are prepared for the attachment of handles.

Material:

- Die-cast zinc

Surface finish:

- Spray-finished, silver-grey

Supply includes:

- Assembly parts

Packs of	Model No.
2 pc(s).	5501.730



Fastening bolts

for slotted component shelves

For non-slip attachment of your components. The bolts are screwed into the longitudinal slots of the component shelf support surface. Consequently, they are infinitely adjustable and can be adapted to suit any appliance.

Packs of	Model No.
4 pc(s).	7115.000



Interior installation

System lights



System lights

- for direct attachment in all large enclosures
- for mounting on compact enclosures, wall-mounted enclosures and in the console system with system accessories

Protection category IP to IEC 60 529:

- IP 20



Also required:

- Connection accessories, see page 639



Accessories:

- Adaptor bracket, see page 618
- Universal bracket, see page 623
- Rail for interior installation, see page 605

Technical comparison/equipment		Standard light	Courtesy light	Universal light	Compact light	System light LED	
Page		635	635	635	636	637	
Voltage supply	100 – 240 V, 50/60 Hz	-	■	■	■	-	
	120 V, 60 Hz	■	-	-	-	-	
	230 V, 50 Hz	■	-	-	-	-	
	24 V (DC)	-	-	-	■	■	
Full-electronic ballast		-	■	■	■	-	
Light	Fluorescent lamp, base G13	■	■	-	-	-	
	Compact fluorescent lamp, base 2G11	-	-	■	-	-	
	Fluorescent lamp T5	-	-	-	■	-	
	LEDs, cold white	-	-	-	-	■	
Protection category	I (PE conductor)	■	■	■	-	-	
	II (all-insulated)	-	-	-	■	-	
	III (SELV)	-	-	-	-	■	
Installation type	Screw-fastening	■	■	■	■	■	
	Clip attachment	-	-	-	■	■	
	Magnet attachment (accessory)	-	-	-	■	■	
Mounting options	TS roof frame (horizontal section)	direct	■	■	■	■	
	TS, SE vertical section	with adaptor bracket	■	■	■	-	-
		direct	-	-	-	■	■
	SE roof frame (front and rear sections)	with adaptor bracket	■	■	■	-	-
		direct	-	-	-	■	■
	SE roof frame (side sections)	direct	■	■	■	■	■
	AE, CM, TP	with universal bracket	■	■	■	-	-
with magnet attachment		-	-	-	■	■	
AE	with rail for interior installation	■	■	■	■	■	
Connection options	Infeed/connection cable	■	■	■	■ ³⁾	■	
	Door-operated switch	■	■	-	■	■	
	Through-wiring (series connection of several lights)	■	■	■	-	■	
Approvals	UL/cUL	■ ²⁾	-	■ ²⁾	■ ²⁾	- ¹⁾	
	ENEC	■ ²⁾	■	-	■ ²⁾	-	
	VDE	-	-	■ ²⁾	-	-	
Equipment	Light cover	-	■	■	■	■	
	Light cone adjustment	-	-	-	-	■	
	Integral sockets, earthing-pin	■ ²⁾	■	■ ²⁾	-	-	
	Integral sockets, USA	■ ²⁾	-	-	-	-	
	Integral motion detector	-	-	■	-	-	
Integral door-operated switch	■ ²⁾	■ ²⁾	-	-	-		

¹⁾ Safety extra-low voltage, not required by the standard

²⁾ Depending on the equipment

³⁾ Integral

Interior installation

System lights

Universal light

With integral motion detector

Benefits:

- Insulated plastic housing
- Efficient compact fluorescent tube
- Simple attachment of the light to the enclosure

Material:

- Plastic

Supply includes:

- Mounting clips



Also required:

- Connection accessories, see page 639



Technical specifications	Socket	Width mm	Height mm	Depth mm	Model No.	Approvals
18 W, 110 – 240 V, 50 – 60 Hz	Earthing-pin	343	95	55	4155.110	VDE
	-	343	95	55	4155.010	VDE
	-	343	95	55	4155.510	UL

Courtesy light

Without door operated switch

Technical specifications	Socket	Width mm	Height mm	Depth mm	Model No.	Approvals
14 W, 100 – 240 V, 50/60 Hz	Earthing-pin	452	117	50	4139.140	ENEC
18 W, 100 – 240 V, 50/60 Hz	Earthing-pin	682	117	50	4139.180	ENEC
30 W, 100 – 240 V, 50/60 Hz	Earthing-pin	987	117	50	4139.300	ENEC



With door operated switch

Technical specifications	Socket	Width mm	Height mm	Depth mm	Model No.	Approvals
14 W, 100 – 240 V, 50/60 Hz	Earthing-pin	452	117	50	4139.150	ENEC
18 W, 100 – 240 V, 50/60 Hz	Earthing-pin	682	117	50	4139.190	ENEC
30 W, 100 – 240 V, 50/60 Hz	Earthing-pin	987	117	50	4139.350	ENEC



Also required:

- Connection accessories, see page 639

Standard light

Without door operated switch

Technical specifications	Socket	Width mm	Height mm	Depth mm	Model No.	Approvals
14 kW, 230 V, 50 Hz	Earthing-pin	452	117	50	4138.140	ENEC
18 W, 230 V, 50 Hz	Earthing-pin	682	117	50	4138.180	ENEC
30 W, 230 V, 50 Hz	Earthing-pin	987	117	50	4138.300	ENEC
14 W, 120 V, 60 Hz	USA	452	117	50	4138.240	cURus
18 W, 120 V, 60 Hz	USA	682	117	50	4138.280	cURus
30 W, 120 V, 60 Hz	USA	987	117	50	4138.400	cURus



With door operated switch

Technical specifications	Socket	Width mm	Height mm	Depth mm	Model No.	Approvals
14 W, 230 V, 50 Hz	Earthing-pin	452	117	50	4138.150	ENEC
18 W, 230 V, 50 Hz	Earthing-pin	682	117	50	4138.190	ENEC
30 W, 230 V, 50 Hz	Earthing-pin	987	117	50	4138.350	ENEC
14 W, 120 V, 60 Hz	USA	452	117	50	4138.250	cURus
18 W, 120 V, 60 Hz	USA	682	117	50	4138.290	cURus
30 W, 120 V, 60 Hz	USA	987	117	50	4138.450	cURus



Also required:

- Connection accessories, see page 639

Interior installation

System lights



Compact light

Slimmer – Faster – Brighter

- Slimmer: Around 50% less height and depth and therefore around 75% less volume than conventional lights
- Faster: Universal fast attachment via clips, screws, or powerful magnets (optional). Simply slide in at the side or rear, fit the light, and it's done!
- Brighter: Up to 75% greater luminous efficiency from the lamp with the same power helps to cut electricity costs
- Door-operated switch can also be connected via a 2-pole connection

Colour:

- Similar to RAL 7035

Protection category IP to IEC 60 529:

- IP 20

Supply includes:

- Compact light with clip and screw mounting kits, including assembly parts

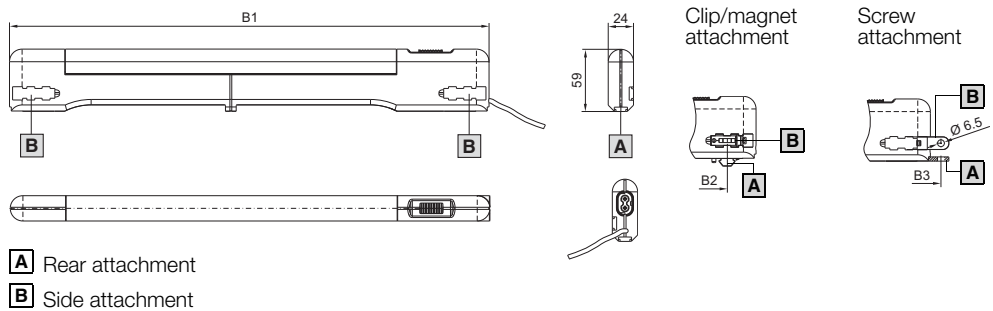


Accessories:

- Mounting kit magnet, see page 636
- Door-operated switch with connection cable, see page 639

Model No.	ENEC 24 cURus	4140.010	– 4140.210 ¹⁾	4140.020	– 4140.220 ¹⁾	4140.110	4140.120
Rated voltage	100 – 240 V ±10% at 50 – 60 Hz				24 V (DC) ±10%		
Wattage	8		14		8		14
Protection category	II (all-insulated)						
Width (B1) mm	455		705		455		705
Mounting distance (B2) mm	400		650		400		650
Clip/magnet	400		650		400		650
Mounting distance (B3) mm	475		725		475		725
Connection cable	3 m (open end)						
Cover colour	Yellow	Grey	Yellow	Grey	Yellow	Yellow	
Rated current A							
– at 230 V	0.045 – 0.088		0.073 – 0.127		–		–
– at 110 V	0.083 – 0.149		0.149 – 0.216		–		–
– at 24 V (DC)	–		–		0.35		0.57
Light	Fluorescent lamp T5						
Operating unit	Wide-range electronic ballast				Electronic ballast		
Circuit-breakers	Integral, on/off/door-operated switch mode						
Light cover	Transparent, grooved on the inside						
Cable deflector across rear	■	–	■	–	■	■	

¹⁾ Only for the North American market



Mounting kit magnet

For reliable adhesion on all sheet steel surfaces.

Packs of	Model No.
2 pc(s).	4140.000

LED system light

in 24 V (DC) version

- Max. EMC compatibility
- Protected, thanks to use within the safety extra-low voltage range
- Economical energy use
- Low-maintenance thanks to the use of LEDs
- May be connected to a door-operated switch
- Integral through-wiring
- Universal attachment options
- Vertically hinged light cone

Material:

- Light body: Extruded aluminium
- Light cover: Polycarbonate (halogen-free)
- Light ends: PC-ABS

Colour:

- Similar to RAL 7035

Protection category IP to IEC 60 529:

- IP 20

Supply includes:

- LED system light with clip and screw mounting kits, assembly parts



Model No.	4140.810	4140.820	4140.830	4140.840
Rated voltage	24 V (DC) (±10%)			
No. of LEDs	10	20	30	40
Protection category	III (SELV)			
Width (B1) mm	230	330	430	530
Mounting distance CLIP (B2) mm	175	275	375	475
Mounting distance, screw attachment (B3) mm	250	350	450	550
Rated current A ¹⁾	0.04	0.08	0.12	0.16
Circuit-breakers	Integral on/off/door-operated switch mode			

¹⁾ Maximum buying up to a total rated current strength of 2 amps



Also required:

- LED connection cable, see page 638 or
- Door operated switch with LED connection cable, see page 638

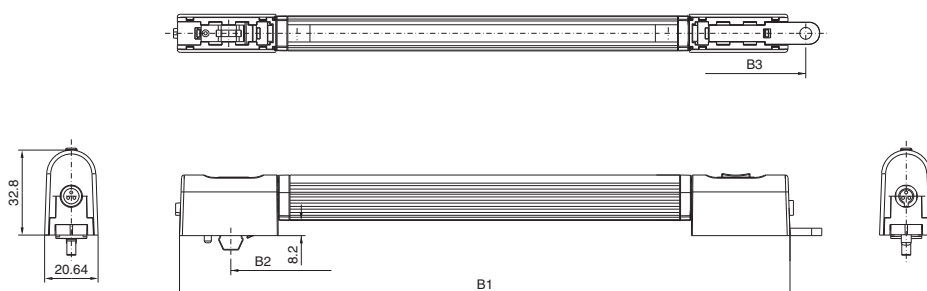


Accessories:

- Mounting kit magnet, see page 636
- Door-operated switch with LED connection cable, see page 638
- Connection cable, LED, see page 638
- Adaptor power pack, see page 638

Note:

- Only intended for use in enclosures and sealed cases!
- When using on customer-supplied power packs, it is important to obtain the requisite approvals depending on the application



Light, 1 U

Complete ready-to-connect light for installation in the 482.6 mm (19") mounting level. The slot attachment additionally allows it to be fastened to the 25 mm system punchings.

Technical specifications:

- Fluorescent tube 8 W, 230 V, 50 Hz
- Mains switch
- 2.5 m connection cable
- Earthing-pin connector

Packs of	Model No.
1 pc(s).	7109.200

Material:

- Aluminium, anodised
- Plastic



Interior installation

System lights

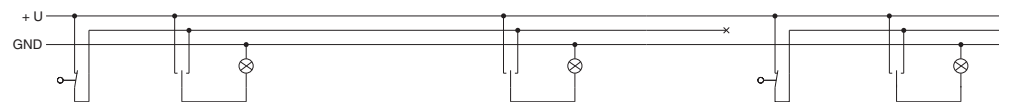
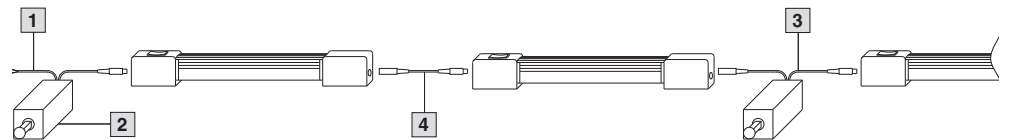
Connection accessories for LED system light



	Connection cable	Length mm	Packs of	Model No.
1	LED connection cable	3000	1 pc(s).	4315.800
	Door-operated switch	Length mm	Packs of	Model No.
2	With LED connection cable	3000	1 pc(s).	4315.810
3	With LED interconnecting cable	1000	1 pc(s).	4315.820
	Interconnecting cable	Length mm	Packs of	Model No.
4	LED interconnecting cable	600	1 pc(s).	4315.830
		1000	1 pc(s).	4315.840
		3000	1 pc(s).	4315.850
	Adaptor power pack	Technical specifications	Packs of	Model No.
5	Adaptor power pack	100 – 230 V/24 V (DC), 1 A	1 pc(s).	4315.860

Layout diagram for LED system light 24 V (DC):

- 1 Connection cable
- 2 Door-operated switch with LED connection cable (open end/cable bush)
- 3 Door-operated switch with LED interconnecting cable
- 4 LED interconnecting cable for through-wiring



Connection accessories

The following components can be used for time-saving and simple installation of the lights:



Accessories:

– Cable ties for quick assembly, see page 667

Connection cable for	UL	Length mm	Packs of	Model No.	
				Orange	Grey
1 Power supply (with socket, without connector)	–	3000	5 pc(s).	4315.100	–
1 Power supply (with socket and strain relief, without connector)	■	3000	1 pc(s).	–	4315.150
2 Through-wiring (with socket and connector)	■	600	1 pc(s).	–	4315.450
2 Through-wiring/infeed via connection component 2507.500 (with socket and connector)	–	600	5 pc(s).	4315.400	–
	–	1000		4315.200	–
	–	4000	1 pc(s).	4315.600	–

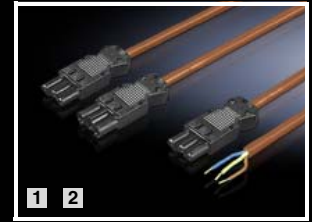
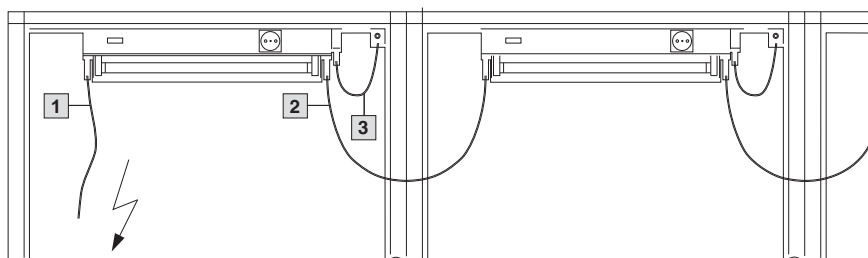
Door-operated switch With mounting accessories	UL	Length mm	Technical specifications	Packs of	Model No.		
					Orange	Yellow	Grey
3 With connection cable (not required for universal lights and standard/courtesy lights with integral door-operated switch)	–	600	240 V, 6 A 125 V, 8 A 24 V, 6 A 24 V (DC), 6 A	1 pc(s).	4315.520	–	–
	–	1000		1 pc(s).	4315.320	–	–
	■	600		1 pc(s).	–	–	4315.550
	■	1000		1 pc(s).	–	–	4315.350
Without connection cable	■	–		1 pc(s).	4127.010		
4 With connection cable (for compact light)	–	600	240 V, 2,5 A 125 V, 2,5 A 24 V, 2,5 A 24 V (DC), 2,5 A	1 pc(s).	–	4315.710	–
	■	600		1 pc(s).	–	–	4315.720

Door-operated switch With toggle	UL	Technical specifications	Packs of	Model No.
5 Without connection cable, for TS enclosures with installed large swing frame. The toggle is actuated via the tubular door frame of the sheet steel door, or in the case of glazed doors, via an adaptor included with the supply.	■	240 V, 6 A 125 V (DC), 8 A 24 V, 6 A 24 V (DC), 6 A	1 pc(s).	4127.210

Connection component with circuit-breaker 10 A	Packs of	Model No.
6 Reduce assembly costs: Power is supplied rapidly and reliably to system and workstation lights via connection cables. For independently configured cables, connector 2507.200 must be used. Connection component to be snapped onto the top hat rail.	1 pc(s).	2507.500

For self-assembly	Packs of	Model No.
7 Sockets for power supply through-wiring	5 pc(s).	2507.100
Connectors for connection component through-wiring	5 pc(s).	2507.200
T distributor with 2 sockets, 1 connector	5 pc(s).	2507.300
Connector for door-operated switch cable	5 pc(s).	2507.400

- 1 Connection cable for infeed
- 2 Connection cable for through-wiring/infeed
- 3 Door-operated switch with connection cable



Interior installation

EMC



EMC side panels

for TS

Automatic potential equalisation via assembly components, and a high level of EMC protection thanks to a special EMC seal.

Material:

- Sheet steel, 1.5 mm

Surface finish:

- Aluminium zinc coated, powder-coated on the outside

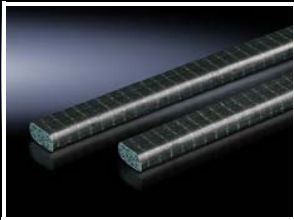
Colour:

- RAL 7035

Supply includes:

- Assembly parts

For enclosures		Packs of	Model No.
Height mm	Depth mm		
2000	600	2 pc(s).	8106.750
2000	800	2 pc(s).	8108.750



EMC baying seal

for TS

For baying enclosure systems. Seal with all-round, electrically conductive sheathing.

Supply includes:

- 3 seals, length 2 m each

Cross-section mm	Model No.
6.3 x 6.3	8800.690



EMC divider panel seal

This seal ensures optimum contact in bayed EMC enclosure systems and when using a zinc-plated divider panel.

Material:

- PU foam with electrically conductive sheathing

Supply includes:

- 1 roll (12.7 x 12.7 x 5300 mm)

Packs of	Model No.
1 pc(s).	4348.000

Rail

for EMC shielding bracket and strain relief

Combined rail for strain relief and EMC contacting of inserted cables.

Mounting options

- On the horizontal/vertical TS, SE, PC enclosure section
- On a mounting plate
May also be fitted without a retaining bracket

Additional contacting on the left or right of the rail via existing holes (9 mm diameter)

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- 1 rail
- 2 retaining brackets
- Assembly parts

Width mm	Packs of	Model No.
600	1 pc(s).	2388.600
800	1 pc(s).	2388.800
1000	1 pc(s).	2388.000
1200	1 pc(s).	2388.120



Also required:

- EMC shielding bracket, see page 641
- Cable clamps for strain relief, see page 666

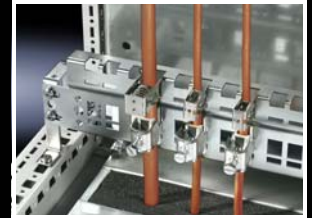
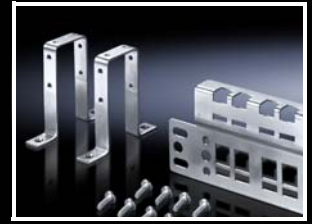


Accessories:

- Earth straps, see page 644
- Earthing braid, see page 644

Technical details:

Available on the Internet



EMC shielding bracket

Quick assembly without the use of tools:

Press the EMC shielding bracket against the cable shield and clip into the rail.

Diameter changes are compensated in full by the spring of the EMC shielding bracket.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

For shield diameter mm	Packs of	Model No.
3 – 10	10 pc(s).	2388.100
4 – 15	10 pc(s).	2388.150
10 – 20	10 pc(s).	2388.200
15 – 28	10 pc(s).	2388.280



EMC gland plates

For shielded cables with a maximum diameter of 20 mm.

Combined EMC/IP seal provides low-resistance contact between cable shield and gland plate.

For all 400, 500, 600 and 800 mm deep enclosures in conjunction with standard gland plates.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- 1 gland plate with T-head punching
- 1 sliding gland plate
- 2 IP/EMC gaskets

Width mm	Packs of	Model No.
600	1 set(s)	8800.660
800	1 set(s)	8800.680
1000	1 set(s)	8800.600¹⁾
1200	1 set(s)	8800.620¹⁾

¹⁾ For one enclosure half only



Interior installation

EMC



EMC cable glands

The cable sheathing may optionally be interrupted at the contact point or removed completely inside the enclosure.

The cable shield in the enclosure is retained.

The supplied lock nut cuts automatically into the paint when screwed down, thus creating a conductive connection.

Protection category IP to IEC 60 529:

- IP 68



Possible alternative:

- Hygienic Design cable gland, see page 659

Cable glands, metric

Size	Cable-diameter mm	Minimum ¹⁾ shield diameter mm	Packs of	Model No.
M16	4.5 – 10	3	5 pc(s).	2843.160
M20	6 – 12	5	5 pc(s).	2843.200
M25	11 – 17	8	5 pc(s).	2843.250
M32	15 – 21	10	1 pc(s).	2843.320
M40	19 – 28	15	1 pc(s).	2843.400
M50	27 – 38	19	1 pc(s).	2843.500
M63	34 – 44	30	1 pc(s).	2843.630

¹⁾ Minimum shield diameter = Cable diameter minus cable sheathing



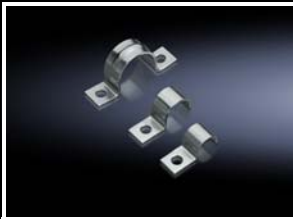
EMC shield bus

Made of clear chromated steel strip, 75 mm² cross section, for cable shield contact.

Supply includes:

- Assembly parts

Bar length mm	Connections	Packs of	Model No.
375	10	1 pc(s).	2413.375
550	16	1 pc(s).	2413.550



EMC earth clamps

The clamps may be used directly on the device or operating equipment on the mounting plate for cable shield contact.

Material:

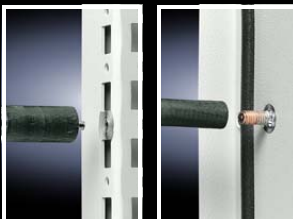
- Sheet steel

Surface finish:

- Zinc-plated

Size mm	Packs of	Model No.
4	50 pc(s).	2367.040
6	50 pc(s).	2367.060
8	50 pc(s).	2367.080
12	50 pc(s).	2367.120
16	50 pc(s).	2367.160
20	25 pc(s).	2367.200¹⁾

¹⁾ 2 assembly brackets



Contact cutter

The contact cutter enables EMC-compatible preparation of the contact point e.g. for earthing braids. Plastic-bound abrasive with guide pin for round system punchings.

With location point for drill, grinder etc.

For	Model No.
Frame section	2414.000
Earthing bolts ¹⁾	2414.500

¹⁾ Not necessary with TS

Contact paint

Contact paint prevents the corrosion of conductive, unprotected contact points.

Contents:

- 12 ml

Packs of	Model No.
1 pc(s).	2415.000

Interior installation

For areas at risk of earthquakes

TS 8 for earthquake zone 1, 2 and 3 to Bellcore

8806.500:

W x H x D 800 x 2000 x 600 mm

With base/plinth (base/plinth components front and rear, see page 513 and base/plinth trim panel, side, see page 514), 100 mm high.

Note:

- These versions have been tested and meet the requirements to Telcordia GR 63-CORE. They should be seen as a comparative variable to the customer's own plant, since empty enclosures cannot be certified.

TS 8 for earthquake zone 4 to Bellcore

8806.500:

W x H x D 800 x 2000 x 600 mm

Fitted with:

- Earthquake kit and
- Earthquake base/plinth, see page 643

(Photo shows TS 8 for earthquake zone 4 to Bellcore)

Technical details:

Available on the Internet



Earthquake kit

Material:

- Sheet steel

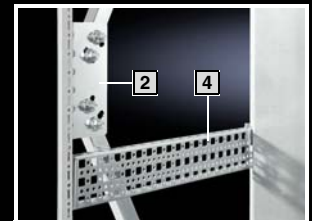
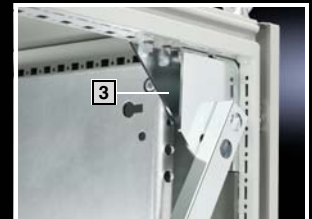
Surface finish:

- Zinc-plated

Supply includes:

- 1** 2 side reinforcements, bottom
- 2** 2 bracing struts each, sides
- 3** 8 gusset plates
- 4** Mounting plate attachment and reinforcement, including assembly parts

For enclosures W x H x D mm	Packs of	Model No.
800 x 2000 x 600	1 pc(s).	8613.860



Earthquake base/plinth

Height 100 mm

Material:

- Corner pieces: Sheet steel 5 mm
- Trim panels: Sheet steel 2 mm

Surface finish:

- Powder-coated

Colour:

- RAL 7022

Supply includes:

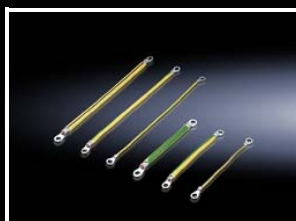
- 1 set =
- 4 corner pieces
- 2 depth stays
- 1 trim panel each front and rear
- fully assembled

For enclosures W x D mm	Packs of	Model No.
800 x 600	1 pc(s).	8601.860



Interior installation

Earthing



Earth straps

For configuring a reliable earthing connection with perfect contact.

- With ring terminals in M6 and M8 to match the earthing screws
- Length-optimised and ready to install

Enclosure	Connection facility		
	Door/lid	Enclosure	Mounting plate
KL	M6	M6	M8
EB/BG	M6	M6/M8 ¹⁾	–
AE	M6	M6 ²⁾ /M8	M8
KE/KEL	M8	M8	M8
CM/TP	M6	M8	M8
TS/SE	M8	M8	M8
PC	M8	M8	–

¹⁾ M8 with BG 1050.900

²⁾ M6 with AE 1032.XXX/AE 1035.XXX

Connection	Cross-section mm ²	Length mm	Packs of	Model No.
M8 – M8	4	170	5 pc(s).	2564.000
M8 – M8	16	170	5 pc(s).	2565.000
M8 – M8	25	170	5 pc(s).	2566.000
M6 – M6	10	200	5 pc(s).	2565.100
M8 – M8	4	300	5 pc(s).	2567.000
M6 – M8	10	300	5 pc(s).	2565.110
M8 – M8	10	300	5 pc(s).	2565.120
M8 – M8	16	300	5 pc(s).	2568.000
M8 – M8	25	300	5 pc(s).	2569.000



Earthing braid

Tin-plated copper, in various lengths and cross-sections with press-fitted contact rings. Earthing braids counteract the current displacement effect at high frequencies, whilst at the same time offering highly flexible connection opportunities.

For	Cross-section mm ²	Length mm	Packs of	Model No.
M6	10	200	10 pc(s).	2412.210
M8	16	200	10 pc(s).	2412.216
M8	25	200	10 pc(s).	2412.225
M6	10	300	10 pc(s).	2412.310
M8	16	300	10 pc(s).	2412.316
M8	25	300	10 pc(s).	2412.325



Assembly parts

for system punchings

For fastening the earth straps and earthing braids to:

- Horizontal TS enclosure sections
- PS rail systems
- Horizontal SE enclosure sections (in the depth only, top)

Size	Packs of	Model No.
M6	10 set(s)	2570.000
M8	10 set(s)	2559.000

! Also required:

- For mounting on the horizontal TS, SE enclosure section: Captive nuts, see page 624



Assembly parts

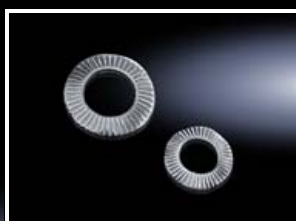
for gland plates

For fastening the earth straps and earthing braids to:

- Gland plates

Fast assembly thanks to self-tapping screws

Size	Packs of	Model No.
M8	10 set(s)	2570.200



Contact washers

Serrated contact washers facilitate secure PE conductor connection. As a result, there is no need to manually strip paint in the connection area.

Size	Packs of	Model No.
M5	100 pc(s).	2343.000
M6	100 pc(s).	2334.000
M8	100 pc(s).	2335.000

Earthing plate

- For installation in
- Comfort Panel
 - Optipanel
 - TS
 - SE
 - PC

One earthing cable can be screw-fastened to the threaded bolt and connected to up to 8 components with earth straps via 6.3 mm flat-pin connectors.

Packs of	Model No.
1 pc(s).	2570.500

- Supply includes:**
- Assembly parts



Central earthing point

For connecting

- Earth straps
- Earthing braids

to the vertical and horizontal enclosure profile. The connection bracket is connected to the enclosure frame with 2 screws and is securely contacted. Earth connection is carried out via the threaded bolt M8 x 20 mm.

- Material:**
- Sheet steel

- Surface finish:**
- Zinc-plated

Packs of	Model No.
1 pc(s).	7829.200

- Supply includes:**
- 1 connection bracket
 - 2 assembly screws for mounting on the enclosure section
 - 2 serrated washers
 - 1 nut M8
 - 1 contact lock washer M8
 - 1 washer



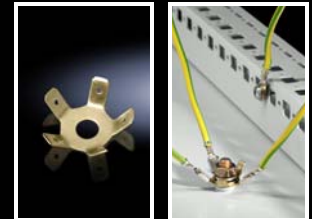
Potential equalisation star

for 8 mm earthing bolt

The earthing connector is used for simple potential equalisation on an 8 mm earthing bolt, or in conjunction with central earthing point 7829.200. Up to five flat-pin connectors (6.3 mm) may be contacted on one earthing point.

Packs of	Model No.
10 pc(s).	7548.210

- Supply includes:**
- 10 earthing connectors
 - Assembly parts



Complete earthing kit

for upgrading existing DK-TS applications

To DIN EN 60 950/VDE 0805, Ø 4 mm². For system-compatible earthing of all enclosure parts on the enclosure frame. The earth conductors are pre-assembled ready for connection with connectors and cut to the correct length.

Packs of	Model No.
1 set(s)	7829.150

- Supply includes:**
- 8 earth straps
 - Central earthing point and assembly parts



Extension kit for complete earthing kit

for upgrading existing DK-TS applications

To DIN EN 60 950/VDE 0805, Ø 4 mm². To extend the complete earthing kit 7829.150, in order to keep additional components potential-free. Conductor length 300 mm in each case. For 6.3 mm flat-pin connectors, 8 mm earthing bolts or for attachment with contact washers and screw.

Packs of	Model No.
1 set(s)	7829.152

- Supply includes:**
- 5 earth straps
 - Assembly parts and identification labels

Interior installation

Earthing



Earthing kit KE

For producing the required external potential equalisation for spray-finished enclosures in the following series:

- KL
- AE
- TS

For applications in Unit Group II, Category 3, in compliance with Directive 94/9 EU-Appendix VIII, internal production control.

