Relays and solid-state relays
Catalogue 2015/2016
Let's connect.

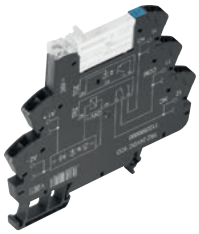
Digital signal processing

Weidmüller

Relays and solid-state relays
Catalogue 4.2

Relays and solid-state relays

TERMSERIES relay modules
Page A.8



- All-purpose, pluggable relay modules
- Space-saving width
- AgNi contact with and without gold plating
- Screw and tension clamp connection

TERMSERIES – solid-state relays
Page A.28

- All-purpose, pluggable solid-state relays
- Space-saving width
- DC and AC output variants
- Screw and tension clamp connection

TERMSERIES adapters
Page A.52

- Suitable for input and output logic
- Version for TERMSERIES base

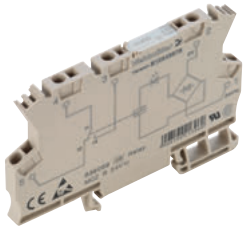
TERMOPTO – solid-state relays
Page A.58

- Isolation of potentials in terminal format
- With PUSH IN technology
- Compact, enclosed design

MICROOPTO – solid-state relays
Page A.70

- Compact semiconductor switch in terminal format
- High power for loads up to 10 A
- Electrically isolates high-speed signals
- International approvals

MCZ SERIES relay modules
Page A.80



- Low profile with tension clamp connection
- TRAK version developed for the rail industry
- Large temperature range of -40 °C to +70 °C

MCZ-SERIES – solid-state relays
Page A.86

- Low profile with tension clamp connection
- Universal interface between controller and sensor/actuator
- TRAK version developed for the rail industry

D-SERIES relay modules
Page B.6

- Modularly designed product line
- Pluggable variants with 1 to 4 CO contacts
- Special variants for switching high DC loads

RIDERSERIES relay modules
Page B.48

- Modularly designed product line
- Pluggable variants with 1 to 4 CO contacts
- Innovative relay base with PUSH IN connection

RIDERSERIES FG relay modules
Page B.78

- Modularly designed product line
- Relays with positively driven contacts
- Screw or tension clamp connection

PSSR 1-phase Power solid-state relays
Page C.4

- Load circuit: 12...275 V AC / 25 A or 24...600 V AC/35 A
- Zero-cross switch
- Ready to use
- Attachable monitoring module

PSSR 1-phase Power solid-state relays
Page C. 8

- Load circuit: 24...600 V/50 A or 75 A
- No-voltage switch
- Compact design

PSSR 1-phase phase angle control
Page C. 10

- Load circuit: 200...460 V AC/70 A
- 4–20 mA control input
- Manual phase angle calibration

PSSR 3-phase Power solid-state relays
Page C.12

- Load circuit: 24...520 V AC / 20 A at 55 °C
- No-voltage switch
- Ready to use

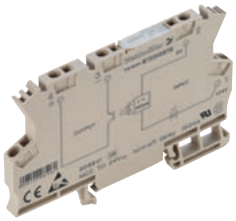
SIL relay
Page D.6

- TÜV “Safety-Approved”
- SIL3 acc. to EN61508
- De-energise/Energise to Safe applications

BT-SERIES - Timer
Page E.4

- Time range: 0.10 s...120 h
- Screw or tension clamp connection
- International approvals

Timer with 6 mm width
Page E.8



- Components for lengthening short pulses for the PLC
- Low input power
- DKZ Series with adjustable switch-off delay

Selection table for TERMSERIES

Relay modules from 6 mm width

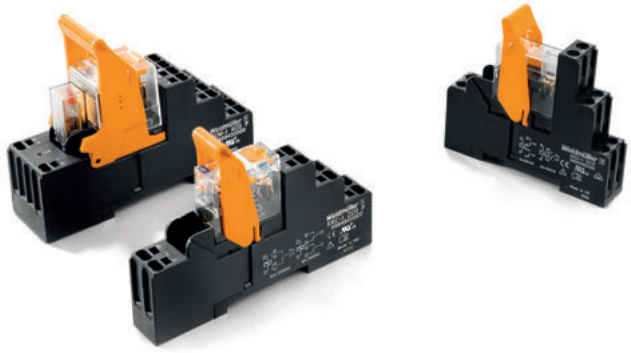
Number of contacts / Type of contact		1 NO		1 CO			2 CO	
Contact material Switching current		AgSnO 16 A	AgSnO + W 16 A	AgNi 6 A	AgNi + 5µAu	AgNi 16 A	AgNi 8 A	AgNi + 5µAu
Voltage / Input DC	**Connection**							
5 V DC	Screw			1122740000	1122980000	1479650000	1123470000	1123710000
	Tension clamp			1122860000	1123100000	1479800000	1123590000	1123830000
12 V DC	Screw			1122750000	1122990000	1479670000	1123480000	1123720000
	Tension clamp			1122870000	1123110000	1479820000	1123600000	1123840000
24 V DC	Screw	1479780000	1479810000	1122770000	1123000000	1479680000	1123490000	1123730000
	Tension clamp	1479940000	1479970000	1122880000	1123120000	1479840000	1123610000	1123850000
Input UC								
24 V UC	Screw			1122780000	1123010000	1479690000	1123500000	1123740000
	Tension clamp			1122890000	1123130000	1479850000	1123620000	1123870000
48 V UC	Screw			1122790000	1123020000	1479700000	1123510000	1123750000
	Tension clamp			1122900000	1123140000	1479870000	1123630000	1123880000
60 V UC	Screw			1122800000	1123030000	1479710000	1123520000	1123770000
	Tension clamp			1122910000	1123150000	1479880000	1123640000	1123890000
120 VUC	Screw			1122810000	1123170000	1479730000	1123530000	1123780000
	Tension clamp			1122920000	1123040000	1479890000	1123650000	1123900000
230 V UC	Screw			1122820000	1123050000	1479740000	1123540000	1123790000
	Tension clamp			1122930000	1123180000	1479900000	1123670000	1123910000
24 - 230 V UC	Screw	1479790000	1479830000	1122850000	1123090000	1479770000	1123580000	1123820000
	Tension clamp	1479950000	1479980000	1122970000	1123210000	1479930000	1123700000	1123940000
Input AC								
120 V AC RC	Screw			1122830000	1123070000	1479750000	1123550000	1123800000
	Tension clamp			1122940000	1123190000	1479910000	1123680000	1123920000
230 V AC RC	Screw			1122840000	1123080000	1479760000	1123570000	1123810000
	Tension