Packs of	Model No.
5 pc(s).	9214.000



Earthing kit

for KL

Consisting of all the screws, nuts, contact washers and earth strap needed to earth the cover; length 250 mm, cross-section 4 mm².

Packs of	Model No.
5 pc(s).	2570.100



PE busbar

699 mm long PE busbar with 42 pre-fitted screws, including terminal clamps up to 6 mm² (fine-wire conductors), 10 mm² (single wire or multi-wire conductors) and main terminal clamp up to 35 mm².

Packs of	Model No.
1 pc(s).	2364.000

Accessories:

- Cable retainer, see page 623



Earth rail, horizontal

for TS

Supply includes:

- Earth rail made from E-Cu 57 to DIN EN 12 163, DIN EN 13 601, 15 x 5 mm
- 20 connection points with M5 screws
- 2 earth connections 25 mm²
- 2 isolators
- Assembly parts

Length mm	Packs of	Model No.
450	1 pc(s).	7113.000

Interior installation

Earthing

Earthing kit, pre-assembled

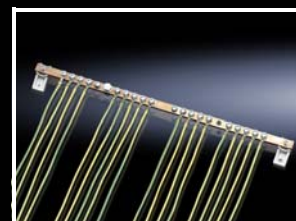
for TS, TS IT

For star earthing. With the pre-assembled earth conductors on a potential equalisation rail, star potential equalisation is easily integrated into network enclosures.

Supply includes:

- Earth rail made from E-Cu 57 to DIN EN 12 163, DIN EN 13 601
- 16 earthing leads 6 mm²
- 2 isolators
- Assembly parts

For TS enclosures up to W x H x D mm	Packs of	Model No.
800 x 2000 x 800	1 set(s)	7829.100
800 x 2200 x 1200	1 set(s)	7829.110



Earth rail, vertical

for TS

Easily fitted to the 25 mm DIN pitch pattern of distributors or to the 482.6 mm (19") mounting angles. The supplied earth conductors facilitate star earthing of the cable clamp straps in the patch panels. The earth terminals are fully adjustable. Current carrying capacity of rail approx. 200 A.

Supply includes:

- Earth rail made from E-Cu 57 to DIN EN 12 163, DIN EN 13 601, 15 x 5 mm
- 16 conductor connection clamps 2.5 – 16 mm²
- 15 earthing leads 6 mm², L = 500 mm
- Assembly parts

For enclosure height mm	Length mm	Packs of	Model No.
800	545	1 set(s)	7541.000
1000	745	1 set(s)	7542.000
1200	945	1 set(s)	7543.000
1400	1145	1 set(s)	7544.000
1600	1345	1 set(s)	7545.000
1800	1545	1 set(s)	7546.000
2000	1745	1 set(s)	7547.000
2200	1945	1 set(s)	7548.000



Extension kit

for earth rail, vertical

For system-compatible expansion of the star earthing on the vertical potential equalisation rail.

Supply includes:

- Earthing leads 6 mm², L = 500 mm
- Preassembled, with ring terminal and wire end ferrule
- Earth terminals, 2.5 – 16 mm²
- Assembly parts

Packs of	Model No.
10 pc(s).	7549.000



ESD connection point

Dangerously high potential differences can occur during maintenance or conversion work on the enclosure. To protect sensitive electronic components, this standardised connection point (push-button) provides potential equalisation. The connection point is directly conductively connected to the enclosure frame via two screws.

Packs of	Model No.
1 pc(s).	7752.950

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts



Interior installation

Earthing



Busbars E-Cu

with integral holes

Suitable for

- Direct installation in enclosures
- Busbar supports
 - 9340.000/.010, see page 212
 - 9340.004, see page 212
 - 3052.000, see page 278
 - 3073.000, see page 278
- PE/PEN combinations in conjunction with PE/PEN combination angles, see page 649 and baying bracket E-Cu, see page 649

Technical details:

Available on the Internet

Size 30 x 5 mm (hole Ø 11 mm)

For enclosure width mm	Length mm	Packs of	Model No.	Page
400	365	2 pc(s).	9661.345	
600	565	2 pc(s).	9661.365	
800	765	2 pc(s).	9661.385	
1000	965	2 pc(s).	9661.305	
1200	1165	2 pc(s).	9661.325	

Accessories

Baying bracket E-Cu	95	4 pc(s).	9661.355	649
PE/PEN combination angle	–	4 pc(s).	9661.235	649

Size 30 x 10 mm (hole Ø 11 mm)

For enclosure width mm	Length mm	Packs of	Model No.	Page
400	365	2 pc(s).	9661.340	
600	565	2 pc(s).	9661.360	
800	765	2 pc(s).	9661.380	
1000	965	2 pc(s).	9661.300	
1200	1165	2 pc(s).	9661.320	

Accessories

Baying bracket E-Cu	95	4 pc(s).	9661.350	649
PE/PEN combination angle	–	4 pc(s).	9661.230	649

Size 40 x 10 mm (hole Ø 14 mm)

For enclosure width mm	Length mm	Packs of	Model No.	Page
400	392	2 pc(s).	9661.040	
600	592	2 pc(s).	9661.060	
800	792	2 pc(s).	9661.080	
1000	992	2 pc(s).	9661.000	
1200	1192	2 pc(s).	9661.020	

Accessories

Baying bracket E-Cu	88	4 pc(s).	9661.050	649
PE/PEN combination angles for use with Form 2-4	–	4 pc(s).	9661.240	649
PE/PEN combination angles for other applications	–	4 pc(s).	9661.200	649

Size 80 x 10 mm (hole Ø 14 mm)

For enclosure width mm	Length mm	Packs of	Model No.	Page
400	392	2 pc(s).	9661.140	
600	592	2 pc(s).	9661.160	
800	792	2 pc(s).	9661.180	
1000	992	2 pc(s).	9661.100	
1200	1192	2 pc(s).	9661.120	

Accessories

Baying bracket E-Cu	88	4 pc(s).	9661.150	649
PE/PEN combination angles for use with Form 2-4	–	4 pc(s).	9661.240	649
PE/PEN combination angles for other applications	–	4 pc(s).	9661.200	649

Inserted screw nuts M12

Self-holding nuts with knurled ring for busbars E-Cu.

Hole diameter: 14.5 mm

Packs of	Model No.
30 pc(s).	3591.060



PE/PEN combination angle E-Cu

for PE/PEN combinations

The PE/PEN combination, comprising busbars, combination angles and baying brackets, supports type-tested configurations as per IEC 61 439-1. The pre-assembled combination angles, baying brackets and busbars customised to match the enclosure width mean a significant reduction in assembly time and costs.

Material:

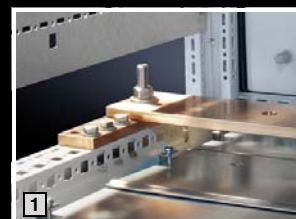
– E-Cu

Supply includes:

– Assembly parts

Tested short-circuit resistance

- PE/PEN combination 30 x 5 mm:
I_{cw} 18 kA, 1 sec.
- PE/PEN combination 30 x 10 mm:
I_{cw} 30 kA, 1 sec.
- PE/PEN combination 40/80 x 10 mm:
I_{cw} 60 kA, 1 sec.



For busbars mm	Application		Size mm	Packs of	Model No.
	Form 2-4	Others			
30 x 5	■	■	30 x 5	4 pc(s).	9661.235
30 x 10	■	■	30 x 10	4 pc(s).	9661.230
40 x 10 and	■	–	40 x 10	4 pc(s).	1 9661.240
80 x 10	–	■	40 x 10	4 pc(s).	9661.200

Baying bracket E-Cu

For busbars mm	Length mm	Packs of	Model No.
30 x 5	95	4 pc(s).	9661.355
30 x 10	95	4 pc(s).	9661.350
40 x 10	88	4 pc(s).	9661.050
80 x 10	88	4 pc(s).	9661.150



Cable management

Cable entry



Cable entry plates

for

- Cable entry grommets
 - Connector grommets
- instead of segments of the standard divided gland plates

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

For installation in TS, SE and PC enclosures

Enclosure width mm	Cut-outs per plate	Packs of	Model No.
600	5	2 pc(s).	8800.060
800	8	2 pc(s).	8800.080
1000	4	4 pc(s).	8800.100
1200	6	4 pc(s).	8800.120

For installation in CM enclosures and TP TopConsole system

Enclosure width mm	Cut-outs per plate	Packs of	Model No.
600	5	1 pc(s).	5001.226
800	8	1 pc(s).	5001.227
1000	4	1 pc(s).	5001.228
1200	6	1 pc(s).	5001.229
1600	8	1 pc(s).	5001.237

For installation in TP universal console

Enclosure width mm	Cut-outs per plate	Packs of ¹⁾	Model No.
600	5	2 pc(s).	4320.700
800	8	2 pc(s).	4321.700
1000	10	2 pc(s).	4323.700

¹⁾ Incl. compensating plate

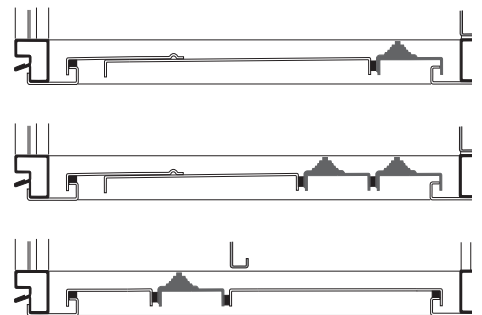
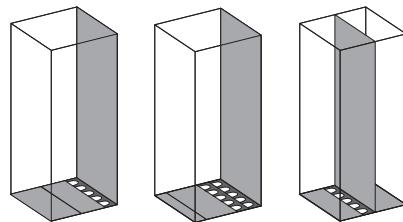


Accessories:

- Cable entry grommets, see page 651

Three examples from a wide range of possibilities

The diagrams show three TS examples for the positioning of cable entry plates instead of segments of the three-piece gland plates supplied as standard. This facilitates positioning to fit the mounting plate. Thanks to the enclosure symmetry, where dimensions permit, cable entry plates may also be inserted in the enclosure depth, right and left, analogous to the gland plates.



Cable management

Cable entry

Cable entry grommets

In conjunction with the cable entry plate, simple and fast sealing of cables inserted in the base area of enclosures.

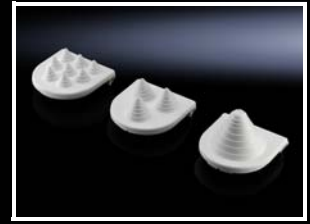
Material:

- Body: Polypropylene
- Cover: Thermoplastic elastomer

Protection category IP to IEC 60 529:

- IP 55 if installed correctly

Cables per grommet	Max. Ø mm	Packs of	Model No.
8	13	25 pc(s).	4316.000
3	21	25 pc(s).	4317.000
1	47	25 pc(s).	4318.000



Connector grommets

Suitable for cable diameters from 8 to 36 mm.

Material:

- Outer cover: Polypropylene covered with thermoplastic elastomer
- Seal: Cellular rubber

Protection category IP to IEC 60 529:

- IP 55 if installed correctly

Packs of	Model No.
10 pc(s).	4311.000



Section for cable entry, centre for TS, SE, CM, TP

For top-mounting on gland plates. A superior alternative to the foam rubber cable clamp strip, thanks to:

- Easier mounting
- Full-surface support
- High level of sealing of cables inserted into the enclosure

Material:

- Extruded aluminium section
- Seal: PU foam
- Cross-section: 30 x 25 mm

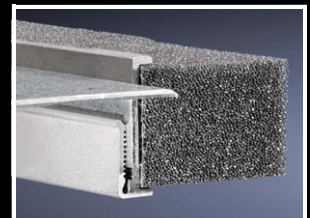
Protection category IP to IEC 60 529:

- IP 55 if installed correctly

Note:

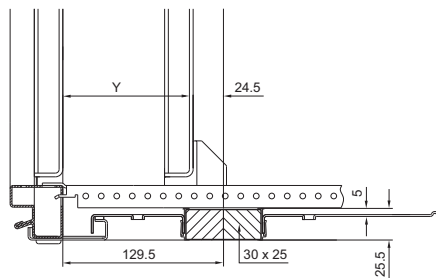
- 1 set is sufficient for one base opening up to an enclosure width of 800 mm. From an enclosure width of 1000 mm, two base openings are provided.
- 2 sets per enclosure may be fitted

For enclosure width mm	Packs of	Model No.
600	1 set(s)	8802.060
800	1 set(s)	8802.080
1000	2 set(s)	8802.100
1200	2 set(s)	8802.120
1600	2 set(s)	8802.160



Accessories:

- Cable clamp rail (right angle section), see page 665
- C rail 30/15, see page 612



Y = Mounting plate depth-adjustable on a 25 mm pitch pattern (final pitch 30 mm)

Cable management

Cable entry



Section for cable entry, rear for TS, SE, CM, TP

Unlike the section for cable entry, centre, the rear section is mounted directly onto the base opening. In this way, when installing the mounting plate in the rearmost position (TS) or with CM, the cables may be routed directly on a cable clamping rail with no large radii. In conjunction with the cable clamp rail, optimum adjustment between the cable entry and mounting plate can be achieved.

Material:

- Extruded aluminium section
- Seal: PU foam
- Cross-section: 30 x 25 mm

Protection category IP to IEC 60 529:

- IP 55 if installed correctly

Note:

- 1 set is sufficient for one base opening up to an enclosure width of 800 mm. From an enclosure width of 1000 mm, two base openings are provided.
- 2 sets per enclosure may be fitted

For enclosure width mm	Packs of	Model No.
600	1 set(s)	8802.065
800	1 set(s)	8802.085
1000	2 set(s)	8802.105
1200	2 set(s)	8802.125
1600	2 set(s)	8802.165



Accessories:

- Cable clamp rail, see page 665



Foam rubber cable clamp strip

For sealing the cable entry between the gland plates. Particularly suitable for identical cable cross-sections.

Material:

- PU foam
- Cross-section: 30 x 30 mm

Protection category IP to IEC 60 529:

- IP 55 if installed correctly

Packs of	Model No.
3 m	2573.000



EMC gland plates

see page 641

Cable management

Gland plates

Plastic cable gland plates

with metric knockouts

With pre-punched holes for cable glands. Used for sealing standard gland plates.

Temperature range:

– Suitable for use from -40°C...+70°C

Colour:

– RAL 7035

Protection category IP to IEC 60 529:

– IP 55 if installed correctly

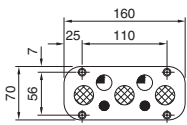
Note:

– The applicable size may be taken from the respective product ordering page

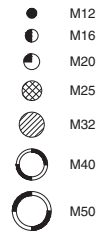
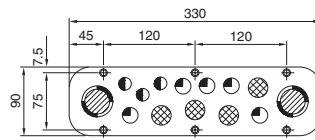
Size	Packs of	Model No.
1	10 pc(s).	2560.010
3	10 pc(s).	2561.010
4	5 pc(s).	2562.010
5	5 pc(s).	2563.010



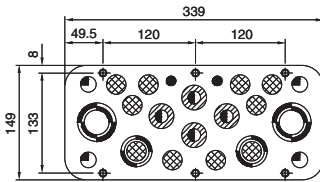
Size 1



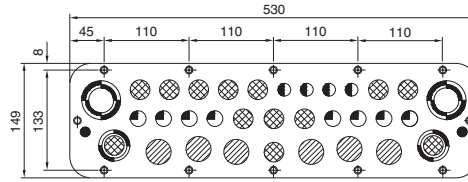
Size 3



Size 4



Size 5



Plastic cable gland plates

with PG knockouts

With pre-punched PG holes for cable glands. Used for sealing standard gland plates.

Temperature range:

– Suitable for use from -40°C...+70°C

Material:

– ABS

Colour:

– RAL 7035

Protection category IP to IEC 60 529:

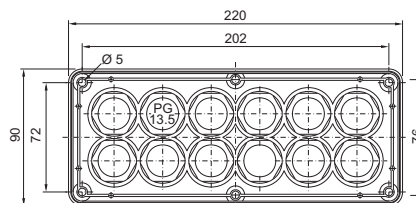
– IP 55 if installed correctly

Note:

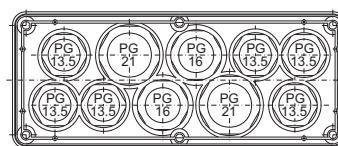
– The applicable size may be taken from the respective product ordering page

Size	PG	Qty.	Packs of	Model No.
2	13.5	12	5 pc(s).	1581.000
	13.5	6	5 pc(s).	1582.000
	16	2		
	21	2		

1581.000



1582.000



Cable management

Gland plates



Plastic gland plates

with membranes

Simply pierce the plastic with a sharp object, and pull through the cable.

Material:

– Plastic to UL 94-V0

Colour:

– Similar to RAL 7035

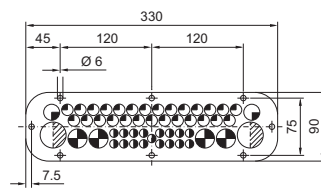
Protection category IP to IEC 60 529:

– IP 65 with careful cable entry

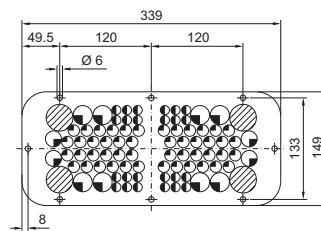
Note:

– The applicable size may be taken from the respective product ordering page

Size 3



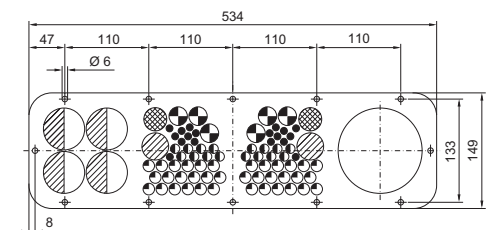
Size 4



Size	Packs of	Model No.
3	1 pc(s).	2561.500
4	1 pc(s).	2562.500
5	1 pc(s).	2563.500

	Diameter mm	Number of cable entries for Model No.		
		2561.500	2562.500	2563.500
●	5 – 9	–	–	18
◐	6 – 11	17	–	–
◑	7 – 12	–	24	16
◒	10 – 15	27	48	36
◓	15 – 21	2	4	–
◔	15 – 24	–	–	6
◕	15 – 25	–	8	–
◖	16 – 25	4	–	–
◗	19 – 34	2	–	–
◘	23 – 30	–	–	2
◙	26 – 35	–	4	2
◚	26 – 54	–	–	4
○	50 – 110	–	–	1

Size 5



Cable management

Gland plates

Metal gland plates

with metric knockouts

Simply knock out the holes for the cable glands using a screwdriver.

Material:

– Sheet steel

Colour:

– RAL 7035

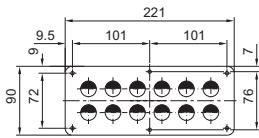
Protection category IP to IEC 60 529:

– IP 66 when mounting in the usual position at the bottom

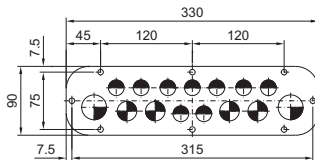
Note:

– The applicable size may be taken from the respective product ordering page

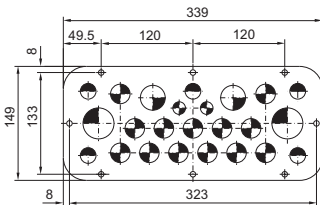
Size 2



Size 3



Size 4



Size	Packs of	Model No.
2	1 pc(s).	1581.100
3	1 pc(s).	2561.100
4	1 pc(s).	2562.100
5	1 pc(s).	2563.100

Number of cable entries

Diameter						Model No.
M12	M16	M20	M25	M32	M40	
–	–	12	–	–	–	1581.100
–	–	9	4	2	–	2561.100
–	2	5	13	2	2	2562.100
1	–	12	11	8	4	2563.100



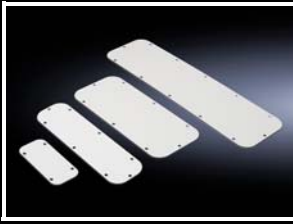
Accessories:

– Cable glands made from polyamide or brass, see page 658



Cable management

Gland plates



Metal gland plates

As spare/replacement part for the standard gland plates supplied loose.

Material:

– Sheet steel

Colour:

– RAL 7035

Protection category IP to IEC 60 529:

– IP 66 when mounting in the usual position at the bottom

Note:

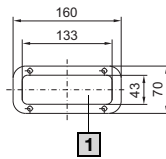
– The applicable size may be taken from the respective product ordering page

Size	Design	Packs of	Model No.
1	Solid	1 pc(s).	2560.400
2	Solid	6 pc(s).	1158.500
3	Solid	1 pc(s).	2561.400
4	Solid	1 pc(s).	2562.400
5	Solid	1 pc(s).	2563.150

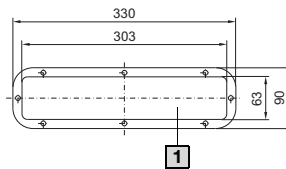
+ **Accessories:**

– Cable glands made from polyamide or brass, see page 658

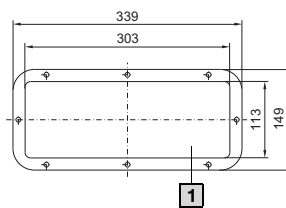
2560.400



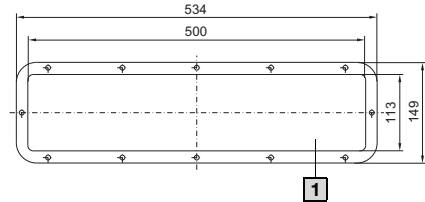
2561.400



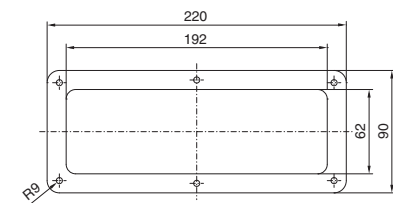
2562.400



2563.150



1158.500



1 Area available for population



Gland plate

for metric cable glands, for EL

Folded gland plate with foamed-in seal and pre-punched, knock-out holes for metric cable glands M12, M20, M25, M32, M40.

Material:

– Sheet steel, 1.5 mm

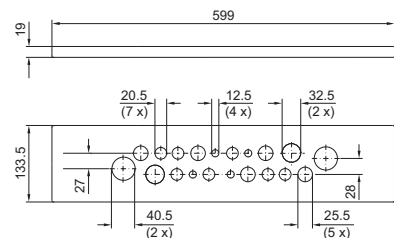
Colour:

– RAL 7035

Protection category IP to IEC 60 529:

– IP 55

Packs of	Model No.
1 pc(s).	7705.235



Cable management

Gland plates

Gland plate

with brush insert, for EL

Folded gland plate with foamed-in seal and plastic brush inserts for simple cable entry.

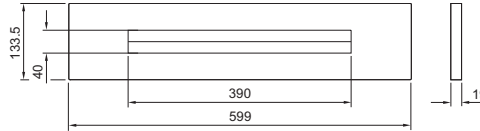
Material:

- Sheet steel, 1.5 mm

Colour:

- RAL 7035

Packs of	Model No.
1 pc(s).	7705.035



Brush strip

For individual installation of enclosure panels, gland plates and panels. Cut-outs for cable routing at any position in the side panel, rear panel, doors, roof and base plate may be finished off attractively by simply attaching the brush strip.

Packs of	Model No.
2 m	7072.200

Technical specifications:

- For metal thickness: 0.6 – 1.5 mm
- Bristle length: 30 mm
- Plastic sheathing: 18 mm
- Snap-on surface: 10 mm
- Maximum cut-out height: 38 mm



Brush strip, super-airtight

For individual installation of enclosure panels, gland plates and panels. Cut-outs for cable routing at any position in the side panel, rear panel, doors, roof and base plate.

These special brush strips may be used to create airtight entries for cable sections and conductors. The brush strips arranged in an offset configuration ensure good sealing from the routed cables even with large quantities of cables. In this way, unwanted flow losses may be reduced to a minimum.

Packs of	Model No.
2 x 1 m	7825.375

Technical specifications:

- For metal thickness: 1.5 – 2 mm
- Bristle length: 58 mm
- Plastic sheathing: 14 mm
- Snap-on surface: 11.5 mm
- Cut-out width: 88 – 90 mm

Material:

- Plastic, UL 94-V0

Supply includes:

- Each 1 brush strip,
1 m in length, right-hand and left-hand version



Cable management

Cable gland



Cable gland, brass

Benefits:

- Because the gland and lock nut are sold together in a single pack, this saves additional ordering and storage
- Clamping membranes for even tightening and strain relief which protects the cables

Material:

- Brass
- Seal: TPE/NBR

Surface finish:

- Nickel-plated

Protection category IP to IEC 60 529:

- IP 68 (1 bar, 30 min.)

Approval:

- VDE tested to EN 50 262

Size	Cable diameter mm	Packs of	Model No.
M12 x 1.5	3 – 7	15 pc(s).	2411.800
M16 x 1.5	4.5 – 10	15 pc(s).	2411.810
M20 x 1.5	7 – 13	10 pc(s).	2411.820
M25 x 1.5	10 – 17	10 pc(s).	2411.830
M32 x 1.5	13 – 21	5 pc(s).	2411.840
M40 x 1.5	19 – 28	4 pc(s).	2411.850
M50 x 1.5	25 – 35	2 pc(s).	2411.860
M63 x 1.5	35 – 48	1 pc(s).	2411.870

 **Possible alternative:**

- Hygienic Design cable gland, see page 659



Cable gland, polyamide

Benefits:

- Because the gland and lock nut are sold together in a single pack, this saves additional ordering and storage
- Clamping membranes for even tightening and strain relief which protects the cables

Material:

- Polyamide 6
- Seal: Neoprene

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 68 (1 bar, 30 min.)

Approval:

- VDE tested to EN 50 262

Size	Cable diameter mm	Packs of	Model No.
M12 x 1.5	2.5 – 6.5	50 pc(s).	2411.600
M16 x 1.5	4.5 – 10	50 pc(s).	2411.610
M20 x 1.5	7 – 13	50 pc(s).	2411.620
M25 x 1.5	10 – 17	25 pc(s).	2411.630
M32 x 1.5	17 – 25	15 pc(s).	2411.640
M40 x 1.5	22 – 33	5 pc(s).	2411.650
M50 x 1.5	28 – 38	5 pc(s).	2411.660
M63 x 1.5	32 – 44	3 pc(s).	2411.670

Cable management

Cable gland

Cable gland HD

Applications:

- Manufacturing and packaging of foodstuffs etc.
- Clean room technology (e.g. pharmaceuticals)
- Biotechnology
- Chemical industry

Benefits:

- Smooth, solid exterior surfaces effectively prevent the depositing of harmful micro-organisms
- Much easier, and therefore cheaper to clean compared with conventional cable glands

Material:

- Cap nut: Stainless steel 1.4305 (AISI 303)
- Seal: Conforms to FDA 21 CFR 177.2600

Protection category IP to IEC 60 529:

- IP 68 (5 bar, 30 min.)

Protection category IP to DIN 40 050-9:

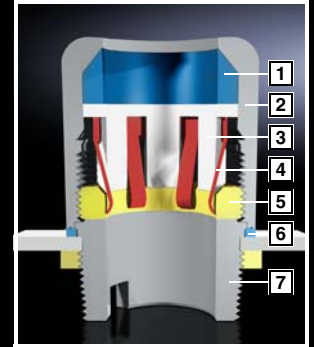
- IP 69K

Standard version

Size	Cable diameter mm	Packs of	Model No.
M12 x 1.5	3 – 6.5	5 pc(s).	2410.000
M16 x 1.5	5 – 10	5 pc(s).	2410.010
M20 x 1.5	6 – 12	5 pc(s).	2410.020
M25 x 1.5	12 – 17	5 pc(s).	2410.030

EMC version

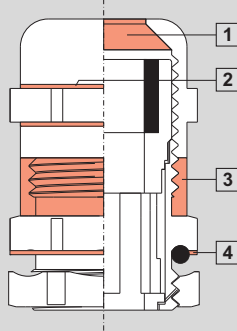
Size	Cable diameter mm	Packs of	Model No.
M16 x 1.5	5 – 10	5 pc(s).	2410.110
M20 x 1.5	6 – 12	5 pc(s).	2410.120
M25 x 1.5	12 – 17	5 pc(s).	2410.130



Why hygiene-compatible cable glands?

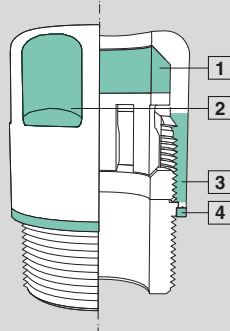
Critical points with conventional solutions

- 1 Cable entry in front of seal
- 2 No minimum radii on the hexagon
- 3 External thread
- 4 Gap caused by O-ring on the enclosure surface



Hygiene-compatible design features

- 1 Seal directly at the cable entry
- 2 Compliance with minimum radii on the hexagon
- 3 No external threads
- 4 Flush termination between the cap nut and the enclosure



- 1 Seal
- 2 Cap nut
- 3 Clamping jaws
- 4 Shield spring
EMC version only
- 5 Clamping ring
- 6 Enclosure seal
- 7 Base with locator for assembly tool

Stainless steel lock nut

To match HD cable glands.

Material:

- Stainless steel 1.4305 (AISI 303)

Size	Packs of	Model No.
M12 x 1.5	10 pc(s).	2410.200
M16 x 1.5	10 pc(s).	2410.210
M20 x 1.5	10 pc(s).	2410.220
M25 x 1.5	10 pc(s).	2410.230



Assembly tool

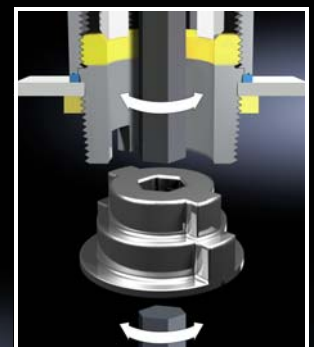
for HD cable gland

For attaching HD cable glands in an internal thread or using lock nuts. This can be achieved either from the inside or from the outside using an Allen key.

Supply includes:

- 1 set = Adaptor for sizes from M12 – M25

Packs of	Model No.
1 set(s)	2410.290



Cable management

Cable gland



Connector gland

for connector cut-outs (24-pole)

For the entry of 2 pre-assembled cables in the connector cut-out, without dismantling the connector.

Cable diameter: 8 – 36 mm

Material:

- Enclosure: Plastic
- Clamps: Sheet steel

Surface finish:

- Clamps: Zinc-plated

Supply includes:

- 1 set =
 - 2 half-shells, including seals, with fastening clamp

Packs of	Model No.
1 set(s)	2400.000



Cable gland

for IW worktops

To fit drilled holes Ø 60 mm. For the entry of cables with pre-assembled connectors, the rotating flap and cover are easily removed.

Material:

- Plastic

Colour:

- RAL 7035

Packs of	Model No.
1 pc(s).	6902.770



Edge protector

For covering sharp edges of cut-outs. Provides protection from injuries and prevents damage to inserted cables. The edge protector is suitable for material thicknesses ranging from approximately 1.0 – 2.0 mm and may be cut to the required length.

Material:

- Plastic PVC

Colour:

- Black

Packs of	Model No.
10 m	7072.100

Cable management

Cable gland



The connector gland proves that sometimes "less is more": significantly faster installation, a flexible sealing system for different cable diameters, and simple cable entry with pre-assembled cables. Low installation costs, a high degree of protection and flexible cable management – added value guaranteed with the latest generation of cable entry solutions from Rittal.

Benefits:

- Cable diameters 4 – 16 mm
- Simple cable entry for pre-assembled cables
- Individual cables can be added or replaced without dismantling the sealing frame
- Sealing modules remain safely attached to their cables

Sealing frame

For pre-assembled cables with connectors.

Mounting over 24-pole or 16-pole connector cut-outs in

- Module plates for TS divider panels
- Metal gland plates

Material:

- Frame: Polyamide
- Flat seal: CR

Protection category IP to IEC 60 529:

- IP 64

Protection category NEMA:

- NEMA 12

Supply includes:

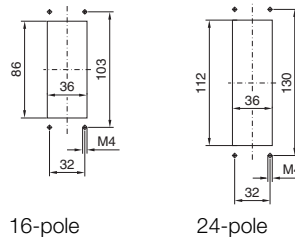
- Assembly parts

For modules 20 x 20 mm	For cut-out	Packs of	Model No.
10 pc(s).	24-pole	1 pc(s).	2400.900
8 pc(s).	16-pole	1 pc(s).	2400.910



Accessories:

- Module plates for TS divider panel, see from page 538



16-pole

24-pole



Sealing modules

To seal cables in conjunction with a sealing frame. It is possible to combine 20 x 20 mm and 40 x 40 mm sealing modules.

Material:

- Hard shell: Polyamide
- Seal: TPE 2

Protection category IP to IEC 60 529:

- IP 64

Protection category NEMA:

- NEMA 12

Sealing modules 20 x 20 mm

Sealing range	Packs of	Model No.
4 – 6 mm	10 pc(s).	2400.920
6 – 9 mm	10 pc(s).	2400.930
Solid	10 pc(s).	2400.970

Sealing modules 40 x 40 mm

Sealing range	Packs of	Model No.
9 – 12 mm	10 pc(s).	2400.940
12 – 16 mm	10 pc(s).	2400.950
Solid	10 pc(s).	2400.960



Cable management

Cable gland



Connector gland, small

For pre-assembled cables with connectors.

- For use with material thickness of up to 4 mm
- Strain relief of the pre-assembled cables can be achieved with cable ties

Material:

- Plastic

Colour:

- RAL 9005

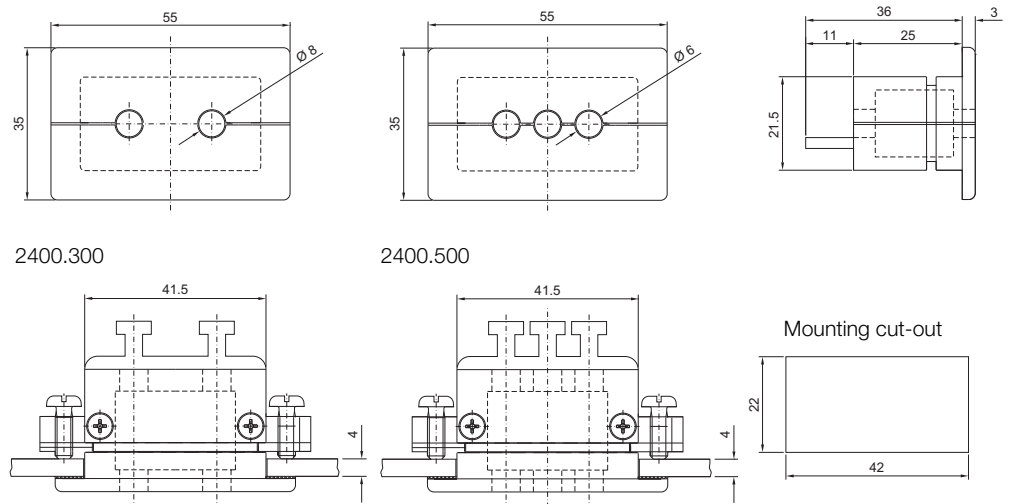
Protection category IP to IEC 60 529:

- IP 65 if installed correctly

Supply includes:

- Assembly parts

To fit	Packs of	Model No.
2 cables Ø 6 – 8 mm	1 pc(s).	2400.300
3 cables Ø 4 – 6 mm	5 pc(s).	2400.500



Cable gland module

for support arm connection Ø 130 mm

Use of the mounting cut-out for support arm connection Ø 130 mm, round, with enclosures mounted on the wall, for sealed cable entry. May also be mounted retrospectively with the cables already inserted.

Fitted with T-heads for cable clamping. Particularly well-suited to cables with identical cross-sections.

Material:

- Sheet steel

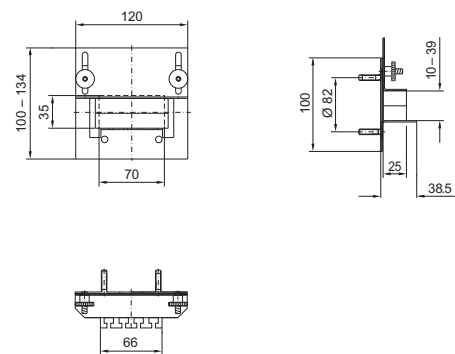
Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

Packs of	Model No.
1 pc(s).	6052.500



Stepped collar

for wall thicknesses from 1.5 to 4.5 mm

For cable entry, simply cut off at the required level to match the cable diameter.

Material:

- Plastic to UL 94-HB

Protection category IP to IEC 60 529:

- IP 54 with careful cable entry

For hole	Sealing range mm	Packs of	Model No.
M20	5 – 16	100 pc(s).	2899.200
M25	5 – 21	50 pc(s).	2899.250
M32	13 – 26.5	25 pc(s).	2899.320
M40	13 – 34	20 pc(s).	2899.400

Cable management

Cable duct

for vertical TS section

For direct mounting on the vertical enclosure section.

Width 50 mm

For assembly on a vertical enclosure section in the area of the side panel.

Width 100 mm

For assembly on two bayed enclosure sections in the baying area. Baying brackets and baying clamps which have already been fitted can be covered over with the cable duct.

The nominal break points of the bars are also designed for combination with the cable ducts for mounting plates; in addition a further nominal break at the level of the mounting plate enables direct insertion into the cable duct.

The cable duct fastening points are co-ordinated with the TS system hole pattern; time-consuming drilling work, as in the case of DIN ducts, is eliminated.

Width mm	Height mm	Packs of	Model No.
50	1600	8 set(s)	8800.570
50	1800	8 set(s)	8800.520
100	1600	4 set(s)	8800.540
100	1800	4 set(s)	8800.510

Technical specifications:

- Depth: 80 mm
- Length: 1600 mm (for enclosure height 1800 mm)
1800 mm (for enclosure height 2000 mm)
Can be shortened for other enclosure sizes
- Bar width: 5.5 mm
- Slot width: 4.5 mm

Material:

- Hard PVC
- Flame-resistant, self-extinguishing
- Temperature resistant to +60°C

Colour:

- Similar to RAL 7030

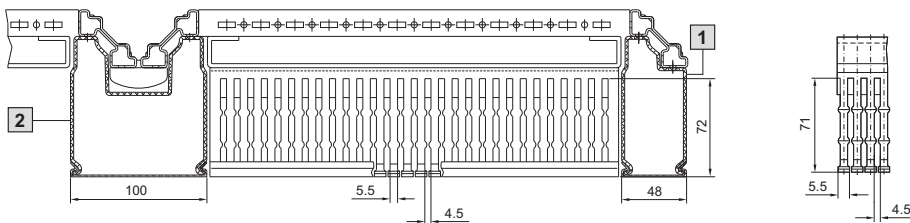
Supply includes:

- 1 set =
1 cable duct with cover



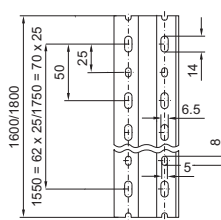
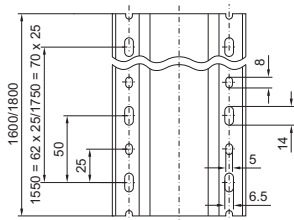
Accessories:

- Aluminium rivet for attachment, see page 664

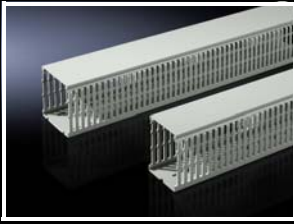


1 8800.570/8800.520

2 8800.540/8800.510



Cable management



Cable duct

for mounting plate

- To fit the cable ducts for the vertical TS section
- If the TS mounting plate is installed in the rear-most position, the horizontally mounted cable ducts are flush with the vertical ones
- For external mounting on surfaces

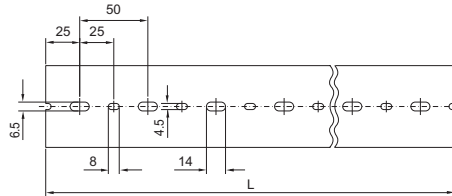
Technical specifications:

- Depth: 80 mm
- Length: 2000 mm, may be cut to length
- Bar width: 5.5 mm
- Slot width: 4.5 mm

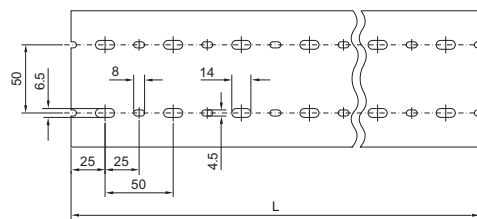
Material:

- Hard PVC
- Flame-resistant, self-extinguishing
- Temperature resistant to +60°C

Width 30, 40 and 60 mm



Width 80 and 100 mm



For enclosure width mm		Fixed length 2000 mm
Length (L) mm		
Width (B) mm	Packs of	Model No.
30	24 set(s)	8800.750
40	20 set(s)	8800.751
60	18 set(s)	8800.752
80	12 set(s)	8800.753
100	12 set(s)	8800.754

Colour:

- Similar to RAL 7030

Supply includes:

- 1 set =
1 cable duct with cover



Accessories:

- Aluminium rivet for attachment, see page 664



Aluminium rivet

For secure assembly of cable ducts. Also suitable for mounting support rails and punched rails.

To fit

- TS system punchings
- Drilled hole \varnothing 4.5 mm

Packs of	Model No.
100 pc(s).	8800.531



Accessories:

- Cable ducts for vertical TS section, see page 663
- Cable ducts for mounting plate, see page 664

Cable management

Cable clamp rails

Right angle section for TS, SE, PC, TP universal console, TS base/plinth, Flex-Block

For strain relief with cable entry. Depth-variable mounting on a 25 mm pitch pattern of holes on the horizontal enclosure section or in the TS base/plinth/Flex-Block.

Material:

- Steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

Enclosure width mm	Length mm	Packs of	Model No.
400	385	2 pc(s).	4193.000
600	585	2 pc(s).	4191.000
800	785	2 pc(s).	4192.000
1000	985	2 pc(s).	4336.000
1200	1185	2 pc(s).	4196.000
1600	1585	2 pc(s).	4338.000
1800	1785	2 pc(s).	4339.000



Accessories:

- Fastening bolts for TS base/plinth, see page 516
- Quick-assembly block 4133.000 for Flex-Block, see page 621
- Punched rails 23 x 23 mm for Flex-Block, see page 611

Cable clamps

for cable clamp rails

For fastening the cables to the cable clamp rails.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Plastic insert

For cable diameter mm	Packs of	Model No.
6 - 12	25 pc(s).	2350.000
12 - 16	25 pc(s).	2351.000
14 - 18	25 pc(s).	2352.000
18 - 22	25 pc(s).	2353.000
22 - 26	25 pc(s).	2354.000
26 - 30	25 pc(s).	2355.000
30 - 34	25 pc(s).	2356.000
34 - 38	25 pc(s).	2357.000
38 - 42	25 pc(s).	2358.000
42 - 46	25 pc(s).	2359.000
46 - 50	25 pc(s).	2360.000



Possible alternative:

- Rail for EMC shielding bracket and strain relief, see page 641

Cable clamp rails

C-section, for mounting plates for TS, SE, CM, TP

For strain relief with cable entry.

The length of the cable clamp rail is tailored to the width of the mounting plate. The mounting bracket included with the supply supports three different installation situations on the mounting plate:

- 1 straight, at a distance of 23 mm from the mounting plate
- 2 straight, at a distance of 10 mm from the mounting plate
- 3 tilted, towards the mounting plate

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

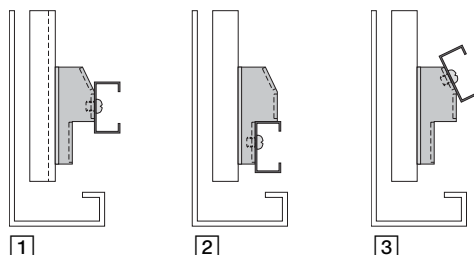
- Two mounting brackets and assembly screws

For enclosure width mm	Length mm	Packs of	Model No.
600	499	1 pc(s).	5001.080
800	699	1 pc(s).	5001.081
1000	899	1 pc(s).	5001.082
1200	1099	1 pc(s).	5001.083



Accessories:

- Cable clamps for C rails, see page 666



Cable management



Cable clamping bracket

For installation in command panels with mounting cut-out □ 120 x 65 mm and Ø 130 mm.

Cable clamping optionally via:

- Cable clamps
- or
- Cable ties 2597.000
- Standard commercially available cable ties

Bracket height = 25 mm with fitted C rail 40 mm

Material:

- Sheet steel

Surface finish:

- Zinc-plated

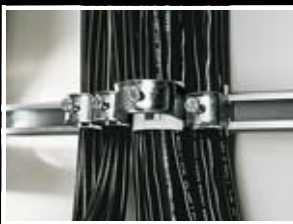
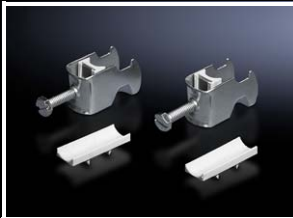
Supply includes:

- C rail and assembly screws

Packs of	Model No.
1 set(s)	6052.000

+ Accessories:

- Cable clamps, see page 666
- Cable ties, see page 667



Cable clamps

for C rails

For attaching the cables to the C rails.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Plastic insert

For cable diameter mm	Packs of	Model No.
6 – 14	25 pc(s).	7077.000
12 – 18	25 pc(s).	7078.000
18 – 22	25 pc(s).	7097.000
22 – 26	25 pc(s).	7097.220
26 – 30	25 pc(s).	7097.260
30 – 34	25 pc(s).	7097.300
34 – 38	25 pc(s).	7097.340
38 – 42	25 pc(s).	7098.000
42 – 56	25 pc(s).	7098.100
56 – 64	25 pc(s).	7099.000

+ Accessories:

- C rails, see from page 612



Cable conduit and cable conduit holder

For secure cable routing e.g. from the enclosure or mounting plate to the door. Attachment facility for standard commercially available cable ties is provided on the cable conduit holder, so that cables may be attached upon entry to/exit from the cable conduit.

Material:

- Cable conduit: Polythene
- Cable conduit holder: Polyamide

Cable conduit

Internal Ø mm	Packs of	Model No.
16	25 m	2595.000
29	25 m	2589.000
36	25 m	2596.000
48	25 m	2590.000

Cable conduit holder

For cable conduit Ø mm	Packs of	Model No.
16	20 pc(s).	2593.000¹⁾
29	20 pc(s).	2591.000¹⁾
36	20 pc(s).	2594.000
48	20 pc(s).	2592.000

¹⁾ Installation in compact enclosures AE with universal bracket 2373.000, see page 623

Cable management

Cable attachment

For professional, secure fastening of cables and conduits.

For fastening:

- Slide into the mounting rail 23 x 23 mm
- Screw-fasten onto the round punchings of the enclosures, as well as all punched rails and punched sections

Material:

- Polyamide

Note:

- As the attachments are bayable, several attachments, even those of different sizes, can be assembled using just 2 screws

For cable diameter from – to mm	Packs of	Model No.
6 – 9	50 pc(s).	4319.090
9 – 12	50 pc(s).	4319.120
12 – 16	50 pc(s).	4319.160
16 – 20	50 pc(s).	4319.200



Also required:

- Posidrive raised countersunk screw M5 x 12 mm, 2488.000, for screw-fastening to the round system punchings, see page 625



Accessories:

- Punched rail 23 x 23 mm, see page 611



Cable ties

The super-fast solution for fastening cables to the enclosure profile or mounting system parts. Simply clip into the round system punchings.

Length mm	Packs of	Model No.
150	100 pc(s).	2597.000



Nylon loop

With the nylon loop, secured cables are easily released, allowing individual cables to be added or removed. Ideal for sensitive data cables (fibre-optic/Cu), as it avoids indentations on the cable sheathing.

In addition, the nylon loop may be screw-fastened to the round system punchings or attached using a quick-release fastener.

Colour:

- Black

Supply includes:

- Quick-release fasteners

Width mm	Length mm	Max. cable diameter mm	Packs of	Model No.
20	130	30	10 pc(s).	7072.220
20	200	50	10 pc(s).	7072.230
20	300	90	10 pc(s).	7072.240



Also required:

- Screw 2486.500 for screw-fastening to the round system punchings, see page 625



Nylon loop tape

For tidy cable routing. Supplied on a reel for cutting to the required length.

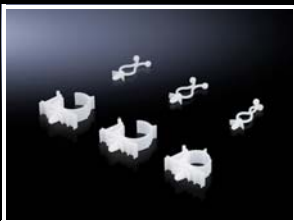
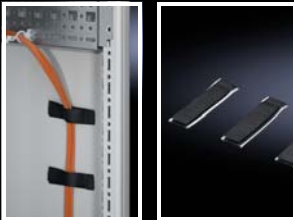
Unlike cable ties, nylon loop tape

- protects the cable sheathing
- is easily reopened and
- is reusable

Length mm	Width mm	Packs of	Model No.
5000	16	1 pc(s).	2203.400



Cable management



Nylon loop tape holders

- For simple, fast cable attachment
- Tool-free mounting in the system punchings with 10.5 x 12.5 mm, with a quarter rotation
- Direct use on the horizontal TS frame section, on the support strips and mounting angles of the TS IT 482.6 mm (19") interior installation, on the cable route or on punched sections with mounting flanges
- Length of nylon loop tape: 400 mm

Material:

- Plastic

Supply includes:

- 10 holders including nylon loop tape

Packs of	Model No.
10 pc(s).	5502.155

Nylon loop cable holder

Self-adhesive

Suitable for universal use in all network enclosures and server racks, wall-mounted enclosures, mounting plates, gland plates.

Material:

- Woven polyamide 6.6

Colour:

- Black

Size Length x width mm	Packs of	Model No.
70 x 16	10 pc(s).	7111.350

Snap-in cable routing

for clipping into the system punchings.

Cable routing suitable for universal use, for tool-free, fast assembly, in two variants:

For locking

- User-friendly opening for cable management via locating points
- For cable diameters 14 – 19 mm
- For system punchings 6.2 mm

For routing

- User-friendly opening for cable management
- For cable diameters 10.2 – 12.7 mm
- For system punchings 4.7 mm

Material:

- Polyamide 6.6, self-extinguishing to UL 94-V2

Colour:

- Natural

Version	Packs of	Model No.
For locking For system punchings 6.2 mm	10 pc(s).	7111.300
For twisting For system punchings 4.7 mm	10 pc(s).	7111.310

Cable management

Cable clamp rails

for TS and between the mounting angles of the TS IT in the enclosure depth

For cable routing on the enclosure frame. The cables may be attached to the cable clamp rails with cable ties or nylon loops. The cable clamp rails are simply located onto the frame section and may additionally be secured with a screw.

Material:

- Sheet steel

Supply includes:

- Assembly parts

For the inner mounting level

For enclosures		Packs of	Model No.
Width mm	Depth mm		
600	600	4 pc(s).	7828.061
800	800	4 pc(s).	7828.081
1000	1000	4 pc(s).	7828.101
1200	1200	4 pc(s).	7828.121

For the outer mounting level

For enclosures		Packs of	Model No.
Width mm	Depth mm		
600	600	4 pc(s).	7828.062
800	800	4 pc(s).	7828.082
1000	1000	4 pc(s).	7828.102
1200	1200	4 pc(s).	7828.122



Accessories:

- Cable ties, see page 667
- Nylon loop, see page 667



Cable clamp rails, depth-variable

for TS and between the mounting angles of the TS IT in the enclosure depth

For cable routing on the enclosure frame and for strain relief of the routed cables. The cables may be attached to the cable clamp rails with cable ties or nylon loops.

The cable clamp rails may be located horizontally at the rear directly onto a 482.6 mm (19') mounting frame or in the enclosure depth between two mounting frames. An additional screw fastening secures the unit.

The depth variability of the rails facilitates flexible adaptation of their length to the existing attachment distance between the two 482.6 mm (19') mounting levels.

Material:

- Sheet steel

Supply includes:

- Assembly parts

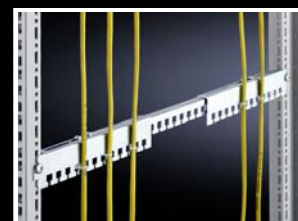
Mounting dimensions ¹⁾ mm	Packs of	Model No.
325 - 575	4 pc(s).	7858.160
500 - 895	4 pc(s).	7858.162

¹⁾ Mounting dimensions + 152 mm = distance between 482.6 mm (19') levels



Accessories:

- Cable ties, see page 667
- Nylon loop, see page 667



Cable clamp, variable

for enclosure-independent mounting

Variable attachment from 450 to 800 mm for flexible cable clamping in two variants.

Supports attachment to punched sections with and without mounting flanges and direct screw-fastening onto mounting plates and other flat surfaces.

Material:

- Sheet steel, zinc-plated

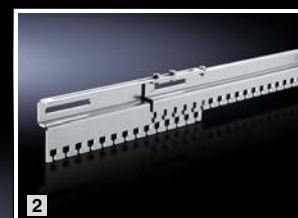
Supply includes:

- Assembly parts

1 C rail

2 T-head rail

Version	Packs of	Model No.
C rail	1 pc(s).	7016.140
T-head rail	1 pc(s).	7016.150



Cable management



Cable manager

- For system-compatible cable deflection while complying with minimal bending radii and to accommodate surplus cables and excess length. The elements may optionally be used individually or in combination for cable routing. They may be combined into semi-circular or circular elements.
- Supports use on corners and edges to allow protected cable routing around them
- Mounting clips for use above the arc hold the routed cables back within the elements. The elements are also bayable in an axial direction to allow U-based cable routing to the mounting level, or ducting of the cable bundles.

Material:

- Plastic, UL 94-V0

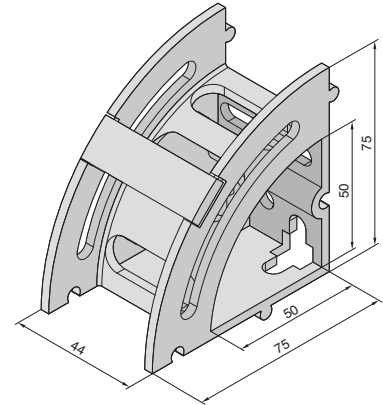
Colour:

- RAL 9005

Supply includes:

- Mounting clips and assembly parts

	Packs of	Model No.
Maxi kit	20 pc(s).	5502.405



Cable shunting ring

For flexible, system-compatible cable routing at the side of the 482.6 mm (19") mounting angles.

Material:

- Steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

Dimensions mm	Packs of	Model No.
125 x 85	10 pc(s).	7111.900
125 x 65	10 pc(s).	7111.000
85 x 43	10 pc(s).	7112.000

Shunting ring

To accommodate large quantities of cables. Shunting ring for side attachment to 482.6 mm (19") sections in 800 mm wide network enclosures. The ring is attached asymmetrically providing approx. 110 mm free space in front of the 482.6 mm (19") level. This allows even large quantities of cables to be effectively managed.

Material:

- Steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

Dimensions mm	Packs of	Model No.
330 x 90/70	4 pc(s).	7220.600

Fibre-optic shunting rings

Fibre-optic shunting or jumper cables can be inserted into the grooves of the inner body. A rubber ring holds different fibre-optic cables with diameters of up to 4.5 mm. Strain relief and bending radius are ensured.

Length: 120 mm

Material:

- Dual compound plastic

Colour:

- Exterior: RAL 7035
- Interior: Black

Supply includes:

- 2 rubber rings
- Baying kit
- Mounting accessories

Assembly:

The supplied mounting brackets are suitable for universal use; the fibre-optic cables can be routed to the patch panel in all directions in various mounting positions:

- 1 At the side, directly on the patch panel
- 2 In front of the patch panel
- 3 At the side next to the patch panel
- 4 Behind the patch panel

Packs of	Model No.
2 pc(s).	7116.500

Possible alternative:

- Fibre-optic cable management panel, 1 U, see page 677



System supports for cable routes

for TS

The depth-variable support system may be attached to all 800 – 1200 mm deep TS enclosures with external screw-fastening of the roof plate. The integral system punchings, for screws or captive nuts, support the attachment of most common cable route systems.

- May be combined with TS IT fan mounting plate
- In combination with punched rail, suitable for accommodating additional cable routing rails or pipelines
- Support height: 102 mm

Material:

- Sheet steel

Surface finish:

- Powder-coated

Colour:

- RAL 7035

Packs of	Model No.
2 pc(s).	7831.472

Accessories:

- Metal multi-tooth screws 5.5 x 13 mm, 2486.500, see page 625
- Captive nuts M6, 8800.340, see page 624



Cable management



Cable route

for TS

- For cable clamping and routing with network and server applications
- Mounting across the entire depth with 800 mm width, mounting only behind the second 482.6 mm (19") pair of mounting angles with 600 mm width
- Tool-free fast assembly
- Alternatively suitable for screw-fastening
- Multi-functional punchings for cable management accessories

Material:

- Sheet steel

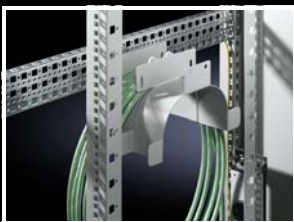
Colour:

- RAL 9005

Height mm	Packs of	Model No.
2000 – 2200	1 pc(s).	5502.120

+ Accessories:

- Cable ties, see page 667
- Nylon loop tape, see page 667
- Shunting rings, see page 670
- Cable routing bars, see page 673



Surplus cable holder

For fastening at the rear area of the enclosure, or at the side of network enclosures. The surplus cable holder can be attached to all depth stays or to punched sections and rails with a 25 mm pitch pattern – mounting dimension 150 mm. May also be joined together.

Material:

- Sheet steel

Colour:

- RAL 7035

W x H x D mm	Packs of	Model No.
280 x 151 x 75	1 pc(s).	7220.500

Cable management

482.6 mm (19") cable management

Cable routing bars

For structured routing of entire cable bundles, the cable bars may be secured to a variety of different positions inside the enclosure.

Material:

- Support: Sheet steel
- Cable routing bars, connection combs: Plastic

Colour:

- RAL 9005

Supply includes:

- Cable routing bars
- Connection combs

482.6 mm (19") attachment

For horizontal cable routing within the distributor level.

Thanks to their open mounting holes, they can also be retrospectively slotted onto the 482.6 mm (19") system punchings of the mounting level at any time and secured with the existing assembly screws of the installed components.

U	No. of connection combs	Packs of	Model No.
4	2 pc(s).	4 pc(s).	7111.224
1	5 pc(s).	10 pc(s).	7111.214

All-round attachment for universal use

For vertical and horizontal cable routing inside the enclosure or within the distributor level.

U	No. of connection combs	Packs of	Model No.
4	2 pc(s).	4 pc(s).	7111.222
1	5 pc(s).	10 pc(s).	7111.212

Connection comb

For connecting individual cable routing bars into complete systems (included with the supply).

Cable duct

for TS IT

- High packing density due to U-based cable routing
- Hinged on both sides, removable duct cover
- Suitable for back-to-back baying
- Easily installed with tool-free fast assembly on the front and rear 482.6 mm (19") mounting angle of the TS IT
- Screw-fastening optionally supported

Material:

- Sheet steel, plastic UL 94 V0

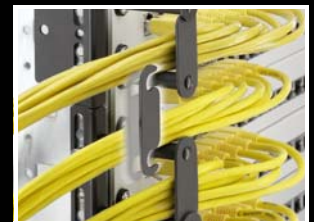
Colour:

- RAL 9005

Supply includes:

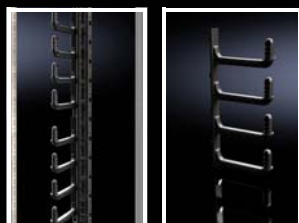
- Cover and assembly parts
- 4 cable retainers for spare cables

For enclosure height mm	U	Packs of	Model No.
2000	36	1 pc(s).	5502.105
2200	42	1 pc(s).	5502.145



Cable management

482.6 mm (19") cable management



Cable finger 6 U

for TS IT

- For U-based cable routing
- Simple, tool-free assembly
- Cable routing in conjunction with air baffle plates is supported

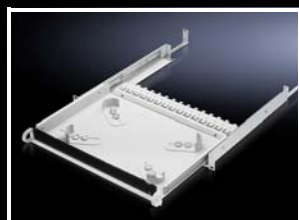
Material:

- Plastic, UL 94-V0

Colour:

- RAL 9005

Packs of	Model No.
14 pc(s).	5502.115



482.6 mm (19") drawer

to accommodate surplus cables

The 1 U drawer offers a convenient opportunity for storing surplus cables in an organised, compact and secure way within the 482.6 mm (19") levels.

- With brush strip at the front for cable entry
- T-head rail in the rear section for cable clamping
- Ring-shaped kink-free routing of the conductors on adjustable elements in the interior
- May be fitted between two 482.6 mm (19") levels at a distance of 435 – 750 mm
- Independent from the enclosure system
- On both L-shaped and cranked mounting angles and mounting frames

Material:

- Sheet steel

Colour:

- RAL 7035

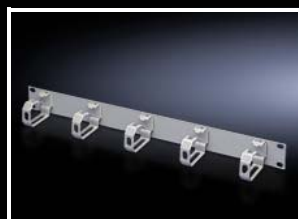
Supply includes:

- Drawer including telescopic slides and assembly parts

Distance between levels mm	Packs of	Model No.
435 – 750	1 pc(s).	7063.200

⊕ Accessories:

- Nylon loop 7072.220/7072.230, see page 667



Cable management panel

with plastic rings

For horizontal management of the patch cables, with 5 cable shunting rings. Cable shunting rings supplied loose.

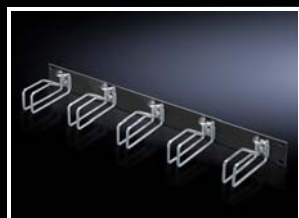
Material:

- Panel: Sheet steel
- Rings: Polyamide

Colour:

- RAL 7035

U	Ring size mm	Packs of	Model No.
1	70 x 44	1 pc(s).	7159.035



Cable management panel

with steel rings

For horizontal management of the patch cables, with 5 cable shunting rings.

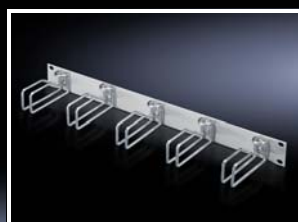
Material:

- Panel: Sheet steel
- Rings: Steel

Surface finish:

- Rings: Zinc-plated

U	Ring size mm	Colour		Packs of	Model No.
		RAL 7035	RAL 9005		
1	43 x 55	■	–	1 pc(s).	7257.200
1	43 x 55	–	■	1 pc(s).	5502.205
1	43 x 105	■	–	1 pc(s).	7257.035
1	43 x 105	–	■	1 pc(s).	7257.005
2	85 x 125	■	–	1 pc(s).	7257.100
2	85 x 125	–	■	1 pc(s).	7257.105



Cable management

482.6 mm (19") cable management

Cable management panel with cable routing bars

482.6 mm (19")

For horizontal management of the patch cables with cable routing bars. Opening the individual cable routing bars allows user-friendly modification and extension of the cabling.

Material:

- Panel: Sheet steel, spray-finished
- Cable routing bars: Plastic

U	Bar depth mm	No. of bars/U	Colour		Packs of	Model No.
			RAL 7035	RAL 9005		
1	approx. 80	5	■	–	1 pc(s).	7257.050
1	approx. 80	5	–	■	1 pc(s).	5502.225



Cable management panel, 2 U

482.6 mm (19")

The cable routing chamber has cut-outs from above, into which the patch cables can be inserted. The cable management panel is equipped with a flap and quick-release fasteners at the front, for optimum access to the cables. From the rear, the cables can be inserted via a cut-out with brush strips.

Material:

- Sheet steel

U	Bar depth mm	Colour		Packs of	Model No.
		RAL 7035	RAL 9005		
2	85	■	–	1 pc(s).	7158.035
2	85	–	■	1 pc(s).	5502.235



Cable routing channel

482.6 mm (19")

To hold the patching cables.

Material:

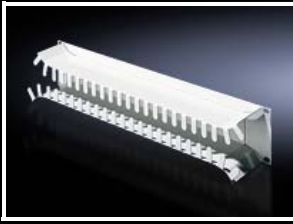
- Sheet steel

U	Depth mm	Colour		Packs of	Model No.
		RAL 7035	RAL 9005		
1	85	■	–	1 pc(s).	7149.135
1	85	–	■	1 pc(s).	5502.245



Cable management

482.6 mm (19") cable management



Cable management panel, 2 U

To accommodate fibre-optic and copper cables. Fibres from the patch panels are placed into the tray via openings and may be distributed at the sides. Rounded openings protect the cable sheathing.

Material:

- Sheet steel

Colour:

- RAL 7035

U	Packs of	Model No.
2	1 pc(s).	7269.135



Cable management duct, horizontal

482.6 mm (19")

The duct facilitates concealed, simple cable routing of large quantities of cables to installed equipment within the 482.6 mm (19") attachment level. Large cut-outs ensure convenient, kink-free cable routing to the components top and bottom.

For simple handling, the entire front panel may be removed via quick-release fasteners. After attaching the cables, these are held in position by nylon loop tapes, whilst the duct is resealed.

Material:

- Sheet steel

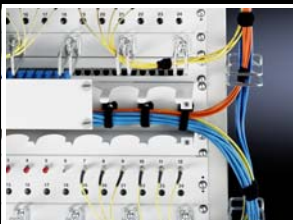
Colour:

- RAL 7035

Supply includes:

- 5 nylon loops

U	Packs of	Model No.
2	1 pc(s).	7158.100



Cable tray, 2 U

For side routing and distribution of fibre-optic and copper cables. In this way, cables inserted into the roof area may be routed at the side of the mounting angles in the upper section of the rack.

Depth: 85 mm

Material:

- Sheet steel

Colour:

- RAL 7035

U	Packs of	Model No.
2	1 pc(s).	7269.235

Cable management

482.6 mm (19") cable management

Fibre-optic cable management panel, 1U

482.6 mm (19")

The four fibre-optic cable shunting rings integrated into the front permit optimum management of up to 48 fibres.

Material:

- Panel: Sheet steel
- Ring: Dual compound plastic

Colour:

- Panel: RAL 7035
- Cable shunting rings on the outside: RAL 7035, black interior

U	Packs of	Model No.
1	1 pc(s).	7256.035

Possible alternative:

- Fibre-optic shunting ring 7116.500, see page 671



Cable entry panel

482.6 mm (19")

Cut-out 390 x 40 mm (2 U) or 390 x 20 mm (1 U) with brush insert.

Material:

- Sheet steel

Colour:

- RAL 9005

U	Packs of	Model No.
1	1 pc(s).	5502.255
2	1 pc(s).	5502.265



Cable routing across the 482.6 mm (19") level

There are various different cable clamping systems available for system-compatible cable routing in 482.6 mm (19") systems with one or two pairs of mounting angles:

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

1 C rail

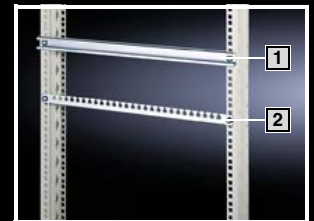
for fastening across all 482.6 mm (19") levels, for cable clamps

C rail	Packs of	Model No.
482.6 mm (19") level	6 pc(s).	7016.100

2 Cable clamp rail

for fastening across all 482.6 mm (19") levels, for cable ties

Cable clamp rail	Packs of	Model No.
482.6 mm (19") level	6 pc(s).	7016.110



482.6 mm (19") installation system

Swing frames



Swing frame, small

Installation for TS, SE, 600 mm and 800 mm wide enclosures

For mounting 482.6 mm (19") equipment.

Material:

– Sheet steel

Surface finish:

– Zinc-plated

Supply includes:

– Cam with double-bit lock insert and parts for attaching to the installation kit

Technical details:

Available on the Internet

Installation	Front, top/bottom	Set back, top/bottom	Set back, front, centre
U	Packs of	Model No.	
3	1 pc(s).	2377.030	
6	1 pc(s).	2377.060	
9	1 pc(s).	2377.090	
12	1 pc(s).	2377.120	
15	1 pc(s).	2377.150	
18	1 pc(s).	2377.180	

Also required:

		For enclosure width			
		600	800		
[1]	Installation kit	1 set(s)	2377.860	2377.880	
[2]	PS punched section without mounting flange Requirements: 2 or 4 pc(s).	For enclosure depth mm		Page	
		400	4 pc(s).	4374.000	611
		500	4 pc(s).	4375.000	611
		600	4 pc(s).	4376.000	611
		800	4 pc(s).	4377.000	611
	Support bracket, 2 pc(s). required per PS punched section without mounting flange	6 set(s)	8800.330		620
Accessories					
	Lock inserts, type D		2484.000	570	

Note:

– The swing frame stay is required to hold open the swing frame, see page 681

482.6 mm (19") installation system

Swing frames

Swing frame, large

without trim panel, for 600 mm and 1200 mm wide enclosures

For mounting 482.6 mm (19") equipment.

Material:

– Sheet steel

Surface finish:

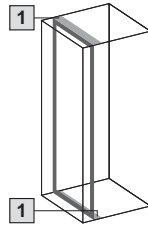
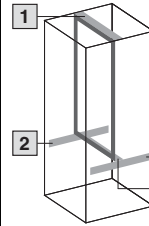
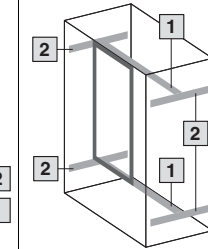
– Zinc-plated

Supply includes:

– Cam with double-bit lock insert and parts for attaching to the installation kit

Technical details:

Available on the Internet

Installation	Full installation, front/set back	Partial installation, top, front/set back	Partial installation, centre, front/set back
			

For enclosure width mm			600	1200
U	For min. enclosure height mm	Packs of	Model No.	
22	1200	1 pc(s).	2322.700	
31	1600	1 pc(s).	2331.700	
36	1800	1 pc(s).	2336.700	
40	2000	1 pc(s).	2340.700	
45	2200	1 pc(s).	2345.700	

Accessories	Page
Lock inserts, type D	2484.000 570

Also required:

1) Installation kits					
For enclosure		Hinge	Load capacity	Packs of	
TS	SE				
■	■	130°	< 1500 N ²⁾	1994.835	– 1 set(s)
■	■	130°	< 1500 N ²⁾	–	1996.835 1 set(s)
■	■	130°	< 1500 N ¹⁾	–	1996.535 1 set(s)

¹⁾ Installation only possible with the mounting plate slide rail dismantled
²⁾ Maximum load 800 N with the TS mounting plate slide rail dismantled

2) For TS, SE:
 TS punched section with mounting flange 23 x 73 mm, 2 or 4 pc(s). required

Installation in enclosure depth mm	Packs of	Model No.	Page
400	4 pc(s).	8612.040 ¹⁾	606
500	4 pc(s).	8612.550	607
600	4 pc(s).	8612.560	607
800	4 pc(s).	8612.580	607
1000	4 pc(s).	8612.500	607
1200	4 pc(s).	8612.520	607

¹⁾ TS punched section with mounting flange, 17 x 73 mm

Note:

– The swing frame stay is required to hold open the swing frame, see page 681



482.6 mm (19") installation system

Swing frames



Swing frame, large

with trim panel, for 800 mm wide enclosures

For mounting 482.6 mm (19") equipment.

Material:

- Sheet steel

Surface finish:

- Frame: Zinc-plated
- Trim panel: Spray-finished

Colour:

- RAL 7035

Supply includes:

- Locking rod system with double-bit lock insert and parts for attaching to the installation kit

Technical details:

Available on the Internet

Installation	Full installation, width 800 mm, front/set back	Partial installation, top, width 800 mm, front/set back	Partial installation, centre (in the height), width 800 mm, front/set back

Mounting position	Side	Centre

With hinge			130°/180°	800	180°
For enclosure width mm			Model No.		
U	For min. enclosure height mm	Packs of			
22	1200	1 pc(s).	2323.235		2324.235
31	1600	1 pc(s).	2332.235		–
36	1800	1 pc(s).	2337.235		2338.235
40	2000	1 pc(s).	2341.235		2342.235
45	2200	1 pc(s).	2346.235		2347.235

Heavy-duty version ¹⁾			Model No.		
U	For enclosure height mm	Packs of			
40	2000	1 pc(s).	7858.100		–

Accessories

Ergoform-S lock systems	see page 568
Lock inserts, version A	see page 570

Also required:

For enclosure		Hinge	Load capacity	Model No.	Packs of
TS	SE				
■	■	130°	< 1500 N ³⁾	1995.235	1 set(s)
■	■		< 1500 N ²⁾	1995.835	1 set(s)
■	■	180°	< 1200 N ³⁾	1997.235	1 set(s)
■	■		< 1200 N ²⁾	1997.835	1 set(s)

¹⁾ Load capacity 350 kg, including installation kit, for enclosure height 2000 mm

²⁾ Installation only possible with the mounting plate slide rail dismantled

³⁾ Maximum load 800 N with the TS mounting plate slide rail dismantled

[2] For TS, SE: TS punched section with mounting flange, 23 x 73 mm, 2 or 4 pc(s). required

Note:

- The swing frame stay is required to lock the open swing frame, see page 681

Installation in enclosure width/depth mm	Packs of	Model No.	Page
400	4 pc(s).	8612.140 ¹⁾	606
500	4 pc(s).	8612.550	607
600	4 pc(s).	8612.560	607
800	4 pc(s).	8612.580	607
1000	4 pc(s).	8612.500	607
1200	4 pc(s).	8612.520	607

¹⁾ TS punched section with mounting flange, 17 x 73 mm

482.6 mm (19") installation system

Swing frames

Compact swing frame

for AE

For the installation of slide-in electronic equipment, 482.6 mm (19") across the entire height.

Technical specifications:

- Torsionally stiff frame, welded from rectangular tube and triple-folded support section

Material:

- Sheet steel

Colour:

- RAL 7035

Supply includes:

- Double-bit lock insert and assembly parts

Width mm	600	600	600/760
Height mm	380	600	760
U	6	11	14
Packs of	1 pc(s).	1 pc(s).	1 pc(s).
Model No.	2026.200	2027.200	2034.200



Accessories:

- 41 mm lock insert, type C, see page 570

Technical details:

Available on the Internet



Swing frame stay

Holds the swing frame in the open position.

For mounting on swing frame, large:

- 1979.200, at the top of the enclosure
- 1980.200, at the bottom of the enclosure (with safety catch at 160°)

	Packs of	Model No.
with 130° hinge	5 pc(s).	1979.200
with 180° hinge	1 pc(s).	1980.200

For mounting on swing frame, small:

- 1979.200, may be mounted at the top or bottom on the installation kit



Slide rails

To support heavy slide-in electronic equipment, 482.6 mm (19") in the swing frame.

Material:

- Sheet steel

Surface finish:

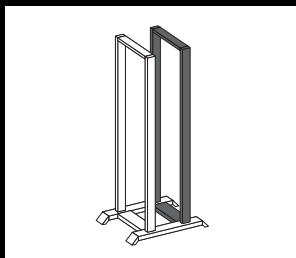
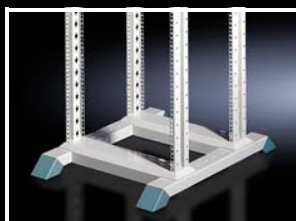
- Zinc-plated

For equipment with a max. installation depth	Packs of	Model No.
D max. < 190 mm	10 pc(s).	1962.200
D max. > 190 mm	10 pc(s).	1963.200



482.6 mm (19") installation system

Accessories for Data Rack



Second pair of mounting angles

To accommodate 482.6 mm (19") network components or for the attachment of component shelves and slide rails. 482.6 mm (19") punched profile at the front, hole centre distance 465 mm (470 mm at the rear), tailored to the attachment of patch panels and cable routing rails. The mounting level may be positioned on a 50 mm pitch pattern. Minimum distance between levels 150 mm, maximum distance between levels 350 mm.

Material:

- Sheet steel, 2 mm

Colour:

- RAL 7035

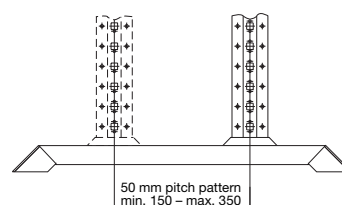
Supply includes:

- 1 torsionally stiff profile frame
- Mounting accessories

U	Packs of	Model No.
31	1 pc(s).	7296.000
36	1 pc(s).	7297.000
40	1 pc(s).	7298.000
45	1 pc(s).	7299.000

Technical details:

Available on the Internet



Baying clamp

For assembling rows of distributor frames, or for cable routing between data racks.

Technical specifications:

- Length: 53 mm

Colour:

- RAL 7035

Packs of	Model No.
3 pc(s).	7494.000



Depth stays

For securing and stabilising two pairs of 482.6 mm (19") mounting angles in the data rack. The length of the depth stay is adjustable, and can accommodate the following spacings of mounting angles: 250, 300 and 350 mm.

Packs of	Model No.
2 pc(s).	7401.000

Material:

- Sheet steel

Surface finish:

- Spray-finished

Colour:

- RAL 7035



Continuous slide rail for two pairs of mounting angles, 482.6 mm (19")

To support heavy equipment in the Data Rack. The mounting dimensions of the slide rails were selected to enable them to be combined with 500 mm deep, 482.6 mm (19") component shelves. The mounting distance between the 482.6 mm (19") mounting angles is 350 mm.

Condition:

Second pair of mounting angles

Packs of	Model No.
2 pc(s).	7402.000

Material:

- Sheet steel

Surface finish:

- Zinc-plated



Accessories:

- Component shelf, 500 mm deep, see page 629

482.6 mm (19") installation system

Mounting angles

Adaptor sections, 482.6 mm (19")

for TS

For the installation of subracks and other equipment.

Adaptor sections are easily shortened for partial assemblies.

Supply includes:

- Assembly parts

Note:

- The 482.6 mm (19") measurement is obtained when mounting on the TS frame for enclosures with width 600 mm

For enclosure system TS¹⁾

For enclosure height mm	Material	U	Packs of	Model No.
1600	Extruded aluminium section	33	4 pc(s).	8613.060
1800		38	4 pc(s).	8613.080
2000		42	4 pc(s).	8613.000

¹⁾ For the rear of electronic enclosures, see page 684



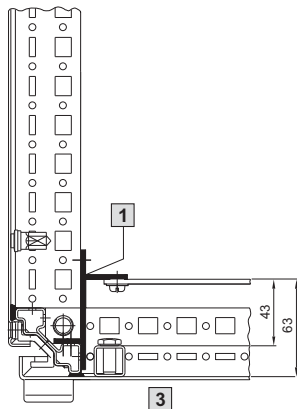
Accessories:

- Infill panels, see page 684
- Captive nuts, see page 624
- Assembly screws, see page 625
- Slide rails with one-sided mounting, see page 688
- Slide rails with two-sided mounting, see page 688
- Component shelf installation kit, see page 691

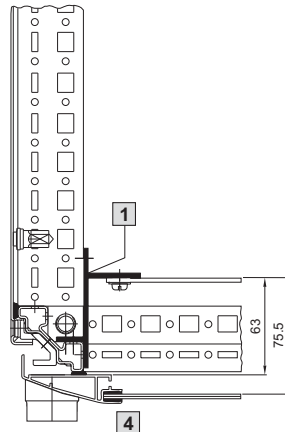


Assembly examples of TS:

Drawing 1



Drawing 2

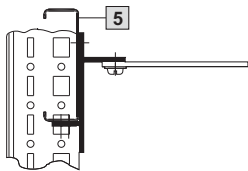


Drawing 1 and 2:

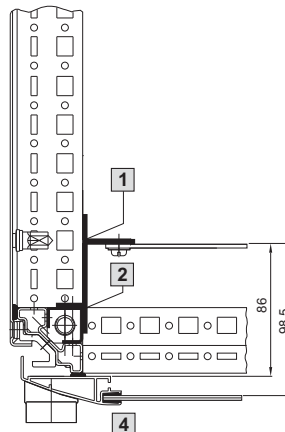
Mounting angle or adaptor piece fitted in the foremost installation position, directly on the vertical section.

When installing slide rails with two-sided mounting (see page 688), the same adaptor sections or adaptor pieces must also be mounted on the vertical section at the rear.

Drawing 3



Drawing 5



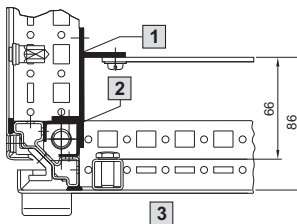
Drawing 3:

Mounting on two vertically installed PS punched sections permits fully flexible use of the enclosure depth.

Drawing 4 and 5:

Greater distance from the door is achieved by mounting on adaptor rails for PS compatibility. In this position, the slide rails can be fitted with one-sided mounting.

Drawing 4



1 Adaptor section/piece

2 Adaptor rail

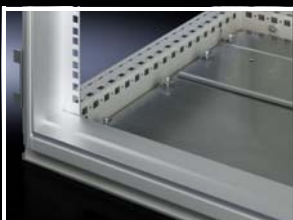
3 TS sheet steel door

4 TS glazed door

5 Punched section without mounting flange

482.6 mm (19") installation system

Mounting angles



Adaptor pieces, 482.6 mm (19") for TS, SE

The "1 U" sub-section of adaptor sections. For the installation of individual subracks and other equipment.

Supply includes:

- Assembly parts

Assembly examples:

May be found on page 683

Note:

- The 482.6 mm (19") measurement is obtained when mounting on the TS frame for enclosures with width 600 mm
- Adaptor set 7246.100 for 800 mm wide enclosures, see page 690

U	Packs of	Model No.
1	4 pc(s).	8613.010

+ **Accessories:**

- Captive nuts, see page 624
- Assembly screws, see page 625
- Slide rails with two-sided mounting, see page 688
- Component shelf installation kit, see page 691

Adaptor sections, 482.6 mm (19")

for rear installation in TS electronic enclosures

For installing subracks at the front and back, and for attaching the slide rails 8613.150, 8613.160 and 8613.180 (see page 688).

For mounting on the inner mounting level. The outer mounting level may still, for example, be used for cable routing on depth-mounted TS punched sections with mounting flange.

Material:

- Extruded aluminium section

Supply includes:

- Assembly parts

Note:

- Design similar to adaptor sections, 482.6 mm (19") (see page 683), but asymmetrical height, suitable for TS electronic enclosure

For enclosure height mm	U	Packs of	Model No.
1600	33	2 pc(s).	8613.360
2000	42	2 pc(s).	8613.300

+ **Accessories:**

- Captive nuts, see page 624
- Assembly screws, see page 625
- Slide rails with two-sided mounting, see page 688
- Component shelf installation kit, see page 691

↔ **Possible alternative:**

- Adaptor pieces, 482.6 mm (19"), see page 684

Infill panels, 482.6 mm (19"), horizontal

for adaptor sections

To infill between installed 482.6 mm (19") equipment positioned in the full enclosure height and the enclosure clearance height.

Material:

- Extruded aluminium section

Supply includes:

- Assembly parts

For enclosure height mm	Packs of	Model No.
1600/2000	2 pc(s).	8613.040
1800/2200	2 pc(s).	8613.030

482.6 mm (19") installation system

Mounting angles

Mounting angles, 482.6 mm (19")

for TS

L-shaped

The L-shaped mounting angles accommodate the installation kits of server systems. The integral U markings in the front facilitate systematic assembly within the 482.6 mm (19") attachment level.

Technical specifications:

- 2 mm sheet steel
- Integral 482.6 mm (19") punchings (EIA standard)
- Side round and square punchings
- Clear chromated for conductive connection of the 482.6 mm (19") installed equipment

Supply includes:

- Assembly parts

Full installation Rack height mm	U	Packs of	Model No.
1800	38	2 pc(s).	7827.181
2000	42	2 pc(s).	7827.201
2200	47	2 pc(s).	7827.221

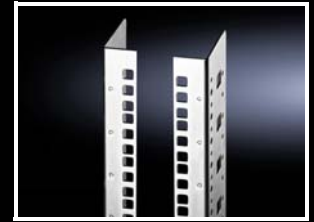


Also required:

- TS punched sections with mounting flanges or TS installation brackets as installation kit for mounting angles, see page 685
- Attachment of component shelves: Adaptor 7827.300, see page 632

Technical details:

Available on the Internet



Installation bracket TS

for L-shaped mounting angles in TS, 482.6 mm (19")

For upgrading existing DK-TS applications.

Installation in enclosure width 800 mm

The installation brackets are screw-fastened to the enclosure frame in the enclosure width. The mounting angle is attached to the depth stay at the top and bottom. The brackets ensure optimum clearance at the sides for cable routing. For partial enclosure configuration, the installation brackets may be attached to the TS punched sections with mounting flanges 17 x 73 mm, on the outer attachment level of the enclosure frame. Fully depth-variable attachment is facilitated by the attachment slots.

Installation position	Packs of	Model No.
Centre	2 pc(s).	7827.480

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts



Accessories:

- For partial installation, TS punched section with mounting flange, 17 x 73 mm, see page 606 – 607
- For partial installation, mounting angles, L-shaped, see page 685



TS punched section with mounting flange as installation kit

for L-shaped mounting angles, 482.6 mm (19") in TS 482.6 mm (19")

For upgrading existing DK-TS applications.

Installation in enclosure width 600 mm

The installation kit consists of 4 TS punched sections with mounting flange 17 x 73 mm to accommodate mounting angles. One pack is sufficient for installing one or two 482.6 mm (19") mounting levels. For exceptionally heavy installed equipment, we recommend the installation of additional punched sections in the centre.

For enclosures		Packs of	Model No.
Width mm	Depth mm		
600	600	4 pc(s).	8612.060
600	800	4 pc(s).	8612.080
600	1000	4 pc(s).	8612.000
600	1200	4 pc(s).	8612.020

Material:

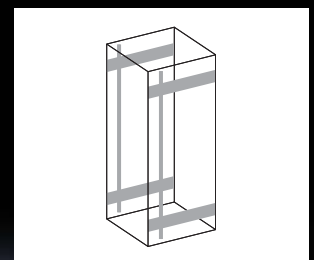
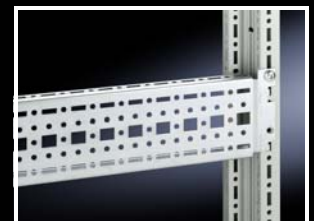
- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts



482.6 mm (19") installation system

Mounting angles



Additional fastening attachment for mounting angles

for 800 mm wide network enclosures

For upgrading existing DK-TS applications. The additional fastening attachment counteracts bending of the mounting angles mounted on installation brackets in case of unevenly distributed loads. It is attached directly to 482.6 mm (19") mounting angles and to the punched section with mounting flange fitted in the depth (inner mounting level).

Material:

- Sheet steel

Supply includes:

- Assembly parts

Packs of	Model No.
2 pc(s).	7284.135



Also required:

- TS punched section with mounting flange, for the inner mounting level, see page 606 – 607



Mounting angles, 482.6 mm (19")

for FlatBox

L-shaped bracket as 2nd mounting level.

Material:

- Sheet steel

Supply includes:

- Assembly parts for fast, tool-free assembly

Note:

- The 2nd attachment level should always be ordered in the same height as the basic enclosure
- Partial configuration is not possible

U	Packs of	Model No.
6	2 pc(s).	7507.706
9	2 pc(s).	7507.709
12	2 pc(s).	7507.712
15	2 pc(s).	7507.715
18	2 pc(s).	7507.718
21	2 pc(s).	7507.721



Adhesive measurement strip, 482.6 mm (19")

For upgrading existing DK-TS applications.

Made from robust aluminium foil, guarantees easy handling and durability. With numerical labelling on a 482.6 mm (19") pitch pattern for clear identification of the various height units. The double-sided labelling allows the counting direction to be freely selected, up to a maximum of 56 U. In this way, clear documentation of the various mounting parts is easily achieved.

Material:

- Aluminium foil

U labelling range	Packs of	Model No.
1 – 56	1 pc(s).	7950.100

482.6 mm (19") installation system

Slide rails

Slide rails, static installation

for TS IT

For mounting between 482.6 mm (19") mounting angles.

- System punchings for mounting accessories and cooling active components

Load capacity:

- 30 kg, static

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

U	Length mm	Packs of	Model No.
2	150	2 pc(s).	5501.400



Slide rails, static installation

for TS IT

For mounting between a front and a rear pair of mounting angles.

- To support heavy installed equipment
- Side system punchings for mounting accessories and cooling components that expel to the side
- Simply locate into the system punchings of the TS IT

Load capacity:

- 80 kg, static

Material:

- Sheet steel

Surface finish:

- Zinc-plated

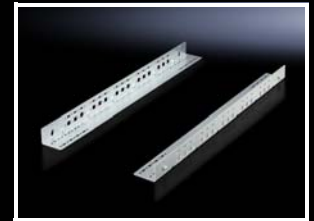
Supply includes:

- Assembly parts

Note:

- Effective contact surface 35 mm per side

U	Distance between 482.6 mm (19") levels mm	Packs of	Model No.
1	345	2 pc(s).	5501.410
1	445	2 pc(s).	5501.420
1	545	2 pc(s).	5501.430
1	645	2 pc(s).	5501.440
1	745	2 pc(s).	5501.450



Depth-variable slide rails

482.6 mm (19")

for TS IT

For mounting between a front and a rear pair of mounting angles. Thanks to side attachment on the front section, all three mounting holes in the EIA system punchings remain available for screw-fastening the equipment.

- To support heavy installed equipment
- To adapt to individual distances between levels
- Tool-free, time-saving one-man assembly from the enclosure front
- All three mounting holes in the EIA system punchings are available for screw-fastening the equipment
- Alternatively, direct attachment to the 482.6 mm (19") system punchings is also possible

Distance between 482.6 mm (19") levels mm	Load capacity kg	Packs of	Model No.
400 - 600	80	2 pc(s).	5501.460
600 - 900	150	2 pc(s).	5501.480

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

Note:

- Effective contact surface 25 mm per side



482.6 mm (19") installation system

Slide rails



Depth-variable slide rails, 1 U

**for server and network enclosures
with two 482.6 mm (19") mounting levels,
without additional loss of U**

For direct attachment to the 482.6 mm (19") system punchings of the mounting angles.

The slide rails are pulled out to the required length and secured between the front and rear pairs of mounting angles on the 482.6 mm (19") pitch pattern.

Load capacity:

- 20 kg static load

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

Distance between 482.6 mm (19") levels mm	Support area mm	Packs of	Model No.
390 – 550	30	2 pc(s).	7063.750
550 – 750	30	2 pc(s).	7063.752

Note:

- Thanks to the thin support area of only around 0.8 mm thickness, exceeding the U pitch pattern is generally avoided, provided the components do not exceed a maximum height of 43.5 mm. This means that several devices are easily arranged on top of one another without offsetting.

Slide rails

for TS adaptor section

With two-sided mounting between the 482.6 mm (19") front and rear adaptor sections, 482.6 mm (19") or adaptor pieces, 482.6 mm (19").

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

For enclosure depth mm	Packs of	Model No.
500	10 pc(s).	8613.150
600	10 pc(s).	8613.160
800	10 pc(s).	8613.180



Also required:

- Adaptor sections, 482.6 mm (19"), see page 683, or
- Adaptor pieces, 482.6 mm (19"), see page 684

Slide rails

for TS adaptor section

With one-sided mounting on the 482.6 mm (19") adaptor sections.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

Length mm	Packs of	Model No.
270	10 pc(s).	4531.000



Also required:

- Adaptor sections, 482.6 mm (19"), see page 683

482.6 mm (19") installation system

482.6 mm (19") installation

Server telescopic slides

Facilitate optimum accessibility to the units, even when built-in.
For up to a maximum enclosure width of 426 mm.

Load capacity:

- 30 kg

Material:

- Sheet steel

Supply includes:

- 1 set =
 - 2 telescopic slides
 - Installation kit
 - Assembly parts

For enclosure depth mm	Maximum extension mm	Model No.
600	511.2	3659.180
800	596.4	3659.190

Note:

- May only be fitted in conjunction with L-shaped 482.6 mm (19") sections



Mounting kit, 2 U

for 482.6 mm (19") equipment

Facilitates fast, simple integration of additional 2 U mounting space within an enclosure by attaching to the enclosure frame or to the existing mounting angles at the sides. The flexible slot fastening of the brackets means that the distance between the two installation brackets may be freely selected, so that other 482.6 mm (19") attachment dimensions may be implemented. The second row of holes is used for the optional configuration of additional mounting surfaces.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

Packs of	Model No.
2 pc(s).	7246.420



482.6 mm (19") installation system

482.6 mm (19") installation



Adaptor kit, 3 U

for 800 mm wide TS enclosures

For fastening individual 482.6 mm (19") components, or as an additional mounting facility at the rear of the enclosure. The mounting level in the adaptor angle can be adjusted in 25 mm increments by up to 100 mm in the depth, leaving sufficient space for buying where patch panels or splicing boxes are used. Attachment is on the inner mounting level of the frame section or a suitable chassis in the enclosure depth.

Material:

- Sheet steel

Colour:

- RAL 7035

Height	Mounting position	Packs of	Model No.
3 U	Centre	2 pc(s).	7246.100



Adaptor, 3 U

Depth offset 100 mm

This adaptor is used to recess 482.6 mm (19") mounting of equipment inside enclosures with 482.6 mm (19") installation in the foremost position, such as server or electronic enclosures. In this way, sufficient space can be gained in front of the mounting equipment to integrate patch panels or switches, whilst at the same time exploiting the maximum enclosure depth.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

Packs of	Model No.
2 pc(s).	7246.400



Adaptor, metric to 21"/>"

With this adaptor, 482.6 mm (19") assemblies may be fastened to metric (535 mm) mounting angles, or combined systems may be configured.

Material:

- Extruded aluminium section

Supply includes:

- Assembly parts

SU	U	Packs of	Model No.
2	1	2 pc(s).	7246.010
6	3	2 pc(s).	7246.030
11	6	2 pc(s).	7246.060

482.6 mm (19") installation system

482.6 mm (19") installation

Drawer, 2 U, 3 U

for a 482.6 mm (19") attachment level

For front attachment to mounting angles, 482.6 mm (19"). With cover and telescopic slides to accommodate assignment lists, operating manuals and small parts. The small version of the 2 U variant is also suitable for mounting inside a swing frame.

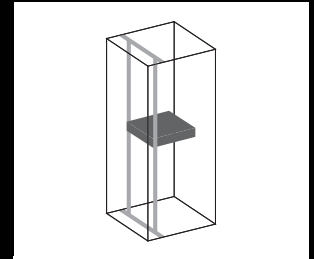
Material:

- Sheet steel

Supply includes:

- Fully assembled, including assembly parts

Height	Clearance openings		Installation depth mm	Colour		Packs of	Model No.
	Width mm	Depth mm		RAL 7035	RAL 9005		
2 U	411	419	427	■	-	1 pc(s).	7282.035
2 U	411	419	427	-	■	1 pc(s).	5502.305
3 U	411	419	427	■	-	1 pc(s).	7283.035
3 U	411	419	427	-	■	1 pc(s).	5502.325



Installation kit

for component shelves with 482.6 mm (19") adaptor sections in TS

For installation between the front and rear adaptor sections or adaptor pieces, 482.6 mm (19") in 600 mm wide enclosures.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

For enclosure system TS

For enclosure depth mm	Packs of	Model No.
600	1 set(s)	8800.560
800	1 set(s)	8800.580

Max. depth of component shelves =
Enclosure depth - 100 mm



Also required:

- Adaptor sections, 482.6 mm (19"), see page 683, or
- Adaptor pieces, 482.6 mm (19"), see page 684



482.6 mm (19") installation system

482.6 mm (19") installation



Blanking plates, 482.6 mm (19")

For installation in electronic enclosures or housings.

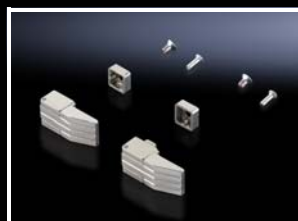
Material:

– Aluminium

Surface finish:

– Natural anodised

U	Packs of	Model No.
1	3 pc(s).	1931.200
2	3 pc(s).	1932.200
3	3 pc(s).	1933.200
4	3 pc(s).	1934.200
6	3 pc(s).	1936.200
7	3 pc(s).	1935.200
9	3 pc(s).	1939.200
12	3 pc(s).	1937.200



Hinge

for blanking plates

Material:

– Die-cast zinc

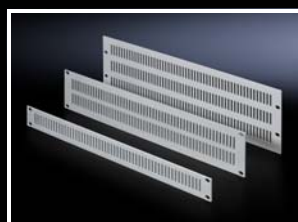
Surface finish:

– Zinc-plated

Supply includes:

– Assembly parts

Packs of	Model No.
2 pc(s).	1950.000



Ventilated front panels

For venting enclosures and housings.

Material:

– Aluminium

Surface finish:

– Natural anodised

Width	U	Packs of	Model No.
482.6 mm (19")	1	3 pc(s).	2231.000
482.6 mm (19")	2	3 pc(s).	2232.000
482.6 mm (19")	3	3 pc(s).	2233.000



Air baffle plate

for TS IT

- To separate the hot/cold zones within an enclosure with aisle containment or when using an LCP system
- With all-round brush strip for collision-free shielding with installed bar systems on the outer mounting level
- For width 800 mm, 6 x 1 U blanking panel additionally included

Material:

– Sheet steel, plastic UL 94-V0

Surface finish:

– Spray-finished

Colour:

– RAL 9005

Supply includes:

– Assembly parts

Width x height mm	Packs of	Model No.
600 x 2000	1 set(s)	5501.805
800 x 2000	1 set(s)	5501.815
600 x 2200	1 set(s)	5501.825
800 x 2200	1 set(s)	5501.835



482.6 mm (19") installation system

482.6 mm (19") installation

Cover, magnetic

For optionally covering the front system punchings in the event of complete air blocking of the front, or in the absence of installed cable fingers or dynamic rack control strip.

Length m	Packs of	Model No.
5	1 pc(s).	5501.895



Brush strip, vertical

for TS IT

Within the network distributor, this serves as a flexible infill panel which stylishly conceals the cable management area to the side of the 482.6 mm (19") mounting level. The brush strip facilitates convenient cable routing from the side and rear distributor area to the front connection level. The clearance required in front of the mounting level is at least 75 mm.

Within the TS, the brush strip is mounted at the side on the vertical frame section, on horizontal or vertical punched sections. There is an additional mounting option directly on the 482.6 mm (19") mounting level of the TS.

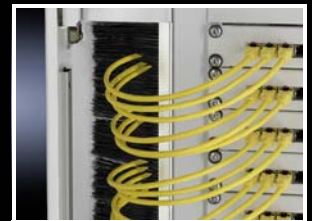
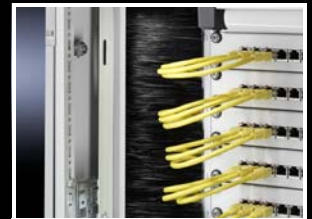
Material:

- Aluminium section with brush strip:
Plastic, UL 94-V0

Supply includes:

- 1 set = 4 brush strips,
Length 950 mm each

For enclosure height mm	Packs of	Model No.
2000	1 set(s)	7827.544



Mounting panel 482.6 mm (19"), 2 U

For fast integration of smaller mounting units within the 482.6 mm (19") level, such as potential equalisation rails, distributor boxes, small electrical components etc.

Simple screw-fastening of the components to the integral 25 mm system punchings.

Material:

- Sheet steel

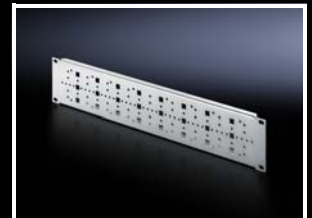
Surface finish:

- Zinc-plated

Supply includes:

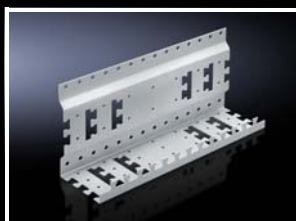
- Assembly parts

Panel height U	Panel width mm	Packs of	Model No.
2	450	1 pc(s).	7151.300



482.6 mm (19") installation system

482.6 mm (19") installation



Support

for small appliances

For secure attachment of small, non-482.6 mm (19")-conforming equipment such as modems, power packs, routers etc. Angle-shaped support for mounting in the empty space at the side between the 482.6 mm (19") level and the side panel on L-mounting angles, mounting frames or chassis. Attachment of the components and connection cables can be achieved quickly and easily using nylon loop tape or cable ties. Also suitable for cable routing in the enclosure depth.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

W x H x D mm	Packs of	Model No.
350 x 150 x 97	1 pc(s).	7246.500

+ Accessories:

- Nylon loop, see page 667
- Cable ties, see page 667

Captive nuts M5/M6

For the attachment of rack-mounted electronic equipment, 482.6 mm (19") installed equipment and blanking plates to mounting angles, 482.6 mm (19"). For use with metal thicknesses from 0.8 – 2.0 mm. In areas of narrow tolerance, the captive nuts for metal thicknesses of 1.2 – 1.5 mm should be used. Optionally with or without contact of the installed equipment to the 482.6 mm (19") section/enclosure.

Captive nut M5

Version	For metal thicknesses mm	Packs of	Model No.
With contact	0.8 – 2.0	50 pc(s).	2094.500
Without contact	0.8 – 2.0	50 pc(s).	2092.500

Captive nut M6

Version	For metal thicknesses mm	Packs of	Model No.
With contact	0.8 – 2.0	50 pc(s).	2094.200
Without contact	0.8 – 2.0	50 pc(s).	2092.200
With contact	1.2 – 1.5	50 pc(s).	2094.300
Without contact	1.2 – 1.5	50 pc(s).	2092.300

Multi-tooth screws

M5 x 16 mm/M6 x 16 mm

For optimum transmission of torques, an extended tool life and increased safety and reliability when tightening and loosening screw connections.

Supply includes:

- Plastic washers

	Bit size	Packs of	Model No.
M5	Multi-tooth 25	50 pc(s).	7094.130
M6	Multi-tooth 30	50 pc(s).	7094.140

482.6 mm (19") installation system

482.6 mm (19") installation

Assembly screws

M5 x 16 mm/M6 x 16 mm

For electronic equipment, 482.6 mm (19") installed components and blanking plates.

Supply includes:

- Plastic washers

Version	Packs of	Model No.
Phillips-head screw M5	50 pc(s).	7094.120
Cheese-head screw M6	50 pc(s).	7094.110
Phillips-head screw M6	50 pc(s).	7094.100



Front-mounting cage nut, 482.6 mm (19")

The front-mounting cage nut consists of an expanding cage which is simply inserted into the square attachment hole at the front and then secured with the assembly screw.

When tightening the screw, the cage expands and thus secures the required components.

Clamping range from 1.2 – 4.5 mm.

Multi-tooth screw head, bit size T 30.

Material:

- Sheet steel

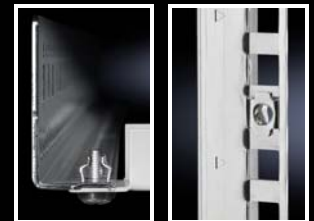
Surface finish:

- Zinc-plated

Supply includes:

- 50 expanding nuts
- Assembly screws
- Plastic washers

Size mm	Mounting hole size mm	Packs of	Model No.
M6 x 16	9.5 x 9.5	50 pc(s).	2094.400



Spring nuts with screws

M6 x 10 mm for T-slot mounting angle

The spring nuts ensure flexible, secure mounting of accessory components on T-slot mounting angles.

Supply includes:

- 50 spring nuts
- 50 screws, 10 mm, self-locking

Version	Packs of	Model No.
Phillips-head, M6	50 pc(s).	7000.990



482.6 mm (19") installation system

Patch panels



Blanking panel, 482.6 mm (19")

As an extension cover or for population as required.

Material:

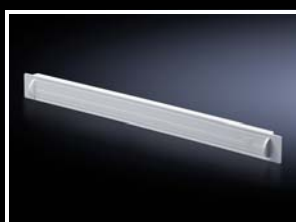
- Sheet steel

Colour: RAL 7035

U	Installation height mm	Packs of	Model No.
1	44	2 pc(s).	7151.035
1.5	66	2 pc(s).	7157.035
2	88	2 pc(s).	7152.035
3	132.5	2 pc(s).	7153.035
6	266	2 pc(s).	7156.035

Colour: RAL 9005

U	Installation height mm	Packs of	Model No.
1	44	2 pc(s).	7151.005
2	88	2 pc(s).	7152.005
3	132.5	2 pc(s).	7153.005
6	266	2 pc(s).	7156.005



Blanking panel, 1 U

Tool-free attachment, 482.6 mm (19")

The blanking panel is used to seal unused areas within the 482.6 mm (19") mounting level. Quick tool-free attachment means that it is easily integrated anywhere, and can also be removed again if necessary. The consistent use of blanking panels ensures targeted air routing in partially populated racks.

Material:

- Plastic, ABS

Fire protection:

- Self-extinguishing to UL 94-V0, non-halogen-free

Colour	Packs of	Model No.
RAL 7035	10 pc(s).	7151.110
RAL 9005	10 pc(s).	7151.105



482.6 mm (19") installation system

Splicing boxes

Fibre-optic splicing box, depth-variable

The 482.6 mm (19") splicing box is designed to accommodate splicing cassettes and can be installed in any network distributor with 482.6 mm (19") accommodation and used as a fibre-optic termination or distributor. The variable cassette fixture permits twist-proof installation of all standard splicing cassettes. The rear section of the splicing box is completely open for cable entry; a rubber cable clamp strip provides protection against dust. The fibre-optic cables can be secured with cable ties or cable clamps.

The splicing box is infinitely depth-adjustable up to 100 mm within the 482.6 mm (19") flanges. In addition, the splicing box may be fully withdrawn from the 482.6 mm (19") flanges. Two strain relief clips and cable routing clips for the fibre stock provide a solution to suit any fibre-optic wiring system.

U	Maximum no. of splicing cassettes	Packs of	Model No.
1	2	1 pc(s).	7241.005

Installation depth:

- 302 mm

Material:

- Sheet steel

Colour:

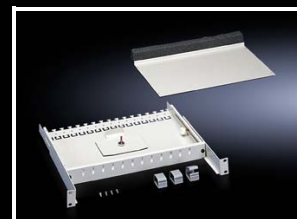
- RAL 7035

Supply includes:

- Splicing box
- Cable routing clips
- Cassette cover
- Mounting accessories for patch panel

Note:

- Supplied without patch panel and splicing cassettes



Fibre-optic breakout box, 1 U

For splice-free cabling of fibre-optic breakout cables.

Cable bundles may be clamped onto the T-heads at the rear. 4 self-adhesive cable clips are supplied loose for cable clamping and for storing excess lengths inside the box.

Material:

- Sheet steel

Colour:

- RAL 7035

Supply includes:

- Breakout box
- Cable routing clips
- Mounting accessories for patch panel

Installation depth	Packs of	Model No.
250 mm	1 pc(s).	7241.500



Patch panels

for

- Fibre-optic splicing box, depth-variable
- Fibre-optic breakout box, 1 U

With cut-outs for population with fibre-optic couplings.

Material:

- Sheet steel

Colour:

- RAL 7035

For Coupling	Number of locations	U	Packs of	Model No.
ST	24	2	1 pc(s).	7242.015
E-2000, E-2000 duplex ¹⁾ , SC or LC duplex	24	1	1 pc(s).	7241.024
SC duplex, LC quad	12	1	1 pc(s).	7241.045

¹⁾ For E-2000 duplex only half of the locations are available



482.6 mm (19") installation system

Splicing boxes



Fibre-optic splicing box with telescopic pull-out

Lockable

The 482.6 mm (19") splicing box is designed to accommodate splicing cassettes and can be installed in any network distributor with 482.6 mm (19") accommodation and used as a fibre-optic termination or distributor. The telescopic pull-out provides optimum access to the splicing cassettes and cable clamp. The variable cassette fixture permits twist-proof installation of all standard splicing cassettes. The security lock fitted at the front protects against unauthorised access. The rear section of the splicing box is completely open for cable entry; a rubber cable clamp strip provides protection against dust. The fibre-optic cables can be secured with cable ties or cable clamps; two strain relief clips and cable routing clips for the fibre stock provide a solution to suit any fibre-optic wiring system.

U	Maximum no. of splicing cassettes	Packs of	Model No.
1	2	1 pc(s).	7170.535
2	4	1 pc(s).	7470.535

Installation depth:

- 363 mm

Material:

- Sheet steel

Colour:

- RAL 7035

Supply includes:

- Splicing box
- Cable routing clips
- Security lock
- Cassette cover
- Mounting accessories for patch panel

Note:

- Supplied without patch panel and splicing cassettes



Patch panels

for fibre-optic splicing box, lockable

For splicing boxes, there is a choice of multiple panels with different cut-outs for the installation of single or duplex fibre-optic couplings.

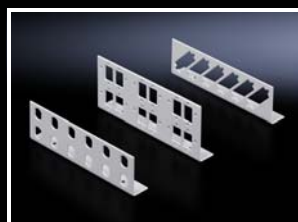
Material:

- Sheet steel

Colour:

- RAL 7035

For coupling	No. of locations	U	Packs of	Model No.
ST	24	2	1 pc(s).	7474.535
E-2000, SC, LC Single or duplex	20	1	1 pc(s).	7178.535
	24	2	1 pc(s).	7478.535
SC duplex, LC quad	12	1	1 pc(s).	7169.535
	24	2	1 pc(s).	7469.535



Patch panels

for small fibre-optic distributors

Various patch panels with different connector types are available for individual configuration of small fibre-optic distributors.

Material:

- Sheet steel

Colour:

- RAL 7035

Supply includes:

- Patch panel including assembly parts, without couplings

For coupling	Locations per patch panel	Locations per enclosure	Packs of	Model No.
ST	12	24	2 pc(s).	7462.000
SC-, E-2000, E-2000 duplex	12/6	24/12	2 pc(s).	7463.100
SC duplex	6	12	2 pc(s).	7463.200

482.6 mm (19") installation system

LSA connection system

Support unit, 3 U

for LSA-Plus strips, max. 150 paired wires

To accommodate a maximum of 15 LSA-Plus strips (each with 10 paired wires). 3 x 5 LSA-Plus connection strips 2/10, series 2, may be installed horizontally. Strip length 124 mm, height pitch pattern 22.5 mm. The support unit may be integrated into all 482.6 mm (19") mounting levels. The mounting level is recessed 75 mm behind the 482.6 mm (19") flanges. Integral shunting rings enable tidy routing and distribution of the telecommunication cables.

Material:

- Stainless steel

Supply includes:

- Support unit, 8 shunting rings

U	Packs of	Model No.
3	1 pc(s).	7050.100



Accommodation system, 2 U

for LSA installation kit

To accommodate LSA support systems within the 482.6 mm (19") mounting level.

Size:

- Overall depth: 98.5 mm
- Height: 2 U

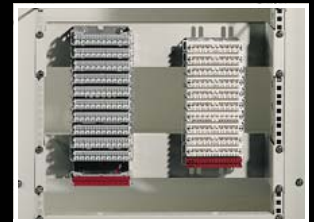
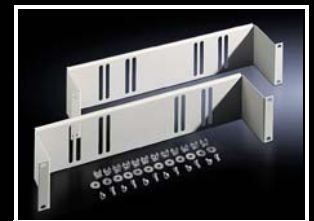
Material:

- Sheet steel

Colour:

- RAL 7035

U	Packs of	Model No.
2	2 pc(s).	7050.035



Handles



Handle set

for Comfort Panel

For external mounting on corner pieces, also suitable for retro-fitting.

Material:

- Handle tube: Aluminium
- Handle holder: Die-cast zinc
- Covers: Polyamide

Surface finish:

- Handle tube: Natural anodised
- Handle holder: Powder-coated

Colour:

- Handle holder: RAL 7024
- Covers: Similar to RAL 7024

Supply includes:

- Handle tube, Ø 20 mm
- 2 handle holders
- 2 covers
- Assembly parts

For horizontal mounting

With front panel width	Packs of	Model No.
482.6 mm (19')	1 set(s)	6375.010

Note:

- Shorter heights and widths can be achieved by cutting the handle tube to length
- For enclosures with 74 mm installation depth, cannot be mounted on the same side as the support arm connection



Accessories:

- Clipboard, see page 703
- Display board, see page 703



Handle set

for Optipanel

For external mounting on corner pieces, also suitable for retro-fitting.

Material:

- Handle tube: Aluminium
- Handle holder: Die-cast zinc
- Covers: Polyamide

Surface finish:

- Handle tube: Natural anodised
- Handle holder: Powder-coated

Colour:

- Handle holder: RAL 7035
- Covers: RAL 7024

Supply includes:

- Handle tube, Ø 25 mm
- 2 handle holders
- 2 covers
- Assembly parts

For horizontal mounting

With front panel width	Packs of	Model No.
482.6 mm (19')	1 set(s)	6385.010

Note:

- Shorter heights and widths can be achieved by cutting the handle tube to length
- For enclosures with 100 mm installation depth, cannot be mounted on the same side as the support arm connection



Accessories:

- Clipboard, see page 703
- Display board, see page 703

Handle set

For vertical and horizontal mounting on all surfaces.

Overall length: 420 mm

Material:

- Handle tube: Aluminium
- Tube holder: Die-cast zinc

Surface finish:

- Handle tube: Natural anodised

Colour:

- Tube holder: RAL 7035

Supply includes:

- 4 tube holders
- 2 handle tubes

Packs of	Model No.
1 set(s)	2389.000



Accessories:

- Clipboard, see page 703
- Display board, see page 703



TP aluminium strip

For retrofitting externally on:

- TP three-part/two-part
- TP one-piece console
- May be mounted on all enclosures/covers with 20 mm fold height (max. metal thickness 2 mm)

Length: 1750 mm

(Easily cut to length for other dimensions)

Sufficient for desk units and consoles:

- 3 x width 600 mm
- 2 x width 800 mm
- 1 x width 1000 mm + 1 x width 600 mm
- 1 x width 1200 mm
- 1 x width 1600 mm

Length mm	Model No.
1750	6731.120

Material:

- Aluminium strip: Extruded aluminium section
- Cover caps: Plastic

Surface finish:

- Aluminium strip: Natural anodised

Colour:

- Cover caps: RAL 7035

Supply includes:

- 1 aluminium section
- 6 plastic cover caps
- Drilling template
- Assembly parts



Handles

Handles

For horizontal or vertical attachment to the enclosure panel of:

- Comfort Panel
- Optipanel
- Other enclosures or
- Surfaces

Mounting holes and surfaces without fins are required for assembly purposes.

For the Comfort Panel version with fins, selectable via configurators at www.rittal.com, corresponding milling work may be carried out. To this end, please specify "Prepared for handle set 6107.XXX" for the command panel.

Material:

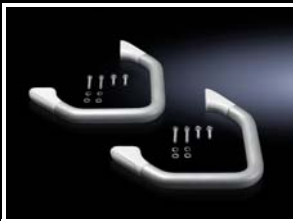
- Handle holder: Die-cast zinc
- Cover bungs: Plastic
- Handle tube: Aluminium

Surface finish:

- Handle tube: Powder-coated

Colour:

- Handle holder: RAL 7035
- Cover bungs: Similar to RAL 7035
- Handle tube: Similar to RAL 9006

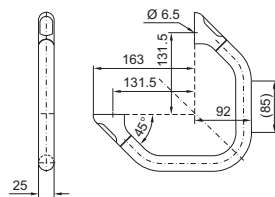


Corner handle

Supply includes:

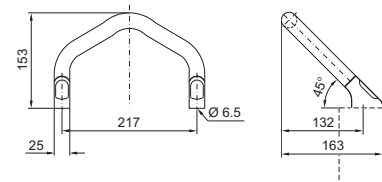
- 4 handle holders
- 2 handle tubes
- Assembly parts

Mounting on enclosure corner



Packs of	Model No.
1 set(s)	6107.000

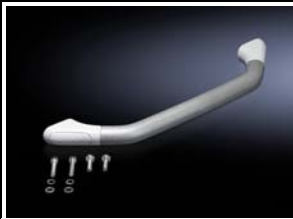
Mounting on straight surfaces
(90° rotation of handle holder)



U handle

Supply includes:

- 2 handle holders
- 1 handle tube
- Assembly parts

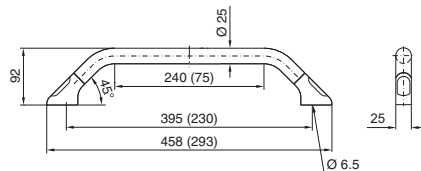


For front panel size	Packs of	Model No.
≥ 7 U	1 set(s)	6107.100
482.6 mm (19")	1 set(s)	6107.200



Accessories:

- For 6107.200: Clipboard, see page 703
- For 6107.200: Display board, see page 703



Note:

- Dimensions in brackets for front size 7 U

External mounting accessories

Clipboard

For attaching operating instructions or plans (A4 size) at eye level.
Prepared for mounting on the right-hand side; mounting on the left is also possible by unscrewing and moving the clip part.
For mounting purposes, a straight tube length of ≥ 200 mm, $\varnothing 20$ mm or $\varnothing 25$ mm is required.

Material:

- Clipboard: Sheet steel
- Clip part: Aluminium

Surface finish:

- Clip part: Natural anodised

Colour:

- RAL 7035

Width mm	Height mm	Packs of	Model No.
225	315	1 pc(s).	6013.000



Also required:

- Handle set 2389.000, see page 701 or
- Handle set for Comfort Panel, see page 700 or
- Handle set for Optipanel, see page 700 or
- U handle 6107.200, see page 702



Display board

with wall bracket

To accommodate test plans, documents etc. in A4 format.

Mounting

- On surfaces
- On a 25 mm pitch pattern of the TS frame or rail system
- On handle set $\varnothing 20$ mm or $\varnothing 25$ mm

Supply includes:

- Display boards
- Wall bracket
- Assembly parts

Packs of	Model No.
1 set(s)	6013.100



Accessories:

- Handle set 2389.000, see page 701 or
- Handle set for Comfort Panel, see page 700 or
- Handle set for Optipanel, see page 700 or
- U handle 6107.200, see page 702



Enclosure surface connector

To accommodate keyboard supports (2383.000, see page 709).

Material:

- Surface connector: Extruded aluminium section
- Side cover: Sheet steel

Surface finish:

- Surface connector: Natural anodised

Colour:

- RAL 7024

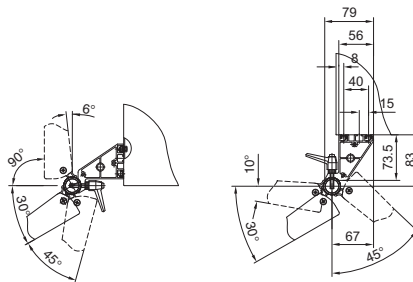
Supply includes:

- Assembly parts

Packs of	Model No.
1 set(s)	2383.010

Mounting on surfaces

Mounting underneath surfaces



Front assembly



Front panels for Comfort Panel and Optipanel

Material:
– Aluminium, 3 mm

Surface finish:
– Natural anodised

Note:
– Mounting kits included with the supply of 520 mm wide standard enclosures.

With mounting hole

Width mm	Height mm	Model No.
482.6 (19')	155.0 (3.5 U)	6027.000
482.6 (19')	310.3 (7 U)	6028.000

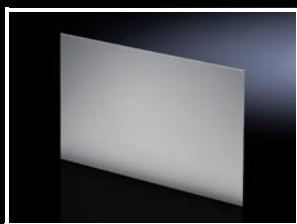
With threaded bolts M5

Width mm	Height mm	Model No.
482.6 (19')	155.0 (3.5 U)	6027.010
482.6 (19')	310.3 (7 U)	6028.010
520	400	6028.014
520	500	6028.015
520	600	6028.016



Also required:

- Mounting kit for Comfort Panel 6053.800, see page 705
- Mounting kit for Optipanel 6053.000/.500, see page 705



Front panels for Compact Panel

Material:
– Aluminium, 3 mm

Surface finish:
– Natural anodised

Size W x H mm	To fit Compact Panel	Model No.
178 x 200	6340.000	6028.500
178 x 350	6340.100	6028.510
252 x 200	6340.300	6028.530
252 x 350	6340.400	6028.540



Cover plate for support arm connection

For secure sealing of an unrequired support arm connection in the enclosure.

Material:
– Sheet steel

Supply includes:
– Seal and assembly parts

Note:
If with
– Comfort Panel
– Optipanel
– Compact Panel
command panels, there are already 2 support arm cut-outs provided, a cover plate is included with the supply of the enclosure

Support arm connection	Surface finish	Model No.
□ 90 x 71 mm	Spray-finished RAL 7024	6505.200
∅ 130 mm	Zinc-plated, passivated	6505.500
□ 120 x 65 mm	Zinc-plated, passivated	6505.100

Front assembly

Mounting kit

for Optipanel

For installation of

- Aluminium front panels
- Command panels
- Keyboards

for drilled holes

Supply includes:

- Packs of 30 retaining claws, captive nuts, screws and sealing washers

for threaded bolts

Supply includes:

- Packs of 10 retaining claws and cap screws

for screw clamp

Supply includes:

- Packs of 4 pressure plates, 4 attachment strips

Note:

- The command panels MP 377 12" Touch, MP 377 15" Touch are installed using an adaptor plate

For front panels	Thread	Model No.
Others	M4	6058.000
Rittal and others	M5	6053.000

For front panels	Thread	Model No.
Others	M4	6058.500
Rittal and others	M5	6053.500 ¹⁾

¹⁾ For the installation of TFT monitors 15", 17" and 19"

For direct installation of	Model No.
Siemens Sinumerik: OP 010, OP 010C, OP 012, OP 015, OP 019, MCP 483, PP 012, Qwerty 19", KB 483C, TP 015A	6053.210
Siemens Simatic: Panel PC 477C, 577C, 677C: 12.1" Touch, 15.1" Touch, 12.1" Key, 15.1" Key, 19" Touch ¹⁾ , 22" Touch ¹⁾ , Flat Panel ¹⁾ 12", 15", 19"	
Industrial Flat Panel: IFP 1200 Touch, IFP 1500 Touch, IFP 1200 Key, IFP 1500 Key, IFP 1900 Touch, IFP 2200 Touch	
Industrial Thin Client: ITC 1200, ITC 1500, ITC 1900, ITC 2200	

The mounting set can only be installed vertically

¹⁾ 2 packs are required

Mounting kit

for Comfort Panel

For the installation of aluminium front panels, command panels and keyboards.

Supply includes:

- 6058.800, 6053.800:
20 each of retaining claws, captive nuts, screws, nuts and sealing washers
- 6053.300:
8 medium retaining claws, 8 short retaining claws, 4 long retaining claws

1) 6058.800, 6053.800

2) 6053.300

For drilled holes/bolts/front panel mounting from the rear

Thread	Model No.
M4	6058.800
M5	6053.800

For screw clamp

For installation of	Model No.
Siemens Sinumerik: OP 010, OP 010 C, OP 012, OP 015, OP 015 A, OP 019, MCP 483 C, MCP 483, PP 012, PP 012 extension, MCP, KB 483 C, Qwerty 19"	6053.300
Siemens Simatic: TP 900 Comfort, KP 900 Comfort, TP 1200 Comfort, KP 1200 Comfort, KTP 1000 Basic, KTP 1500 Basic	
Panel PC 477C, 577C, 677C: 12.1" Key, 12.1" Touch, 15.1" Key, 15.1" Touch, 19" Touch, 22" Touch ¹⁾	
MP 377 12" Touch, MP 377 15" Touch, MP 377 19" Touch	
Industrial Flat Panel: IFP 1200 Touch, IFP 1500 Touch, IFP 1200 Key, IFP 1500 Key, IFP 1900 Touch, IFP 2200 Touch	
Industrial Thin Client: ITC 1200, ITC 1500, ITC 1900, ITC 2200	
B & R: Automation Panel, Panel PC	

¹⁾ 2 packs are required



Monitors



TFT monitor

Installation variant for surfaces and command panels.

Benefits:

- High-quality industrial design
- Reduced installation work thanks to integral front frame
- No additional ventilation required
- Very small installation depth (45 mm)
- Resistive touchscreen for operation with a pen, finger or glove

Material:

- Front frame: Aluminium

Surface finish:

- Powder-coated

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 65 (at the front)

Supply includes:

- Seal, hex nuts (for installation in surfaces), VGA cables, rear threaded bolts M5 (14). Touch variants additionally with integral connection cable and CD-ROM driver

Size	Width mm	Height mm	Model No.	
			Touch	
			Without ¹⁾	Resistive, USB
15"	430	343	6450.010	6450.070
17"	482.6	354.8	6450.020	–
19"	482.6	399.3	6450.170	–

¹⁾ With anti-reflection coated safety glass screen

Note:

- Other variants as resistive touchscreen with serial or USB interface are also possible



Also required:

- Mounting kit 6053.800 (for installation in Comfort Panel), see page 705
- Mounting kit 6053.500 (for installation in Optipanel), see page 705
- Power pack 6450.050, see page 706 and
- Connection cable 6450.060, see page 706, if an operating voltage of only 100 – 240 V AC is available instead of 12 V (DC).

Technical details:

Available on the Internet

Technical specifications	15"	17"	19"
Resolution of display (max. pixels)	1024 x 768	1280 x 1024	1280 x 1024
Resolution of controller/million colours	VGA-XGA/16.2	VGA-SXGA/16.7	VGA-SXGA/16.2
Brightness cd/m ²	400	350	250
Contrast ratio	700:1	1000:1	500:1
H-Sync. kHz/V-Sync. Hz	31.4 – 80/60 – 75	31.4 – 80/60 – 75	31.5 – 80/60 – 75
Reading angle horizontal (right/left)	80°/80°	85°/85°	88°/88°
Reading angle vertical (top/bottom)	70°/70°	80°/80°	88°/88°
Backlight/operating time h	LED/min. 50,000	LED/min. 50,000	Tubes/min. 40,000
On-screen display (OSD)	Operating buttons on the rear		
VGA input/DVI-D	D-SUB HD 15-pole/DVI-D jack		
Rated voltage V (DC)	12		
Power consumption (W)	15	20	40
Operating temperature/storage temperature	0°C...+50°C/ -40°C...+85°C	0°C...+50°C/ -30°C...+85°C	0°C...+50°C/ -20°C...+60°C
Max. humidity during operation and storage Non-condensing	90% rel. humidity for 240 h	80% rel. humidity for 300 h at 50°C	80% relative humidity



Power pack

for TFT monitor

- With IEC 320 socket
- With cable (1.5 m) for connecting to the TFT monitor

Dimensions, W x H x D: 107 x 30 x 59 mm

Technical specifications:

- Input voltage: 100 – 240 V
- Output voltage: 12 V (DC)
- Operating temperature: 10°C...40°C

Packs of	Model No.
1 pc(s).	6450.050

Material:

- Enclosure: Plastic



Connection cable

for power pack

With IEC connector at one end.

Length: 1.5 m

Packs of	Model No.
1 pc(s).	6450.060

Keyboards, supports and drawers

TFT holder

Suitable for mounting TFTs using VESA 75/100 adaptor up to 21" on

- Attachment CP 40, 6501.070, see page 139
- Attachment CP 60, for support arm connection
 - 120 x 65 mm, 6206.360, see page 147
- Vertical support arm via tilting adaptor +100°/-60°, 6206.460, see page 147

Material:

- Sheet steel

Surface finish:

- Spray-finished

Colour:

- RAL 7024

Dimensions mm	Packs of	Model No.
477 x 372 x 110.5	1 pc(s).	2383.030

Technical details:

Available on the Internet



Keyboard, pull-out

with integral trackball

Super-slimline keyboard with cursor keys and trackball. The handle also serves as a hand rest. The 10° angled pullout ensures ergonomic working.

For installation in:

- Any sufficiently large surface (e.g. door, side panel)
- Front panels
- Directly in a Comfort-Panel and Optipanel of a suitable size, selectable via configurators at www.rittal.com

Technical specifications:

Keyboard:

- 84 short-stroke keys, IBM-AT compatible (MF2), including cursor keys
- With integral 16 mm trackball
- Interface: 2 x USB
- Operating temperature: +5°C...+50°C
- Storage temperature: -10°C...+60°C
- Humidity: max. 95 % (non-condensing)

Keyboard layout	Packs of	Model No.
German	1 pc(s).	6002.130

Material:

- Sheet steel

Surface finish:

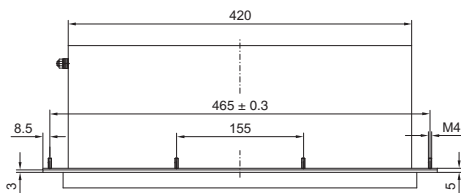
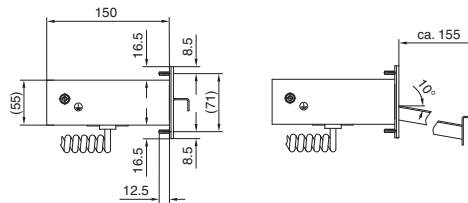
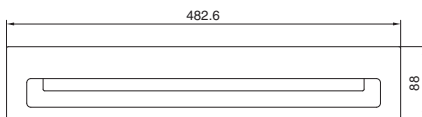
- Front panel: Powder-coated

Colour:

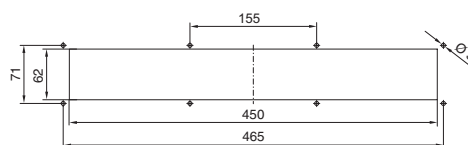
- RAL 7035

Protection category IP to IEC 60 529:

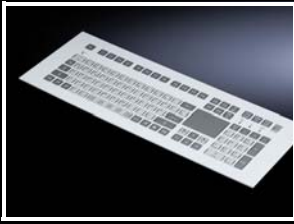
- IP 65 (at the front, sealed)



Mounting cut-out



Keyboards, supports and drawers



Built-in keyboard 482.6 mm (19¹)/4 U

with integral touchpad

The integral touchpad eliminates the need to install an additional, correct protection category mouse is no longer required, and cabling is also reduced. The short stroke keys are easily identified by edge embossing, less force is required to operate them and they have good positive key actuation.

Benefits:

- The separate number pad enables the parameters to be entered quickly
- Sealed, wipeable surface finish
- High level of mechanical and chemical resistance as per DIN 42 115

Technical specifications:

- Number of keys: 105
- Front panel dimensions: 482.6 x 177.0 mm (19¹ x 4 U)
- Installation depth: 23 mm
- 12 M5 x 20 threaded bolts at the rear
- Actuation travel/force: 0.3 mm/2.6 N
- Service life: 3 million switching cycles
- Operating temperature: -40°C...+90°C
- Touchpad resolution, capacitive: 40 pixels/mm
- Interfaces: USB

Material:

- Front panel: Aluminium

Protection category IP to IEC 60 529:

- IP 65 (at the front)

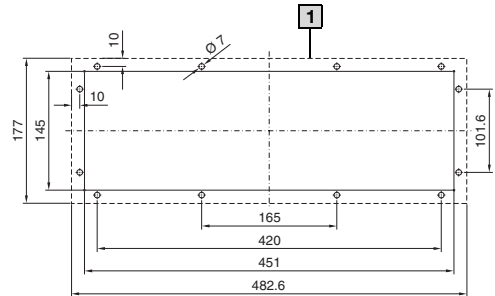
Supply includes:

- USB connection cable, length 1.8 m
- Seal
- Drilling template
- Assembly parts for surfaces

Keyboard layout	Packs of	Model No.
German	1 pc(s).	6446.030

! Also required:

- Mounting kit 6053.800 (when installing in Comfort Panel), see page 705
- Mounting kit 6053.500 (when installing in Optipanel), see page 705



1 Support surface



Fold-out tray

for keyboard and mouse

For installation in

- 600 and 800 mm wide doors
- 482.6 mm (19¹) swing frames and enclosures

Standard double-bit lock insert which may be exchanged for lock inserts 27 mm, type A, see page 570 and for lock cylinder 2571.000, see page 571

Material:

- Flap: Sheet steel
- Side parts: Cast aluminium
- Tray: Extruded aluminium section

Surface finish:

- Cover, side parts: Textured paint
- Tray: Natural anodised

Colour:

- Cover, side parts: RAL 7035

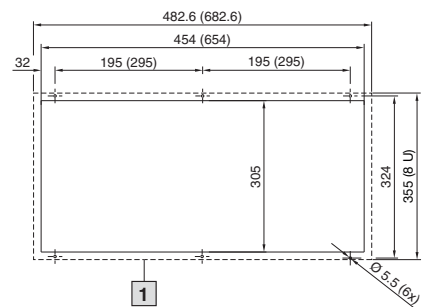
Protection category IP to IEC 60 529:

- IP 55

+ Accessories:

- Mousepad support, pull-out, see page 709

Mounting cut-out



1 Support surface

For door width mm	External dimensions W x H x D mm	Installation depth mm	Max. keyboard size W x H x D mm	Model No.
600	482.6 (19 ¹) x 355 (8 U) x 126	93	405 x 50 x 250 405 x 50 x 195 ¹⁾	2379.600
800	682.6 x 355 (8 U) x 126	93	605 x 50 x 250 605 x 50 x 195 ¹⁾ 475 ¹⁾ x 50 x 250	2379.800

¹⁾ Maximum keyboard size with holder for mouse

Keyboards, supports and drawers

Mousepad support, pull-out with mouse holder

For screw-fastening into the fold-out tray 2379.600/2379.800, see page 708.
To fit all standard mousepads up to 250 x 205 mm.

Supply includes:

- Assembly parts

Packs of	Model No.
1 set(s)	2379.900



Support

for keyboards

for max. 473 x 210 mm.

Prepared for

- Cable gland
- Mousepad support, vertically hinged 2383.020

Material:

- Side parts: Sheet steel
- Front and rear: Extruded aluminium section

Surface finish:

- Side parts: Textured paint
- Front and rear: Natural anodised

Colour:

- Side parts: RAL 7024

Supply includes:

- 2 clamping screws, end stoppers, cover plate, cable entry grommet and nylon loop tape

Packs of	Model No.
1 set(s)	2383.000



Also required:

- For external mounting on surfaces using enclosure surface connectors, see page 703



Accessories:

- Mousepad support, vertically hinged, see page 713



Utility bars, vertically hinged

To support standard keyboards during programming and servicing work.

Mounting distance of utility bars for problem-free insertion at least 300 mm.

Depth adequate for keyboards up to max. 210 mm.

For mounting beneath

- Comfort Panel ¹⁾
- Optipanel ²⁾
- any sufficiently large surface, such as:
 - Worktops IV
 - Operating housing with handle strips

on

- vertical services (doors/side panels)

Min. front panel width

¹⁾ 385 mm

²⁾ 405 mm

After use, the utility bars fit securely and neatly under the mounting surface, thus giving the operator more space to move around.

Packs of	Model No.
1 set(s)	6514.200

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts



Keyboards, supports and drawers



Drawer 482.6 mm (19 1/2 U) for keyboard and mouse

For installation in:

- Any sufficiently large surface (e.g. door, side panel)
- 482.6 mm (19') system punchings
- Front panels
- Directly in a Comfort Panel and Optipanel of a suitable size, selectable via configurators at www.rittal.com

Suitable for

- Accommodation of keyboards up to max. 390 x 32 x 139 mm
- Support of standard commercially available mouse or trackball

Design:

- Drawer: With stay
- Front panel: With security lock (lock no. 12321) and handle strip

Width mm	U	Depth mm	Model No.
482.6 (19')	2	150	6002.000

Material:

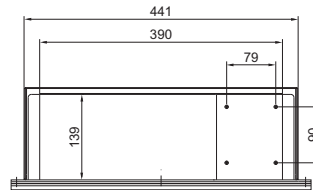
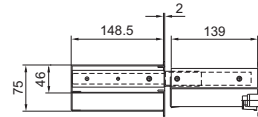
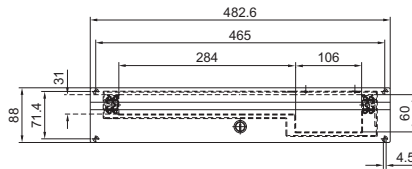
- Drawer housing: Sheet steel
- Drawer and front panel: Aluminium

Surface finish:

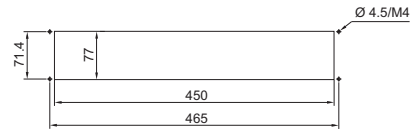
- Drawer housing: Zinc-plated
- Drawer and front panel: Natural anodised

Supply includes:

- Assembly parts for installation in Comfort Panel/ Optipanel command panel



Mounting cut-out
(for installation in surfaces)



Keyboards, supports and drawers

Drawer for keyboard and mouse

with mousepad support

For installation in:

- Any sufficiently large surface (e.g. door, side panel)
- Front panels

Suitable for accommodating

- Keyboards up to a maximum of 460 x 42 x 170 mm
- Standard mouse and mousepad

Design:

- Drawer and housing: With side pull-out mousepad support and tray
- Front panel: With 3 mm double-bit lock insert, folds out as handrest

Width mm	U	Depth mm	Model No.
482.6 (19')	3.5	261	6003.000

Material:

- Drawer and enclosure: Sheet steel
- Front panel: Aluminium

Surface finish:

- Drawer and enclosure: Textured paint
- Front panel: Natural anodised

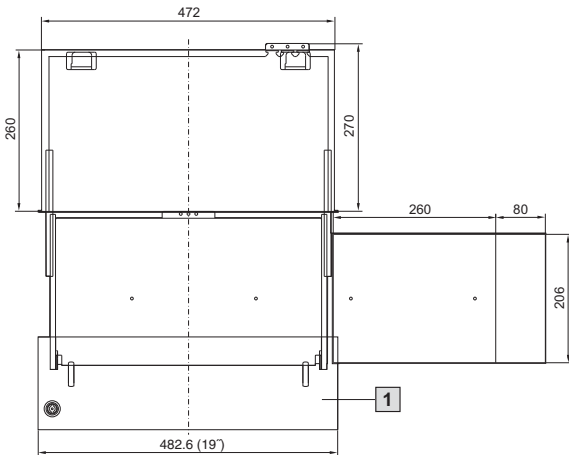
Supply includes:

- Assembly parts

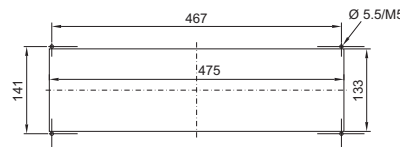


Accessories:

- Standard double-bit lock insert may be exchanged for 27 mm lock inserts, type A, see page 570



Mounting cut-out for installation in surfaces



1 Front trim panel

Keyboard drawer, 1 U

for 482.6 mm (19') mounting level

This space-saving keyboard drawer is screw-fastened to the front and rear 482.6 mm (19') mounting angles. The installation spacing is infinitely adjustable from 460 – 800 mm. It is fully extendible, lockable, with strain relief and hinged cable support.

The drawer is suitable for accommodating 482.6 mm (19') keyboards.

Interior dimensions:

- W x H x D approx. 420 x 40 x 220 mm

Material:

- Sheet steel

Colour:

- RAL 7035

Supply includes:

- Assembly parts, excluding keyboard

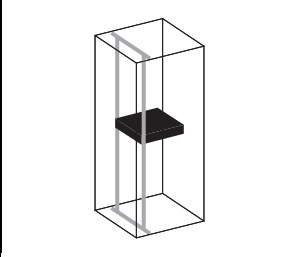
Note:

- Monitor/keyboard unit, 1 U, see page 461

Distance between levels mm	Model No.
460 – 800	7281.200



Keyboards, supports and drawers



Keyboard drawer, 2 U

for 482.6 mm (19") mounting level

For keyboards up to 430 mm wide and 250 mm deep with the front panel folded over.

Material:

- Sheet steel with aluminium front

Surface finish:

- Spray-finished

Colour:

- RAL 7035

Supply includes:

- Lockable drawer with handles
- Folding front
- Pull-out mousepad
- Mouse support
- Practical cable entry
- and strain relief

Height	Packs of	Model No.
2 U	1 pc(s).	7281.035

Installation depth: 390 mm



Mousepad support

for command panels and surfaces

The angle of the mousepad support is individually adjustable.

Two holes are needed on the enclosure for attachment purposes.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

Weight kg	Packs of	Model No.
1.0	1 pc(s).	2381.000



Accessories:

- Mouse holder, see page 713

Keyboards, supports and drawers

Mousepad support, vertically hinged

For mounting on the left/right, beneath the keyboard support. Latches home automatically, both when retracted and extended. With mounting holes for mouse holder 2382.000.

With cut-outs for cable routing and holes for attachment via cable ties, for fast assembly 2597.000.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

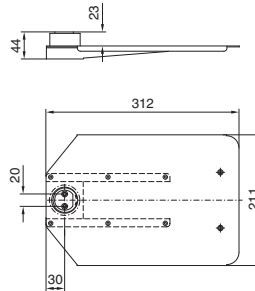
Supply includes:

- Assembly parts and mousepad, stuck on with adhesive

Packs of	Model No.
1 pc(s).	2383.020

+ Accessories:

- Mouse holder, see page 713
- Cable ties, see page 667



Mouse holder

To fit mousepad support and for secure accommodation of a standard mouse.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

Weight kg	Packs of	Model No.
0.3	1 pc(s).	2382.000

! Also required:

- Mousepad support, see page 712 or
- Mousepad support, vertically hinged, see page 713



Paper removal flap

For installation in surfaces

Facilitates easy removal of pages from the printer without opening the enclosure door. Acrylic glazed flap with magnetic lock.

Paper removal flap	Colour RAL	Packs of	Model No.
DIN A4	7015	1 pc(s).	6903.200



Interfaces



Base

for tubular door frame

The space-saving alternative instead of component shelves to accommodate tower PCs (maximum 20 kg).

For screw-fastening to the tubular door frame of 600 mm wide enclosures based on TS.

Load capacity:

- 20 kg

Material:

- Sheet steel

Surface finish:

- Spray-finished

Colour:

- RAL 7015

Supply includes:

- Retaining strap and assembly parts

Width x height x depth mm	Packs of	Model No.
445 x 159 x 230	1 pc(s).	6902.950



Also required:

- TS support strips for direct screw-fastening to the tubular door frame, see page 609



Interface extension with wall connection and built-in RJ 45 module

For extending the internal enclosure interfaces – e.g. in industrial PCs and switches – up to the outside of the enclosure. The wall connection only needs the same space as a switch.

Benefits:

- Rapid access for maintenance work
- The protection category of the enclosure is preserved
- The lock nut cuts automatically into the spray-finish or eloxal layer, thereby creating a conductive connection
- Captive protective cap

Material:

- Enclosure: Brass
- Cover: Aluminium
- Seal: Polyamide

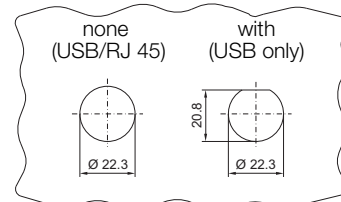
Surface finish:

- Enclosure: Nickel-plated
- Cover: Natural anodised

Protection category IP to IEC 60 529:

- IP 66/67 (with protective cap closed)

Anti-twist guard



Material thickness: 1 – 6 mm

Version	Wall connection	Inside	Length m	Packs of	Model No.
USB	Type A jack	Type A connector	0.5	1 pc(s).	2482.210
			1.0	1 pc(s).	2482.220
			2.0	1 pc(s).	2482.230
RJ 45	Jack	Connector	0.5	1 pc(s).	2482.700
			1.0	1 pc(s).	2482.710
			2.0	1 pc(s).	2482.720
RJ 45	Jack	Jack	–	1 pc(s).	2482.730

Interface flaps, modular

For universal use in all situations where rapid access to interfaces and sockets is needed. The affected enclosure remains closed and is therefore protected from ambient influences and unauthorised access.

Space-saving installation e.g.

- in **small enclosures and compact enclosures** as a programming interface for controllers
- in **IT and industrial distributors** as maintenance access for networks
- in **PC enclosures and console systems** for the temporary connection of additional equipment
- in mobile **Industrial Workstations** for rapid connection to existing network structures
- in **command panel systems** for programming and maintenance of integral components

The mounting frame has a flap which snaps into position in various stages at opening angles of 90° to 180°. A snap fastener ensures a reliable seal. This may be locked if required.

Material:

- Mounting frame and metal flap: Fine die-cast zinc
- Plastic flap: Polycarbonate (semi-transparent)
- Lock: Polycarbonate, RAL 7024

Surface finish:

- Mounting frame and metal flap: Matt nickel-plated

Colour:

- Lock: RAL 7024

Protection category IP to IEC 60 529:

- IP 65 (with sealed flap and proper assembly)

Description	cUL	UL	Packs of	Model No.
Mounting frame¹⁾				
[1] Single, with plastic flap (semi-transparent)			1 pc(s).	2482.300
Double, with plastic flap (semi-transparent)			1 pc(s).	2482.310
[2] Single, with metal flap	■	■	1 pc(s).	2482.320
[3] Double, with metal flap	■	■	1 pc(s).	2482.330
Socket modules				
[4] Germany (VDE), spring-action terminals max. 2 x 2.5 mm ² , connection at rear			1 pc(s).	2482.400³⁾
[5] Germany (VDE), screw terminals max. 6 mm ² , connection at rear, Colour: yellow (RAL 1016), for installation in front of main switch			1 pc(s).	2482.410³⁾
Interface inserts				
[6] 2 x SUB-D9 (jack/pin)	■	■	1 pc(s).	2482.500
[7] SUB-D9 (jack/jack)	■	■	1 pc(s).	2482.510
[8] 2 x USB A (jack/jack)	■	■	1 pc(s).	2482.540²⁾
[9] RJ 45 (jack/jack, Cat. 5e), SUB-D9 (jack/jack), SUB-D9 (pin/pin)	■	■	1 pc(s).	2482.550
[10] 2 x RJ 45 (jack/jack, Cat. 5e)	■	■	1 pc(s).	2482.560²⁾
[11] USB A (jack/jack), RJ 45 (jack/jack, Cat. 5e), SUB-D9 (jack/pin)	■	■	1 pc(s).	2482.570²⁾
[12] Blanking plate (slimline), for individual population, usable area: 45 x 75 mm	■	■	1 pc(s).	2482.590

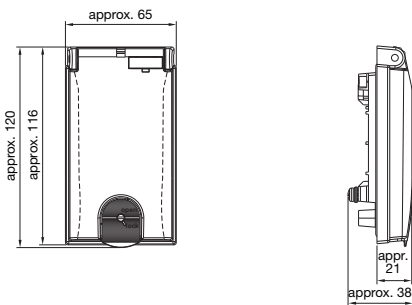
¹⁾ Electrically conductive

²⁾ Conductively connected to mounting frame

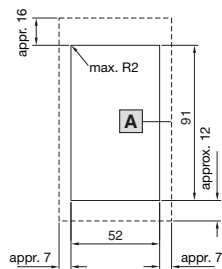
³⁾ Rated voltage: 250 V, rated current: 10 – 16 A

All SUB-D interfaces may be rotated while in use

Interface flap, single



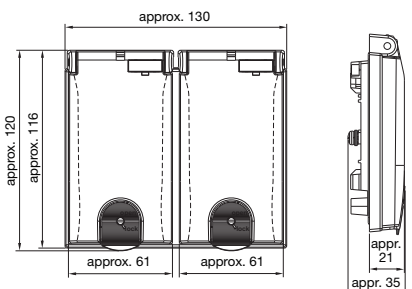
Mounting cut-out



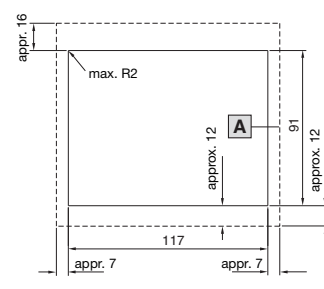
Permissible material thickness:
1 – 5 mm

A Contact surface

Interface flap, double



Mounting cut-out



Signal pillars



Signal pillars, LED compact

Benefits:

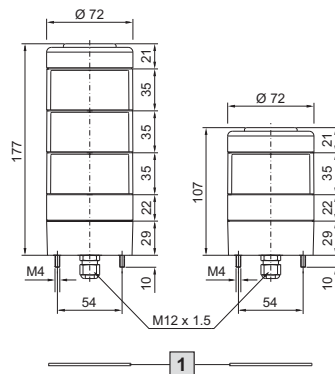
- Complete, ready-to-connect solution
- Minimal build height
- Extremely long LED service life (minimum 70,000 h) – therefore maintenance-free
- Minimal assembly work and warehousing costs

Technical specifications:

- Operating voltage: 24 V AC/DC
- Electrical connection: Screw terminals
- Light: LED
- Transmission angle: 3 x 120°
- Operating temperature: -20...+70°C
- Flashing function: Controllable via PLC
- Cable entry: Metric cable gland M12 x 1.5 for cable diameter 3.0 – 6.5 mm

Protection category IP to IEC 60 529:

- IP 65



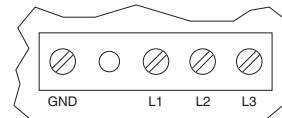
1 Seal

Version	Packs of	H mm	Model No.
3-stage, red, amber, green	1 pc(s).	177	2372.100
1-stage, red	1 pc(s).	107	2372.130

! Also required:

- For wall mounting: Bracket for wall mounting, see page 720
- For conduit mounting/support arm systems: Busbar connection adaptor, see page 716
- Other mounting components, see page 720/721

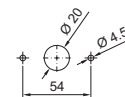
Connection plan 2372.100/.130



GND – 0 V (Ground)

L1 – L3 – +24 V DC (LED light stages, from bottom to top, unneeded contacts are left free)

Mounting cut-out



Connection adaptor

for signal pillar, LED compact

For conduit mounting and mounting on support arm systems.

Material:

- Plastic

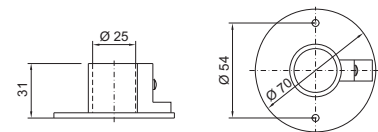
Colour:

- Black

Packs of	Model No.
1 pc(s).	2372.120

+ Accessories:

- Mounting components for conduit mounting, see page 721
- Mounting components for support arm systems, see page 720



Signal pillars, modular

Benefits:

- Simple assembly and contact via bayonet fastener
- Configuration of up to five components with the same voltage
- Flashing and stroboscopic light element incl. lamp, suitable for direct use
- Components are available in a range of colours and voltages

For modular configuration of

- Connection components
- Optical components
- Incandescent lamps
- Acoustic components
- Label panel



Connection component

for signal pillars, modular

- Optionally for conduit or wall/base mounting
- Screw terminals in the connection component
- With cover for optical components
- Contact hazard protection to VDE

Material:

- Enclosure of polyamide

Colour:

- Black

Protection category IP to IEC 60 529:

- IP 54

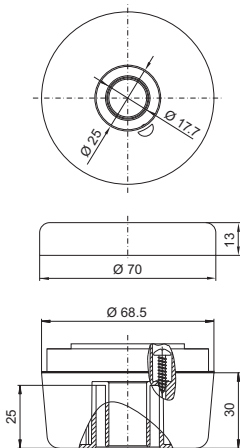
Connection component	Model No.
For conduit mounting	2368.000
For wall/base mounting	2368.010

+ Accessories:

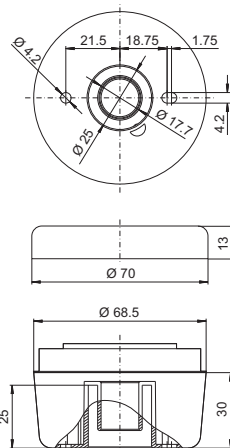
- Mounting components for wall/base mounting, see page 720
- Mounting components for conduit mounting, see page 721
- Mounting components for support arm systems, see page 720



Connection component
For conduit mounting
2368.000

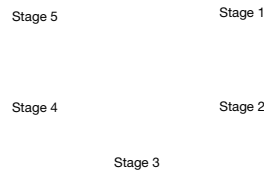


Connection component
For wall/base mounting
2368.010



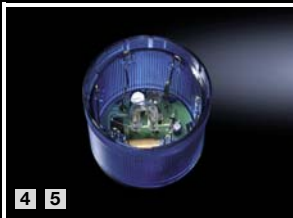
Connection diagram

Shared conductor



1 Seal

Signal pillars



Optical components

for signal pillars, modular

- With 360° signal transmission thanks to optimised prism system
- No. of potential stages = 5 components, with identical voltage

Material:

- Enclosure: Polyamide
- Cap: Transparent polycarbonate

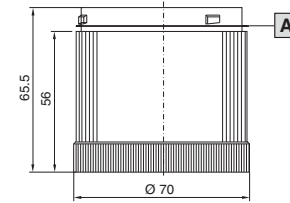
Protection category IP to IEC 60 529:

- IP 54 if a cover or acoustic component is fitted at the top



Also required:

- Incandescent lamps for steady light component, see page 718



A Pre-configured seal

1 Steady light component 12 – 240 V AC/DC¹⁾

Model No.				
Red	Green	Amber	Clear	Blue
2369.000	2369.010	2369.020	2369.030	2369.040

¹⁾ Incandescent lamps not included with the supply

2 LED steady light component 24 V AC/DC, 25 mA

Model No.				
Red	Green	Amber	Clear	Blue
2372.000	2372.010	2372.020	2372.030	2372.040

3 LED steady light component 230 V

Model No.				
Red	Green	Amber	Clear	Blue
2370.150	2370.160	2370.170	2370.180	2370.190

4 LED flashing light component 24 V AC/DC

Model No.				
Red	Green	Amber	Clear	Blue
2370.500	2370.510	2370.520	2370.530	2370.540

5 LED steady light component 230 V

Model No.				
Red	Green	Amber	Clear	Blue
2370.550	2370.560	2370.570	2370.580	2370.590

6 Stroboscopic light component 24 V DC, 125 mA

Model No.				
Red	Green	Amber	Clear	Blue
2371.000	–	2371.020	–	–

7 Stroboscopic light component 230 V DC, 15 mA

Model No.				
Red	Green	Amber	Clear	Blue
2371.050	–	2371.070	–	–

Incandescent lamps

for steady light components

With BA 15d base/plinth.

Incandescent lamp	Packs of	Model No.
24 V, 5 W	3 pc(s).	2374.060
230 V, 5 W	3 pc(s).	2374.070



Acoustic components

for signal pillars, modular

To indicate warnings or malfunctions.

Material:

- Enclosure: Polyamide

Colour:

- Black

Note:

- Mounting only on the upper end of the optical components or directly on the connection component

24 V AC/DC

Acoustic components	Packs of	Model No.
85 dB ¹⁾ max. 25 mA	1 pc(s).	2376.000
100 dB ²⁾ max. 25 mA	1 pc(s).	2376.010

¹⁾ Continuous tone or pulsating

²⁾ Volume and 8 tones may be set

230 V

Acoustic components	Packs of	Model No.
85 dB ¹⁾ max. 25 mA	1 pc(s).	2376.020
100 dB ²⁾ max. 25 mA	1 pc(s).	2376.030

¹⁾ Continuous tone or pulsating

²⁾ Volume and 8 tones may be set



Label panel

for signal pillars, modular

For text additions for a maximum of 5 optical components, with break point for any fields that are not required (50 x 150 mm), including clamping section for base or tube with a diameter of 25 mm.

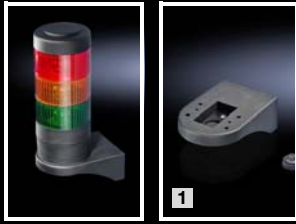
Material:

- Acrylic, transparent

Label panel	Model No.
For 5 optical components	2374.150



Signal pillars



1



2



3

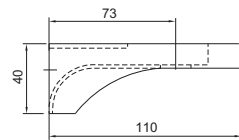
Mounting components for wall/base mounting

Fig.	Mounting component	Colour	Suitable for signal pillar		Model No.
			LED compact	modular	
1	Bracket for wall mounting, including rubber gland for concealed cable routing	Black	■	–	2372.110
2	Bracket for connection component	Black	–	■ ¹⁾	2374.040
3	For side cable outlet	Black	–	■ ¹⁾	2374.080

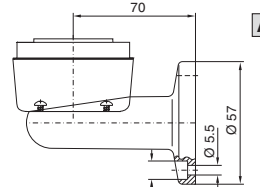
! Also required:

- ¹⁾ Connection component 2368.010, see page 717

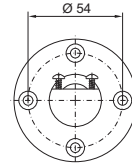
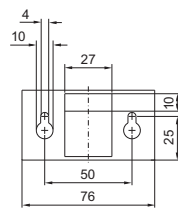
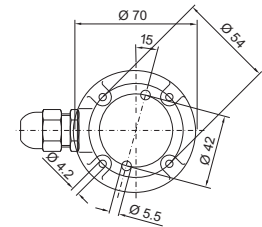
Bracket for wall mounting



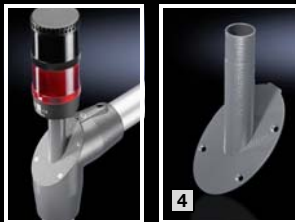
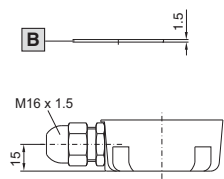
Bracket for connection component



For side cable outlet



- A Seal
- B Flat seal



4



5



6

Mounting components for support arm systems

For external mounting of a signal pillar on the plastic cover of the support arm components.

Fig.	Mounting component	Colour	Suitable for signal pillar		Model No.
			LED compact	modular	
4	for support arm system CP 40, steel – Angle piece 90° 6501.140	RAL 7024 (graphite grey)	■ ¹⁾	■ ²⁾	2375.030
5	for support arm system CP 60 – Angle adaptor 90° for support arm combination CP 60 to CP 40 6206.640 – Angle coupling 90° 6206.380 – Angle piece 90° 6206.600 – Intermediate hinge 6206.620 – Wall-mounted hinge 6206.740 – Top-mounted joint 6206.700	RAL 7024 (graphite grey)	■ ¹⁾	■ ²⁾	6206.900
6	for support arm system CP 120 – Angle coupling 90° 6212.380 – Angle piece 90° 6212.600 – Intermediate hinge 6212.620 – Wall-mounted hinge 6212.740 – Top-mounted joint 6212.700	RAL 7024 (graphite grey)	■ ¹⁾	■ ²⁾	6212.900
	for support arm system CP 180 – Angle piece 90° 6218.600 – Top-mounted joint 6218.700	RAL 7024 (graphite grey)	■ ¹⁾	■ ²⁾	6212.900

! Also required:

- ¹⁾ Connection adaptor 2372.120, see page 716
- ²⁾ Connection component 2368.000, see page 717

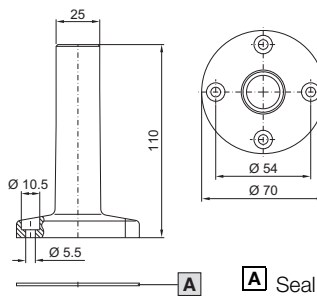
Mounting components for conduit mounting

Fig.	Mounting component	Colour	Suitable for signal pillar		Model No.
			LED compact	modular	
8	Base with integral conduit, Ø 25 mm, 110 mm long	Black	■ ¹⁾	■ ²⁾	2374.000
9	Individual base	Black	■	■	2374.010
10	Single conduit, 250 mm long	Aluminium	■ ¹⁾	■ ²⁾	2374.020
	Single conduit, 400 mm long	Aluminium	■ ¹⁾	■ ²⁾	2374.030
11	Angle bracket for conduit mounting	Black	■	■	2374.050

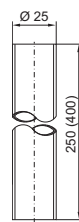
! Also required:

- ¹⁾ Connection adaptor 2372.120, see page 716
- ²⁾ Connection component 2368.000, see page 717

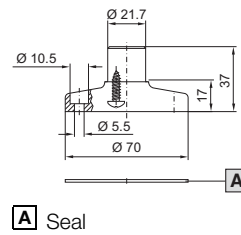
Base with integral conduit



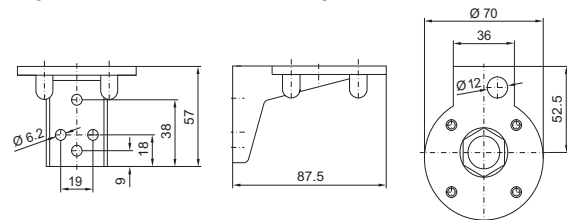
Single conduit



Individual base, plastic



Angle bracket for conduit mounting



The 3-phase coating procedure

Coating procedure	Technical properties	Technical specifications	
Degreasing, nanoceramic pretreatment, rinsing	Used as corrosion protection and to improve paint adhesion.	Nanoceramic conversion layer	
Anodic dipcoat priming	Even layer formation on all surfaces, edges and in cavities, which produces a high level of corrosion protection even at the assembly stage. The primer is readily overpainted and free from heavy metals, chromate and silicone.	Erichsen cupping test to DIN EN ISO 1520	≥ 4 mm
		Buchholz hardness to DIN EN ISO 2815	≥ 80
		Cross cutting to DIN EN ISO 2409	Gt 0
Stove enamelling			
Textured powder-coating	Powder-coating is distinguished by a high level of mechanical resistance, excellent corrosion protection, good resistance to chemicals and temperature, and its facility for decontamination. The powder coating is readily overpainted and is free from heavy metals, chromate and silicone.	Erichsen cupping test to DIN EN ISO 1520	≥ 3.5 mm
		Buchholz hardness to DIN EN ISO 2815	≥ 80
		Cross cutting to DIN EN ISO 2409	Gt 0
		Salt spray test to DIN EN ISO 9227 NSS	Test period: 168 hrs
		Condensate test to DIN EN ISO 6270-2 CH	Test period: 500 hrs
		Condensate test to DIN EN ISO 6270-2 AHT	Test period: 20 cycles
Stove enamelling			

The coating is resistant to:

- Mineral oils
- Lubricants
- Machine emulsions
- Alcohol-based solvents (briefly, e.g. during cleaning)
- Weak acids and alkalines

Primer or powder coating suitable for overpainting

After careful cleaning of the surface, the standard coating may be overpainted with:

- DD gloss paints
- Single and dual-component gloss paints
- Car repair paints
- Powder paints
- Water-based paints

If in doubt, perform a compatibility test. Always follow the paint manufacturer's instructions.
When overpainting, take care not to exceed 180°C and a baking time of 15 minutes.

Outdoor use of enclosures

In order to guarantee satisfactory long-term function of enclosures in outdoor use, the relevant environmental factors must be taken into account.

These include:

- UV radiation, the corrosive action of air pollution, rain, icing, snow, wind or other factors in special climatic conditions.

Condensation inside the enclosure

Condensation must be prevented by means of appropriate measures, e.g. by venting or heating the enclosure.

Protection category

The enclosure may be exposed to extreme weather conditions during outdoor use.

Long periods of rain, snow, ice, high winds and temperature fluctuations place particularly high demands on the enclosure sealing. The protection category IP X3 as envisaged for external weather conditions in DIN VDE 0100, part 737, point 5.2 is often insufficient to provide permanent protection for electrical equipment.

Protection categories to IEC 60 529 (EN 60 529)

The IP protection category is characterised by 2 numbers.

Example of a protection category, e.g. IP 43:

Code letters	
IP	
First numeral	Second numeral
4	3

Degrees of protection for protection against contact and foreign bodies: First numeral			Degrees of protection for protection against water: Second numeral		
First numeral	Degree of protection		Second numeral	Degree of protection	
	Description	Explanation		Description	Explanation
1	Protected against solid foreign objects with a diameter of 50 mm and greater	The object probe, a sphere 50 mm in diameter, must not penetrate fully ¹⁾ .	1	Protected against water drops	Vertically falling water drops must not cause any harmful effects.
2	Protected against solid foreign objects with a diameter of 12.5 mm and greater	The object probe, a sphere 12.5 mm in diameter, must not penetrate fully ¹⁾ . The articulated test finger may penetrate up to its length of 80 mm, but adequate distance from hazardous parts must be adhered to.	2	Protected against vertically falling water drops when the enclosure is tilted up to 15°	Vertically falling drops must not have any harmful effects when the enclosure is tilted up to 15° on either side of the vertical.
3	Protected against solid foreign objects with a diameter of 2.5 mm and greater	The object probe, a sphere 2.5 mm in diameter, must not penetrate at all ¹⁾ .	3	Protected against sprayed water	Water sprayed at an angle of up to 60° on either side of the vertical shall have no harmful effects.
4	Protected against solid foreign objects with a diameter of 1.0 mm and greater	The object probe, a sphere 1.0 mm in diameter, must not penetrate at all ¹⁾ .	4	Protected against splashed water	Water splashed on the enclosure from any direction shall have no harmful effects.
5	Dust-proof	The ingress of dust is not fully prevented, but dust may not enter to such an extent as to impair satisfactory operation of the device or safety.	5	Protected against water jets	Water directed at the enclosure from any direction in a jet shall have no harmful effects.
6	Dust-tight	No ingress of dust at a partial vacuum of 20 mbar inside the enclosure.	6	Protected against powerful water jets	Water directed at the enclosure from any direction in a powerful jet shall have no harmful effects.
			7	Protected against temporary immersion in water	Water must not ingress to such an extent as to cause harmful effects when the enclosure is temporarily immersed in water under standardised pressure and time conditions.
			8	Protected against continuous immersion in water	Ingress of water in quantities causing harmful effects shall not be possible when the enclosure is continuously immersed in water under conditions to be agreed between the manufacturer and the user. However, the conditions must be more difficult than for numeral 7.
			9	Water with high-pressure/steam-jet cleaning	Water directed at the enclosure from every direction under greatly increased pressure must not have any adverse effects.

¹⁾ The full diameter of the object probe must not pass through an opening of the enclosure

Technical information

NEMA

The **N**ational **E**lectrical **M**anufacturers **A**ssociation (NEMA) is a standards organisation in Washington, USA, which publishes a number of technical standards but does not test or certify products itself.

The following NEMA classification outlines the protection of individuals from accidental contact with equipment and the protection of an enclosure from external factors.

Further information on protection categories may be found on the Internet at: www.rittal.com

UL/NEMA Type	Intended use and description
1	Enclosures for use predominantly indoors Protection against the penetration of foreign bodies
3	Enclosures for use predominantly outdoors Protection from rain, hail, dust, icing and the damage caused by icing
3R	Enclosures for use predominantly outdoors Protection from rain, hail, icing and the damage caused by icing
3S	Enclosures for use predominantly outdoors Protection from rain, hail and dust External mechanisms remain usable despite being coated in ice
4	Enclosures for indoor or outdoor use Protection against rain, foreign bodies, splashed water and hosed water and against damage caused by icing on the exterior of the enclosure
4X	Enclosures for indoor or outdoor use Protection against rain, foreign bodies, splashed water and hosed water and against damage caused by icing on the exterior of the enclosure Increased protection from corrosion
12, 12K	Enclosures for use predominantly indoors Protection against dust deposits, foreign bodies and non-corrosive dripping liquids
13	Enclosures for use predominantly indoors Protection against dust deposits, sprayed water, oil, and non-corrosive coolants

The UL/NEMA classifications are not directly comparable with IP protection categories, since both the test conditions and the evaluation of the test results are different

Approvals and permits

Product certifications and approvals are pivotal to the global acceptance of industrial products.

Rittal products meet the highest internationally recognised quality yardsticks. All components are subjected to the most stringent testing in accordance with international standards and regulations.

The consistently high product quality is ensured by a comprehensive quality management system. Regular production inspections by external test institutes also guarantee compliance with global standards.

A precise allocation of products to marks of conformity can be found on our product and service pages on the Internet.
www.rittal.com

Earthing

The PE conductor connection must be designed by the manufacturer of switchgear in accordance with the relevant VDE and/or local regulations.

The enclosure packs generally contain earthing materials (screws, nuts, washers). The assembly instructions contain recommendations on installing a protective earth.

The pre-assembled earth straps, available as accessories in various cross-sections and lengths, are intended to make assembly of a PE conductor easier.

Further information can be found in our technical documentation "PE conductor connection, current carrying capacity".

List of model numbers

2388.000 to 3145.000

Model No.		Page	Model No.		Page	Model No.		Page	Model No.		Page	Model No.		Page	Model No.		Page
2388.000	SZ	641	2418.000	SZ	572	2482.710	SZ	714	2546.000	SZ	573	2735.250	FT	556	2892.000	SZ	516
2388.100	SZ	641	2419.000	SZ	572	2482.720	SZ	714	2547.000	SZ	573	2735.500	FT	556	2899.200	SZ	662
2388.120	SZ	641	2420.000	SZ	570	2482.730	SZ	714	2548.000	SZ	573	2735.510	FT	556	2899.250	SZ	662
2388.150	SZ	641	2422.000	SZ	586	2483.000	SZ	570	2549.000	SZ	573	2735.520	FT	556	2899.320	SZ	662
2388.200	SZ	641	2423.000	SZ	586	2484.000	SZ	570	2549.500	SZ	573	2735.530	FT	556	2899.400	SZ	662
2388.280	SZ	641	2424.100	SZ	581	2485.000	SZ	569	2549.510	HD	172	2735.540	FT	556	2907.000	SO	518
2388.600	SZ	641	2425.100	SZ	581	2485.100	SZ	569	2549.600	HD	172	2735.560	FT	556	2908.000	SO	518
2388.800	SZ	641	2426.100	SZ	581	2486.300	SZ	625	2559.000	SZ	644	2735.570	FT	556	2913.000	SO	518
2389.000	SZ	701	2426.500	SZ	581	2486.500	SZ	625	2560.010	SZ	653	2735.580	FT	556	3020.500	SV	295
2400.000	SZ	660	2427.100	SZ	581	2487.000	SZ	625	2560.400	SZ	656	2735.590	FT	556	3031.000	SV	251
2400.300	SZ	662	2430.000	SZ	570	2488.000	SZ	625	2561.010	SZ	653	2736.500	FT	556	3032.000	SV	251
2400.500	SZ	662	2432.000	SM	574	2489.000	SZ	625	2561.100	SZ	655	2736.510	FT	556	3052.000	SV	278
2400.900	SZ	661	2433.000	SZ	587	2489.500	SZ	625	2561.400	SZ	656	2736.520	FT	556	3055.000	SV	278
2400.910	SZ	661	2433.500	SZ	587	2493.000	SZ	571	2561.500	SZ	654	2736.530	FT	556	3056.000	SV	278
2400.920	SZ	661	2435.000	SZ	568	2493.500	SZ	572	2562.010	SZ	653	2736.540	FT	556	3057.000	SV	278
2400.930	SZ	661	2436.735	SZ	536	2501.500	SZ	580	2562.100	SZ	655	2740.000	FT	559	3071.000	SV	263
2400.940	SZ	661	2438.735	SZ	536	2502.500	SZ	580	2562.400	SZ	656	2741.000	FT	559	3073.000	SV	278
2400.950	SZ	661	2440.735	SZ	536	2503.010	SZ	587	2562.500	SZ	654	2742.000	FT	559	3074.000	SV	278
2400.960	SZ	661	2446.000	SZ	576	2504.000	SZ	625	2563.010	SZ	653	2743.000	FT	559	3075.000	SV	278
2400.970	SZ	661	2449.000	SZ	574	2504.500	SZ	625	2563.100	SZ	655	2744.000	FT	559	3076.000	SV	278
2401.000	SZ	540	2452.000	SZ	568	2504.800	SZ	625	2563.150	SZ	656	2745.000	FT	559	3079.000	SV	255
2402.000	SZ	540	2453.000	SZ	568	2505.510	SZ	588	2563.500	SZ	654	2746.000	FT	559	3079.010	SV	255
2403.000	SZ	558	2455.010	SZ	568	2506.100	SZ	424	2564.000	SZ	644	2749.000	FT	559	3083.000	SV	279
2404.000	SZ	558	2456.500	SZ	568	2507.100	SZ	639	2565.000	SZ	644	2760.000	FT	557	3085.000	SV	253
2410.000	HD	659	2459.000	SZ	533	2507.200	SZ	639	2565.100	SZ	644	2761.000	FT	557	3086.000	SV	257
2410.010	HD	659	2459.500	SZ	533	2507.300	SZ	639	2565.110	SZ	644	2762.000	FT	557	3087.000	SV	257
2410.020	HD	659	2460.000	SZ	570	2507.400	SZ	639	2565.120	SZ	644	2763.000	FT	557	3088.000	SV	257
2410.030	HD	659	2460.650	SZ	570	2507.500	SZ	639	2566.000	SZ	644	2772.000	FT	557	3090.000	SV	257
2410.110	HD	659	2461.000	SZ	570	2508.010	SZ	587	2567.000	SZ	644	2780.000	FT	557	3091.000	SV	257
2410.120	HD	659	2462.000	SZ	570	2508.100	SZ	587	2568.000	SZ	644	2781.000	FT	557	3092.000	SV	253
2410.130	HD	659	2463.000	SZ	570	2509.000	SZ	586	2569.000	SZ	644	2782.000	FT	557	3093.010	SV	262
2410.200	HD	659	2464.000	SZ	570	2509.500	CM	586	2570.000	SZ	644	2784.000	FT	557	3093.020	SV	262
2410.210	HD	659	2465.000	SZ	570	2510.000	SZ	577	2570.100	SZ	646	2785.000	FT	557	3105.310	SK	366
2410.220	HD	659	2466.000	SZ	570	2511.500	SZ	580	2570.200	SZ	644	2786.000	FT	557	3105.320	SK	366
2410.230	HD	659	2467.000	SZ	565	2512.000	SZ	577	2570.500	SZ	645	2787.000	FT	557	3105.330	SK	366
2410.290	HD	659	2468.000	SZ	565	2513.000	SZ	577	2571.000	SZ	571	2788.000	FT	557	3105.340	SK	366
2411.600	SZ	658	2469.000	SZ	565	2514.000	SZ	577	2572.000	SZ	569	2789.000	FT	557	3105.350	SK	366
2411.610	SZ	658	2470.000	SZ	580	2514.500	SZ	577	2573.000	SZ	652	2791.000	FT	559	3105.360	SK	366
2411.620	SZ	658	2471.000	SZ	580	2514.600	SZ	577	2574.000	SZ	623	2792.000	FT	559	3105.370	SK	366
2411.630	SZ	658	2472.000	SZ	580	2514.800	SZ	577	2575.000	SZ	569	2793.560	FT	558	3105.380	SK	367
2411.640	SZ	658	2473.000	SZ	580	2515.000	SZ	577	2576.000	SZ	569	2796.000	FT	557	3105.390	SK	367
2411.650	SZ	658	2474.000	SZ	580	2519.000	SZ	578	2581.000	SZ	536	2801.200	SO	519	3105.400	SK	367
2411.660	SZ	658	2475.000	SZ	580	2519.200	CM	578	2583.010	SZ	588	2802.200	SO	519	3105.410	SK	367
2411.670	SZ	658	2476.000	SZ	572	2520.000	SZ	570	2584.000	SZ	589	2807.200	SO	519	3105.420	SK	367
2411.800	SZ	658	2477.000	SZ	540	2521.000	SZ	573	2589.000	SZ	666	2816.200	SO	519	3105.430	SK	367
2411.810	SZ	658	2478.000	SZ	540	2522.000	SZ	570	2590.000	SZ	666	2817.000	SO	516	3108.024	SK	373
2411.820	SZ	658	2479.000	SZ	540	2523.000	SZ	570	2591.000	SZ	666	2818.200	SO	519	3108.100	SK	373
2411.830	SZ	658	2480.000	SZ	540	2525.000	SZ	571	2592.000	SZ	666	2819.000	SO	516	3108.115	SK	373
2411.840	SZ	658	2481.000	SZ	540	2526.000	SZ	570	2593.000	SZ	666	2819.200	SZ	516	3110.000	SK	379
2411.850	SZ	658	2482.210	SZ	714	2527.000	SZ	570	2594.000	SZ	666	2826.200	SO	519	3110.200	SK	380
2411.860	SZ	658	2482.220	SZ	714	2528.000	SZ	570	2595.000	SZ	666	2828.200	SO	519	3114.200	SK	379
2411.870	SZ	658	2482.230	SZ	714	2530.000	SZ	570	2596.000	SZ	666	2843.160	SZ	642	3118.000	SK	380
2412.210	SZ	644	2482.300	SZ	715	2531.000	SZ	573	2597.000	SZ	667	2843.200	SZ	642	3120.200	SK	381
2412.216	SZ	644	2482.310	SZ	715	2532.000	SZ	573	2599.000	SZ	569	2843.250	SZ	642	3121.000	SK	385
2412.225	SZ	644	2482.320	SZ	715	2533.000	SZ	569	2683.600	AP	186	2843.320	SZ	642	3124.100	SK	382
2412.310	SZ	644	2482.330	SZ	715	2534.100	SZ	571	2684.600	AP	186	2843.400	SZ	642	3124.200	SK	381
2412.316	SZ	644	2482.400	SZ	715	2534.500	SZ	571	2685.600	AP	186	2843.500	SZ	642	3126.100	SK	329
2412.325	SZ	644	2482.410	SZ	715	2535.000	SZ	569	2686.600	AP	186	2843.630	SZ	642	3126.230	SK	469
2413.375	SZ	642	2482.500	SZ	715	2536.000	SZ	569	2694.500	TP	116	2859.000	SO	521	3126.240	SK	469
2413.550	SZ	642	2482.510	SZ	715	2537.000	SZ	567	2695.500	TP	116	2865.000	SO	519	3126.270	SK	471
2414.000	SM	642	2482.540	SZ	715	2537.010	SZ	567	2696.500	AP	116	2867.000	SO	519	3127.100	SK	329
2414.500	SM	642	2482.550	SZ	715	2540.500	SZ	570	2730.000	FT	557	2869.000	SO	519	3128.100	SK	329
2415.000	SZ	642	2482.560	SZ	715	2541.235	SK	373	2731.000	FT	557	2870.000	SO	519	3129.100	SK	329
2415.100	SM	579	2482.570	SZ	715	2542.235	SK	373	2732.000	FT	557	2889.000	SO	520	3130.100	SK	329
2415.500	SM	595	2482.590	SZ	715	2543.235	SK	373	2733.000	FT	557	2890.000	SO	520	3144.000	SK	328
2416.000	SZ	572	2482.700	SZ	714	2545.000	SZ	573	2734.000	FT	557	2891.000	SZ	516	3145.000	SK	328

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3148.007	SK	325	3232.861	SK	443	3245.080	SK	372	3303.500	SK	337	3335.790	RK	364	3387.540	SK	349
3149.007	SK	325	3232.871	SK	443	3245.500	SK	320	3303.504	SK	344	3335.830	RK	364	3387.640	SK	349
3149.410	SK	324	3232.881	SK	443	3245.510	SK	320	3303.510	SK	337	3335.840	RK	364	3418.010	SV	236
3149.420	SK	324	3232.891	SK	442	3245.600	SK	322	3303.514	SK	344	3335.850	RK	364	3418.020	SV	262
3149.440	SK	324	3235.440	SK	380	3248.000	SK	330	3303.600	SK	337	3335.860	RK	365	3418.030	SV	262
3149.810	SK	324	3235.450	SK	381	3273.500	SK	348	3304.500	SK	339	3335.870	RK	365	3418.040	SV	236
3149.820	SK	324	3236.124	SK	373	3273.515	SK	348	3304.504	SK	344	3335.880	RK	365	3427.010	SV	236
3149.840	SK	324	3237.020	SK	372	3284.210	SK	370	3304.510	SK	339	3335.890	RK	365	3427.020	SV	262
3159.100	SK	385	3237.060	SK	372	3286.110	SK	369	3304.540	SK	339	3340.230	SK	326	3427.030	SV	262
3164.230	SK	437	3237.066	SK	371	3286.120	SK	370	3304.544	SK	344	3341.115	SK	326	3427.040	SV	236
3164.620	SK	437	3237.080	SK	372	3286.300	SK	369	3304.600	SK	339	3341.230	SK	326	3431.000	SV	238
3165.230	SK	439	3237.100	SK	316	3286.310	SK	370	3304.640	SK	339	3342.024	SK	326	3431.020	SV	239
3165.630	SK	439	3237.110	SK	316	3286.400	SK	369	3305.500	SK	340	3342.230	SK	326	3431.030	SV	239
3165.830	SK	439	3237.124	SK	316	3286.410	SK	370	3305.504	SK	344	3342.500	SK	326	3431.035	SV	239
3169.007	SK	325	3237.200	SK	372	3286.500	SK	369	3305.510	SK	340	3350.230	SK	327	3433.010	SV	236
3171.100	SK	371	3237.600	SK	321	3286.510	SK	370	3305.540	SK	340	3351.230	SK	327	3433.020	SV	262
3171.105	SK	371	3238.020	SK	372	3286.520	SK	370	3305.544	SK	344	3352.230	SK	327	3433.030	SV	262
3172.100	SK	371	3238.055	SK	371	3286.530	SK	370	3305.600	SK	340	3352.500	SK	327	3433.040	SV	236
3172.105	SK	371	3238.060	SK	372	3286.540	SK	370	3305.640	SK	340	3355.100	SK	384	3439.010	SV	217
3173.100	SK	371	3238.066	SK	371	3286.550	SK	370	3307.700	SK	350	3357.100	SK	384	3450.500	SV	257
3173.105	SK	371	3238.080	SK	372	3286.600	SK	369	3307.740	SK	350	3359.500	SK	347	3451.500	SV	257
3174.000	SK	371	3238.100	SK	316	3286.610	SK	370	3310.700	SK	350	3359.510	SK	347	3452.500	SV	257
3175.000	SK	373	3238.110	SK	316	3286.700	SK	384	3310.740	SK	350	3359.540	SK	347	3453.500	SV	257
3176.000	SK	372	3238.124	SK	316	3286.780	SK	376	3311.011	SK	434	3359.600	SK	347	3454.500	SV	257
3177.000	SK	369	3238.200	SK	372	3286.800	SK	384	3311.030	SK	433	3360.100	SK	363	3455.500	SV	257
3181.100	SK	371	3238.500	SK	319	3286.840	SK	374	3311.040	SK	433	3360.250	SK	363	3456.500	SV	257
3182.100	SK	371	3238.600	SK	321	3286.850	SK	375	3311.080	SK	433	3361.500	SK	338	3457.500	SV	257
3183.100	SK	371	3239.020	SK	372	3286.860	SK	375	3311.130	SK	428	3361.510	SK	338	3458.500	SV	257
3201.050	SK	371	3239.060	SK	372	3286.870	SK	374	3311.230	SK	428	3361.540	SK	338	3459.500	SV	257
3201.070	SK	382	3239.066	SK	371	3286.880	SK	376	3311.260	SK	428	3361.600	SK	338	3460.500	SV	257
3201.200	SK	334	3239.080	SK	372	3286.900	SK	384	3311.320	SK	434	3363.100	SK	354	3500.000	SV	254
3201.300	SK	334	3239.100	SK	317	3286.970	SK	374	3311.360	SK	433	3363.500	SK	354	3505.000	SV	254
3201.900	SK	378	3239.110	SK	317	3286.980	SK	376	3311.410	SK	431	3364.100	SK	355	3509.000	SV	253
3201.960	SK	382	3239.124	SK	317	3286.990	SK	374	3311.420	SK	431	3364.500	SK	355	3514.000	SV	254
3201.970	SK	382	3239.200	SK	372	3300.040	SK	351	3311.430	SK	432	3364.504	SK	355	3515.000	SV	254
3209.100	SK	359	3239.500	SK	319	3300.050	SK	351	3311.440	SK	432	3366.500	SK	343	3516.000	SV	253
3209.500	SK	359	3239.600	SK	321	3300.060	SK	351	3311.530	SK	429	3366.540	SK	343	3524.000	SV	253
3209.504	SK	359	3240.020	SK	372	3300.070	SK	351	3311.540	SK	429	3373.100	SK	356	3525.000	SV	253
3210.100	SK	359	3240.060	SK	372	3300.080	SK	351	3311.560	SK	429	3373.500	SK	356	3525.010	SV	253
3210.504	SK	359	3240.066	SK	371	3300.090	SK	351	3318.600	SK	361	3374.100	SK	356	3526.000	SV	253
3212.024	SK	354	3240.080	SK	372	3300.110	SK	351	3318.610	SK	361	3374.500	SK	357	3527.000	SV	253
3212.115	SK	354	3240.100	SK	317	3300.120	SK	351	3319.600	SK	361	3374.504	SK	356	3528.000	SV	253
3212.230	SK	354	3240.110	SK	317	3300.239	DK	430	3319.610	SK	361	3375.100	SK	357	3528.010	SV	253
3213.310	SK	376	3240.124	SK	317	3301.320	SK	433	3320.600	SK	362	3375.500	SK	357	3529.000	SV	253
3213.320	SK	376	3240.200	SK	372	3301.370	SK	433	3321.700	SK	371	3375.504	SK	357	3548.000	SV	258
3213.330	SK	376	3240.500	SK	319	3301.380	SK	433	3321.705	SK	371	3377.000	SK	383	3549.000	SV	258
3214.100	SK	355	3240.600	SK	321	3301.390	SK	433	3322.700	SK	371	3378.200	SK	360	3550.000	SV	257
3215.100	SK	356	3241.100	SK	317	3301.421	SK	433	3322.705	SK	371	3378.280	SK	360	3554.000	SV	257
3216.480	SK	358	3241.110	SK	317	3301.500	SK	377	3328.500	SK	341	3382.500	SK	346	3555.000	SV	257
3232.701	SK	441	3241.124	SK	317	3301.505	SK	377	3328.504	SK	345	3382.510	SK	346	3559.000	SV	257
3232.711	SK	441	3241.500	SK	319	3301.600	SK	377	3328.510	SK	341	3382.600	SK	346	3560.000	SV	257
3232.721	SK	441	3241.600	SK	322	3301.606	SK	377	3328.540	SK	341	3383.500	SK	347	3561.000	SV	257
3232.731	SK	441	3243.020	SK	372	3301.610	SK	377	3328.544	SK	345	3383.510	SK	347	3562.000	SV	257
3232.741	SK	441	3243.060	SK	372	3301.612	SK	377	3328.600	SK	341	3383.540	SK	347	3563.000	SV	257
3232.751	SK	442	3243.066	SK	371	3301.800	IT	436	3328.640	SK	341	3383.600	SK	347	3565.005	SV	255
3232.761	SK	442	3243.080	SK	372	3301.930	SK	378	3329.500	SK	342	3384.500	SK	348	3568.005	SV	255
3232.771	SK	442	3243.100	SK	317	3301.940	SK	378	3329.504	SK	345	3384.510	SK	348	3569.005	SV	255
3232.781	SK	442	3243.110	SK	317	3301.950	SK	378	3329.510	SK	342	3384.540	SK	348	3570.005	SV	255
3232.791	SK	442	3243.200	SK	372	3301.955	SK	378	3329.540	SK	342	3384.600	SK	348	3571.005	SV	255
3232.801	SK	442	3243.500	SK	320	3301.960	SK	378	3329.544	SK	345	3385.500	SK	348	3572.005	SV	255
3232.811	SK	442	3243.600	SK	322	3301.965	SK	378	3329.600	SK	342	3385.510	SK	348	3573.005	SV	255
3232.821	SK	442	3244.100	SK	318	3302.100	SK	336	3329.640	SK	342	3385.540	SK	348	3574.005	SV	255
3232.831	SK	442	3244.110	SK	318	3302.110	SK	336	3332.540	SK	342	3385.600	SK	348	3575.005	SV	255
3232.841	SK	443	3244.140	SK	318	3302.200	SK	336	3332.640	SK	342	3385.640	SK	348	3576.005	SV	255
3232.851	SK	443	3244.500	SK	320	3302.300	SK	335	3334.600	SK	362	3386.540	SK	349	3577.005	SV	255
			3244.600	SK	322	3302.310	SK	335	3334.660	SK	362	3386.640	SK	349	3578.005	SV	255

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3580.000	SV	252	4140.820	SZ	637	4321.700	TS	650	4912.000	TS	541	5112.500	CM	50	5502.245	DK	675
3580.100	SV	252	4140.830	SZ	637	4323.700	TS	650	4916.000	TS	541	5113.500	CM	50	5502.255	DK	677
3581.000	SV	252	4140.840	SZ	637	4333.120	TS	595	4918.000	TS	541	5114.500	CM	50	5502.265	DK	677
3581.100	SV	252	4155.010	SZ	635	4333.160	TS	595	4920.000	TS	541	5115.500	CM	50	5502.305	DK	691
3582.000	SV	252	4155.110	SZ	635	4333.180	TS	595	4933.000	PS	614	5116.500	CM	50	5502.325	DK	691
3582.020	SV	252	4155.510	SZ	635	4336.000	PS	665	4934.000	PS	614	5117.500	CM	50	5502.405	DK	670
3583.000	SV	252	4157.000	PS	624	4338.000	PS	665	4935.000	PS	614	5118.500	CM	51	5502.510	DK	528
3584.000	SV	252	4162.000	TS	624	4339.000	PS	665	4937.000	PS	614	5119.500	CM	51	5502.530	DK	529
3584.020	SV	252	4163.000	TS	624	4347.000	PS	613	4943.000	PS	612	5120.500	CM	51	5502.540	DK	530
3585.005	SV	252	4164.000	TS	624	4348.000	SZ	640	4944.000	PS	612	5121.500	CM	51	5502.550	DK	530
3585.020	SV	252	4165.000	TS	624	4361.000	PS	613	4945.000	PS	612	5122.500	CM	51	5502.560	DK	531
3586.005	SV	252	4166.000	TS	624	4362.000	PS	613	4946.000	PS	612	5123.500	CM	51	5502.570	DK	531
3586.020	SV	252	4169.000	PS	610	4363.000	PS	613	4947.000	PS	612	5366.000	PC	118	5503.120	DK	92
3587.000	SV	252	4169.500	TS	611	4364.000	PS	612	5001.000	CM	574	5366.100	PC	118	5504.110	DK	90
3588.005	SV	252	4170.000	PS	610	4365.000	PS	612	5001.050	CM	605	5366.200	PC	118	5504.120	DK	92
3589.005	SV	252	4170.500	TS	611	4367.000	PS	612	5001.051	CM	605	5366.300	PC	118	5505.120	DK	92
3590.005	SV	252	4171.000	PS	610	4373.000	PS	612	5001.052	CM	605	5366.400	PC	118	5506.120	DK	93
3590.015	SV	252	4171.500	TS	611	4374.000	PS	611	5001.053	CM	605	5368.000	PC	118	5507.120	DK	93
3591.060	SV	253	4172.000	PS	610	4375.000	PS	611	5001.054	CM	605	5501.000	DK	536	5507.130	DK	95
3592.010	SV	264	4172.500	TS	611	4376.000	PS	611	5001.060	CM	565	5501.010	DK	536	5507.150	DK	94
3659.180	RP	689	4173.000	PS	610	4377.000	PS	611	5001.061	CM	565	5501.020	DK	536	5508.110	DK	90
3659.190	RP	689	4174.000	PS	610	4378.000	PS	611	5001.062	CM	565	5501.030	DK	536	5508.120	DK	92
4000.100	HD	172	4175.000	PS	610	4379.000	PS	611	5001.075	CM	595	5501.040	DK	536	5509.110	DK	90
4000.200	HD	172	4176.000	PS	610	4380.000	PS	611	5001.080	CM	665	5501.050	DK	536	5509.120	DK	93
4000.210	HD	172	4177.000	PS	610	4381.000	PS	611	5001.081	CM	665	5501.060	DK	536	5509.130	DK	95
4114.000	TS	578	4178.000	PS	610	4382.000	PS	611	5001.082	CM	665	5501.070	DK	536	5510.110	DK	90
4115.000	TS	578	4179.000	PS	624	4393.000	SZ	610	5001.083	CM	665	5501.200	DK	549	5510.120	DK	92
4115.500	TS	578	4180.000	PS	624	4394.000	PS	613	5001.130	CM	532	5501.210	DK	549	5511.110	DK	90
4116.000	TS	578	4181.000	PS	620	4395.000	PS	613	5001.140	CM	532	5501.300	DK	524	5511.120	DK	93
4116.500	TS	578	4182.000	PS	619	4396.000	PS	613	5001.150	CM	532	5501.310	DK	524	5512.120	DK	93
4118.000	TS	578	4183.000	PS	620	4396.500	TS	613	5001.160	CM	532	5501.320	DK	524	5513.110	DK	91
4118.500	TS	578	4191.000	PS	665	4398.000	PS	613	5001.210	CM	525	5501.350	DK	524	5514.110	DK	91
4119.000	PS	624	4192.000	PS	665	4398.500	TS	613	5001.211	CM	525	5501.400	DK	687	5514.130	DK	95
4120.000	TS	576	4193.000	PS	665	4531.000	PS	688	5001.212	CM	525	5501.410	DK	687	5515.110	DK	91
4123.000	TS	578	4196.000	PS	665	4532.000	PS	617	5001.213	CM	525	5501.420	DK	687	5516.110	DK	91
4124.000	TS	578	4198.000	PS	585	4538.000	TS	579	5001.214	CM	525	5501.430	DK	687	5830.500	SE	81
4127.010	SZ	639	4199.000	TS	621	4540.000	TS	546	5001.215	CM	525	5501.440	DK	687	5830.580	SE	83
4127.210	SZ	639	4309.000	TS	609	4568.000	PS	586	5001.216	CM	525	5501.450	DK	687	5831.500	SE	81
4133.000	TS	621	4311.000	PS	651	4568.500	SZ	586	5001.217	CM	525	5501.460	DK	687	5831.580	SE	83
4134.000	TS	621	4315.100	SZ	639	4576.000	TS	593	5001.218	CM	525	5501.480	DK	687	5832.500	SE	81
4138.140	SZ	635	4315.150	SZ	639	4579.000	TS	609	5001.219	CM	525	5501.615	DK	631	5833.500	SE	81
4138.150	SZ	635	4315.200	SZ	639	4582.000	PS	546	5001.220	CM	525	5501.625	DK	631	5834.500	SE	81
4138.180	SZ	635	4315.320	SZ	639	4582.500	TS	546	5001.221	CM	525	5501.655	DK	630	5834.580	SE	83
4138.190	SZ	635	4315.350	SZ	639	4583.000	PS	578	5001.222	CM	526	5501.665	DK	630	5840.500	SE	82
4138.240	SZ	635	4315.400	SZ	639	4583.500	TS	578	5001.223	CM	526	5501.675	DK	630	5841.500	SE	82
4138.250	SZ	635	4315.450	SZ	639	4590.700	TS	591	5001.224	CM	526	5501.685	DK	630	5842.500	SE	82
4138.280	SZ	635	4315.520	SZ	639	4591.700	TS	591	5001.225	CM	526	5501.695	DK	630	5843.500	SE	82
4138.290	SZ	635	4315.550	SZ	639	4592.700	TS	591	5001.226	CM	525	5501.705	DK	630	5844.500	SE	82
4138.300	SZ	635	4315.600	SZ	639	4593.000	TS	593	5001.227	CM	525	5501.715	DK	630	5845.500	SE	82
4138.350	SZ	635	4315.710	SZ	639	4594.000	TS	609	5001.228	CM	525	5501.725	DK	630	5846.500	SE	82
4138.400	SZ	635	4315.720	SZ	639	4595.000	PS	588	5001.229	CM	525	5501.730	DK	633	5850.500	SE	184
4138.450	SZ	635	4315.800	SZ	638	4596.000	TS	609	5001.233	CM	525	5501.805	DK	692	5850.580	SE	185
4139.140	SZ	635	4315.810	SZ	638	4597.000	PS	617	5001.234	CM	525	5501.815	DK	692	5851.500	SE	184
4139.150	SZ	635	4315.820	SZ	638	4598.000	TS	609	5001.235	CM	525	5501.825	DK	692	5852.500	SE	184
4139.180	SZ	635	4315.830	SZ	638	4599.000	TS	609	5001.236	CM	526	5501.835	DK	692	5852.580	SE	185
4139.190	SZ	635	4315.840	SZ	638	4612.000	PS	521	5001.237	CM	525	5501.895	DK	693	5853.500	SE	184
4139.300	SZ	635	4315.850	SZ	638	4638.600	TS	576	5001.239	DK	528	5502.010	DK	437	5853.580	SE	185
4139.350	SZ	635	4315.860	SZ	638	4638.800	TS	576	5001.240	DK	528	5502.020	DK	437	5854.500	SE	184
4140.000	SZ	636	4316.000	PS	651	4650.100	PC	187	5001.310	CM	580	5502.105	DK	673	5855.500	SE	184
4140.010	SZ	636	4317.000	PS	651	4694.000	TS	609	5001.330	CM	580	5502.115	DK	674	6002.000	CP	710
4140.020	SZ	636	4318.000	PS	651	4695.000	TS	609	5001.350	CM	580	5502.120	DK	672	6002.130	SM	707
4140.110	SZ	636	4319.090	PS	667	4696.000	TS	609	5001.360	CM	580	5502.145	DK	673	6003.000	CP	711
4140.120	SZ	636	4319.120	PS	667	4697.000	TS	609	5001.370	CM	608	5502.155	DK	668	6005.500	CP	590
4140.210	SZ	636	4319.160	PS	667	4757.500	AP	116	5001.371	CM	608	5502.205	DK	674	6013.000	CP	703
4140.220	SZ	636	4319.200	PS	667	4911.000	TS	541	5110.500	CM	50	5502.225	DK	675	6013.100	CP	703

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6016.600	CP	161	6206.820	CP	147	6380.400	CP	126	6723.500	TP	114	7030.260	DK	460
6016.700	CP	161	6206.900	CP	720	6380.410	CP	126	6730.030	TP	532	7030.480	DK	457
6027.000	CP	704	6212.025	CP	151	6380.510	CP	126	6730.100	TP	532	7030.490	DK	457
6027.010	CP	704	6212.050	CP	151	6380.610	CP	126	6730.110	TP	532	7030.550	DK	462
6028.000	CP	704	6212.100	CP	151	6385.010	CP	700	6730.120	TP	532	7050.035	DK	699
6028.010	CP	704	6212.110	CP	151	6446.030	SM	708	6730.130	TP	532	7050.100	DK	699
6028.014	CP	704	6212.150	CP	151	6450.010	SM	706	6730.310	TP	597	7061.000	DK	632
6028.015	CP	704	6212.200	CP	151	6450.020	SM	706	6730.330	TP	597	7063.200	DK	674
6028.016	CP	704	6212.210	CP	151	6450.050	SM	706	6730.340	TP	597	7063.750	DK	688
6028.500	CP	704	6212.300	CP	151	6450.060	SM	706	6731.120	TP	117	7063.752	DK	688
6028.510	CP	704	6212.320	CP	151	6450.070	SM	706	6740.500	TP	115	7063.850	DK	631
6028.530	CP	704	6212.380	CP	151	6450.170	SM	706	6742.500	TP	115	7064.000	DK	632
6028.540	CP	704	6212.500	CP	151	6501.000	CP	139	6746.500	TP	115	7065.000	DK	632
6052.000	CP	666	6212.520	CP	157	6501.020	CP	139	6748.500	TP	115	7066.000	DK	632
6052.500	CP	662	6212.540	CP	158	6501.050	CP	139	6900.000	IW	121	7066.700	DK	632
6053.000	CP	705	6212.600	CP	151	6501.070	CP	139	6900.100	IW	121	7072.100	DK	660
6053.210	CP	705	6212.620	CP	151	6501.110	CP	139	6900.300	IW	119	7072.200	DK	657
6053.300	CP	705	6212.640	CP	151	6501.120	CP	139	6900.400	IW	121	7072.220	DK	667
6053.500	CP	705	6212.700	CP	151	6501.130	CP	139	6900.410	IW	121	7072.230	DK	667
6053.800	CP	705	6212.720	CP	151	6501.140	CP	139	6901.100	IW	121	7072.240	DK	667
6058.000	CP	705	6212.740	CP	151	6501.150	CP	139	6902.100	IW	121	7077.000	DK	666
6058.500	CP	705	6212.760	CP	151	6501.160	CP	139	6902.300	IW	121	7078.000	DK	666
6058.800	CP	705	6212.800	CP	151	6505.100	CP	704	6902.310	IW	165	7081.000	DK	632
6071.600	CP	159	6212.820	CP	151	6505.200	CP	704	6902.500	IW	121	7094.100	DK	695
6106.100	CP	164	6212.900	CP	720	6505.500	CP	704	6902.700	IW	628	7094.110	DK	695
6106.110	CP	167	6218.050	CP	155	6508.010	CP	156	6902.770	IW	660	7094.120	DK	695
6106.200	CP	164	6218.100	CP	155	6510.210	CP	160	6902.920	IW	519	7094.130	DK	694
6106.300	CP	165	6218.110	CP	155	6510.330	CP	160	6902.950	IW	714	7094.140	DK	694
6106.400	CP	164	6218.150	CP	155	6510.340	CP	160	6902.960	IW	627	7097.000	DK	666
6106.500	CP	166	6218.200	CP	155	6514.200	CP	709	6902.980	IW	627	7097.220	DK	666
6107.000	CP	702	6218.210	CP	155	6528.410	CP	160	6903.200	IW	713	7097.260	DK	666
6107.100	CP	702	6218.600	CP	155	6535.010	CP	189	7000.630	TE	423	7097.300	DK	666
6107.200	CP	702	6218.620	CP	155	6536.010	CP	189	7000.678	DK	607	7097.340	DK	666
6108.000	CP	625	6218.640	CP	155	6538.010	CP	189	7000.990	DK	695	7098.000	DK	666
6112.500	CP	166	6218.700	CP	155	6539.010	CP	189	7016.100	DK	677	7098.100	DK	666
6135.000	CP	165	6218.740	CP	155	6660.010	CP	141	7016.110	DK	677	7099.000	DK	666
6141.200	IW	165	6218.820	CP	155	6660.050	CP	141	7016.140	DK	669	7109.035	DK	379
6143.310	CP	167	6315.100	CP	130	6663.000	CP	141	7016.150	DK	669	7109.200	DK	637
6144.100	CP	167	6315.200	CP	130	6663.400	CP	141	7030.000	DK	450	7111.000	DK	670
6146.100	CP	164	6315.300	CP	130	6663.500	CP	141	7030.010	DK	450	7111.212	DK	673
6146.200	CP	164	6315.400	CP	131	6664.000	CP	141	7030.030	DK	456	7111.214	DK	673
6146.300	CP	164	6315.600	CP	131	6664.100	CP	141	7030.040	DK	454	7111.222	DK	673
6147.000	CP	167	6320.000	CP	130	6664.300	CP	141	7030.050	DK	454	7111.224	DK	673
6148.000	CP	522	6320.300	CP	130	6664.500	CP	141	7030.060	DK	457	7111.300	DK	668
6205.100	CP	617	6320.400	CP	131	6665.000	CP	141	7030.070	DK	458	7111.310	DK	668
6206.025	CP	147	6320.500	CP	131	6665.500	CP	141	7030.071	DK	458	7111.350	DK	668
6206.050	CP	147	6320.600	CP	131	6681.000	CP	188	7030.080	DK	457	7111.900	DK	670
6206.100	CP	147	6321.000	CP	132	6700.500	TP	111	7030.090	DK	457	7112.000	DK	670
6206.200	CP	147	6340.000	CP	133	6701.500	TP	112	7030.091	DK	457	7113.000	DK	646
6206.300	CP	147	6340.100	CP	133	6702.500	TP	113	7030.092	DK	457	7115.000	DK	633
6206.320	CP	147	6340.300	CP	133	6703.500	TP	114	7030.093	DK	457	7116.500	DK	671
6206.340	CP	147	6340.400	CP	133	6704.500	TP	111	7030.094	DK	457	7119.140	DK	630
6206.360	CP	147	6341.000	CP	590	6705.500	TP	112	7030.095	DK	457	7119.250	DK	631
6206.380	CP	147	6372.541	CP	124	6706.500	TP	113	7030.100	DK	451	7119.400	DK	631
6206.400	CP	147	6372.542	CP	124	6707.500	TP	114	7030.110	DK	454	7144.035	DK	629
6206.420	CP	147	6372.543	CP	124	6710.500	TP	111	7030.111	DK	454	7145.035	DK	629
6206.440	CP	147	6372.551	CP	124	6711.500	TP	112	7030.120	DK	454	7145.635	DK	629
6206.460	CP	162	6372.552	CP	124	6712.500	TP	113	7030.130	DK	454	7145.735	DK	629
6206.480	CP	156	6372.553	CP	124	6713.500	TP	114	7030.140	DK	454	7149.135	DK	675
6206.500	CP	157	6372.561	CP	124	6714.500	TP	111	7030.150	DK	454	7151.005	DK	696
6206.600	CP	147	6372.562	CP	124	6715.500	TP	112	7030.190	DK	454	7151.035	DK	696
6206.620	CP	147	6372.563	CP	124	6716.500	TP	113	7030.200	DK	452	7151.105	DK	696
6206.640	CP	158	6375.010	CP	700	6717.500	TP	114	7030.220	DK	455	7151.110	DK	696
6206.700	CP	147	6380.000	CP	126	6720.500	TP	111	7030.230	DK	455	7151.300	DK	693
6206.740	CP	147	6380.020	CP	126	6721.500	TP	112	7030.240	DK	460	7152.005	DK	696

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7257.200	DK	674	7507.706	DK	686	7825.381	DK	532	7856.120	DK	411	7955.331	DK	417	7999.009	DK	466
7269.135	DK	676	7507.709	DK	686	7825.387	DK	532	7856.170	DK	413	7955.332	DK	417	7999.709	DK	467
7269.235	DK	676	7507.712	DK	686	7825.388	DK	533	7856.190	DK	411	7955.333	DK	417	7999.898	DK	468
7280.035	DK	424	7507.715	DK	686	7825.900	DK	522	7856.201	DK	411	7955.334	DK	417	7999.922	DK	435
7280.100	DK	424	7507.718	DK	686	7826.605	DK	585	7856.203	DK	412	7955.335	DK	417	7999.961	LS	470
7281.035	DK	712	7507.721	DK	686	7826.665	DK	585	7856.204	DK	412	7955.336	DK	417	7999.962	LS	470
7281.200	DK	711	7507.740	DK	521	7826.669	DK	585	7856.220	DK	411	7955.401	DK	417	7999.963	LS	470
7282.035	DK	691	7507.760	DK	440	7826.685	DK	585	7856.230	DK	411	7955.410	DK	417	7999.964	LS	470
7283.035	DK	691	7526.964	DK	617	7826.689	DK	585	7856.240	DK	411	7955.411	DK	417	7999.965	LS	470
7284.135	DK	686	7541.000	DK	647	7826.750	DK	440	7856.321	DK	409	7955.431	DK	417	7999.966	LS	470
7296.000	DK	682	7542.000	DK	647	7826.805	DK	585	7856.323	DK	409	7955.432	DK	417	7999.991	LS	471
7297.000	DK	682	7543.000	DK	647	7826.809	DK	585	7857.130	DK	408	7955.433	DK	417	7999.992	LS	471
7298.000	DK	682	7544.000	DK	647	7826.825	DK	585	7857.150	DK	408	7955.434	DK	417	7999.999	DK	468
7299.000	DK	682	7545.000	DK	647	7826.865	DK	585	7857.190	DK	408	7955.435	DK	417	8000.100	TS	511
7320.530	DK	455	7546.000	DK	647	7826.869	DK	585	7857.300	DK	408	7955.436	DK	417	8000.500	TS	522
7320.560	DK	455	7547.000	DK	647	7826.885	DK	585	7857.310	DK	408	7955.510	DK	418	8004.500	TS	68
7320.570	DK	455	7548.000	DK	647	7826.889	DK	585	7857.320	DK	408	7955.511	DK	418	8005.500	TS	69
7320.630	DK	455	7548.210	DK	645	7827.181	DK	685	7857.421	DK	463	7955.512	DK	418	8006.500	TS	70
7320.631	DK	455	7549.000	DK	647	7827.201	DK	685	7857.998	DK	472	7955.513	DK	418	8080.500	TS	65
7320.721	DK	455	7552.002	DK	461	7827.221	DK	685	7858.100	DK	680	7955.520	DK	418	8084.500	TS	65
7320.790	DK	460	7552.120	DK	461	7827.300	DK	632	7858.160	FR	669	7955.521	DK	418	8100.000	TS	511
7320.793	DK	460	7552.122	DK	461	7827.480	DK	685	7858.162	FR	669	7955.522	DK	418	8100.010	TS	511
7320.794	DK	460	7552.140	DK	461	7827.544	DK	693	7859.050	DK	410	7955.530	DK	418	8100.120	TS	511
7320.814	DK	458	7552.142	DK	461	7828.040	DK	613	7859.053	DK	410	7955.531	DK	418	8100.160	TS	511
7338.120	DK	473	7583.500	TS	517	7828.050	DK	613	7859.120	DK	411	7955.532	DK	418	8100.180	TS	511
7338.130	DK	473	7610.000	DK	458	7828.060	DK	613	7859.130	DK	411	7955.540	DK	418	8100.235	TS	534
7338.220	DK	473	7641.000	DK	104	7828.061	DK	669	7859.212	DK	411	7955.541	DK	418	8100.300	TS	511
7338.320	DK	473	7643.000	DK	104	7828.062	DK	669	7859.222	DK	411	7955.542	DK	418	8100.400	TS	511
7391.000	DK	96	7645.000	DK	104	7828.080	DK	613	7859.225	DK	412	7955.901	DK	417	8100.500	TS	511
7396.000	DK	96	7705.035	DK	657	7828.081	DK	669	7859.232	DK	411	7955.910	DK	417	8100.600	TS	511
7400.000	DK	96	7705.110	DK	567	7828.082	DK	669	7859.235	DK	412	7955.911	DK	417	8100.602	TS	511
7401.000	DK	682	7705.120	DK	567	7828.100	DK	613	7859.312	DK	421	7955.931	DK	417	8100.800	TS	511
7402.000	DK	682	7705.235	DK	656	7828.101	DK	669	7859.315	DK	421	7955.932	DK	417	8100.802	TS	511
7445.000	DK	96	7706.135	DK	101	7828.102	DK	669	7859.316	DK	421	7955.933	DK	417	8104.235	TS	534
7451.000	DK	105	7709.135	DK	101	7828.120	DK	613	7859.332	DK	421	7955.940	DK	418	8105.235	TS	534
7462.000	DK	698	7709.535	DK	100	7828.121	DK	669	7859.335	DK	421	7955.941	DK	418	8106.235	TS	534
7463.100	DK	698	7709.735	DK	100	7828.122	DK	669	7890.020	DK	462	7955.942	DK	418	8106.750	TS	640
7463.200	DK	698	7712.135	DK	101	7829.100	DK	647	7890.242	DK	462	7966.035	DK	438	8108.235	TS	534
7464.035	DK	627	7715.135	DK	101	7829.110	DK	647	7890.247	DK	462	7967.000	DK	586	8108.750	TS	640
7465.035	DK	627	7715.535	DK	100	7829.150	DK	645	7890.500	DK	462	7968.035	DK	438	8115.235	TS	534
7466.035	DK	627	7715.735	DK	100	7829.152	DK	645	7950.100	DK	686	7980.000	DK	438	8126.235	TS	534
7466.735	DK	627	7721.135	DK	101	7829.200	DK	645	7950.150	DK	579	7980.100	DK	438	8128.235	TS	534
7469.535	DK	698	7721.535	DK	100	7829.400	DK	626	7950.200	DK	579	7980.148	DK	438	8145.235	TS	534
7470.535	DK	698	7721.735	DK	100	7831.472	DK	671	7955.010	DK	418	7986.035	DK	438	8146.235	TS	534
7474.535	DK	698	7752.950	DK	647	7831.723	DK	537	7955.015	DK	418	7988.035	DK	438	8148.235	TS	534
7478.535	DK	698	7824.120	DK	536	7831.724	DK	537	7955.020	DK	418	7990.101	DK	463	8165.235	TS	534
7480.035	DK	425	7824.128	DK	536	7856.005	DK	409	7955.110	DK	416	7990.103	DK	463	8166.235	TS	534
7480.300	DK	425	7824.188	DK	536	7856.006	DK	409	7955.111	DK	416	7990.201	DK	463	8168.235	TS	534
7484.035	DK	627	7824.200	DK	536	7856.008	DK	409	7955.131	DK	416	7990.203	DK	463	8170.235	TS	534
7485.035	DK	627	7824.201	DK	550	7856.010	DK	409	7955.132	DK	416	7990.206	DK	463	8173.235	TS	534
7486.035	DK	627	7824.202	DK	550	7856.011	DK	413	7955.133	DK	416	7990.208	DK	463	8174.235	TS	534
7486.735	DK	627	7824.206	DK	536	7856.013	DK	413	7955.134	DK	416	7990.301	DK	463	8175.235	TS	534
7493.100	DK	521	7824.208	DK	536	7856.014	DK	413	7955.135	DK	416	7990.303	DK	463	8176.235	TS	534
7494.000	DK	682	7824.220	DK	536	7856.020	DK	409	7955.201	DK	417	7990.306	DK	463	8180.235	TS	534
7495.000	DK	522	7824.222	DK	550	7856.022	DK	413	7955.210	DK	417	7990.308	DK	463	8184.235	TS	534
7501.000	DK	97	7824.228	DK	536	7856.023	DK	413	7955.211	DK	417	7995.992	DK	468	8185.235	TS	534
7507.000	DK	98	7824.510	DK	536	7856.025	DK	413	7955.231	DK	417	7998.106	DK	400	8186.235	TS	534
7507.010	DK	98	7824.520	DK	574	7856.026	DK	413	7955.232	DK	417	7998.107	DK	400	8188.235	TS	534
7507.020	DK	99	7824.525	DK	574	7856.027	DK	413	7955.233	DK	417	7998.206	DK	402	8200.000	TS	511
7507.030	DK	99	7824.540	DK	548	7856.029	DK	413	7955.234	DK	417	7998.306	DK	401	8200.010	TS	511
7507.100	DK	98	7825.250	DK	520	7856.030	DK	413	7955.235	DK	417	7998.307	DK	401	8200.120	TS	511
7507.110	DK	98	7825.360	DK	532	7856.070	DK	411	7955.236	DK	417	7998.406	DK	400	8200.300	TS	511
7507.120	DK	99	7825.361	DK	532	7856.080	DK	411	7955.238	DK	417	7998.407	DK	400	8200.400	TS	511
7507.200	DK	99	7825.367	DK	532	7856.082	DK	411	7955.301	DK	417	7998.506	DK	402	8200.500	TS	511
7507.210	DK	99	7825.375	DK	657	7856.090	DK	411	7955.310	DK	417	7998.606	DK	401	8200.600	TS	511

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8204.500	TS	68	8601.980	TS	513	8611.190	TS	565	8614.240	TS	596	8800.330	TS	620
8205.500	TS	69	8602.000	TS	513	8611.200	TS	565	8614.250	TS	596	8800.340	TS	624
8206.500	TS	70	8602.015	TS	514	8611.210	TS	566	8614.260	TS	596	8800.350	TS	624
8208.500	TS	71	8602.025	TS	514	8611.220	TS	570	8614.640	TS	596	8800.360	TS	618
8215.500	TS	63	8602.030	TS	514	8611.280	TS	564	8614.650	TS	596	8800.370	TS	619
8226.500	TS	72	8602.040	TS	514	8611.290	TS	564	8614.660	TS	596	8800.380	TS	610
8245.500	TS	63	8602.050	TS	514	8611.300	PC	549	8614.675	TS	596	8800.390	TS	515
8265.500	TS	64	8602.060	TS	514	8611.330	TS	564	8614.680	TS	596	8800.400	TS	543
8284.500	TS	65	8602.065	TS	514	8611.340	TS	564	8614.840	TS	596	8800.410	TS	543
8285.500	TS	66	8602.080	TS	514	8611.350	TS	564	8614.850	TS	596	8800.420	TS	544
8286.500	TS	67	8602.085	TS	514	8611.360	TS	564	8614.880	TS	596	8800.430	TS	545
8405.510	TS	69	8602.100	TS	513	8611.370	TS	566	8615.500	TS	63	8800.470	TS	546
8406.510	TS	70	8602.200	TS	513	8612.000	TS	606	8626.500	TS	72	8800.490	TS	544
8410.510	TS	73	8602.400	TS	513	8612.010	TS	606	8645.500	TS	63	8800.500	TS	543
8418.510	TS	73	8602.500	TS	513	8612.020	TS	606	8665.500	TS	64	8800.510	TS	663
8430.510	TS	73	8602.600	TS	513	8612.030	TS	606	8684.500	TS	65	8800.520	TS	663
8438.510	TS	73	8602.605	TS	513	8612.040	TS	606	8685.500	TS	66	8800.531	TS	664
8450.600	TS	182	8602.800	TS	513	8612.050	TS	606	8686.500	TS	67	8800.540	TS	663
8450.680	TS	183	8602.805	TS	513	8612.060	TS	606	8700.000	TS	544	8800.560	TS	691
8451.600	TS	182	8602.850	TS	513	8612.070	SZ	606	8700.010	TS	535	8800.570	TS	663
8452.600	TS	182	8602.905	TS	513	8612.080	TS	606	8700.060	TS	534	8800.580	TS	691
8453.600	TS	182	8602.915	TS	513	8612.090	SZ	606	8700.140	TS	548	8800.590	TS	543
8454.600	TS	182	8602.920	TS	513	8612.100	TS	606	8700.150	TS	548	8800.600	TS	641
8455.600	TS	182	8602.980	TS	513	8612.120	TS	606	8700.160	TS	548	8800.610	TS	592
8456.600	TS	182	8604.500	TS	68	8612.130	TS	606	8700.840	TS	534	8800.620	TS	641
8457.600	TS	182	8605.500	TS	69	8612.140	TS	606	8700.850	TS	534	8800.630	TS	592
8485.510	TS	66	8606.500	TS	70	8612.150	TS	606	8701.000	TS	518	8800.640	TS	612
8486.510	TS	67	8608.500	TS	71	8612.160	TS	606	8701.040	TS	518	8800.650	TS	612
8600.255	TS	515	8609.020	TS	540	8612.180	TS	606	8701.050	TS	518	8800.660	TS	641
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RAL colours

	Colour RAL	Designation
	5002	ultramarine blue
	5018	turquoise blue
	7001	silver grey
	7015	slate grey
	7022	umbra grey
	7024	graphite grey
	7030	stone grey
	7032	pebble grey
	7033	cement grey
	7035	pale grey
	8019	grey brown
	9005	jet black
	9006	white aluminium
	9011	graphite black
	9017	traffic black

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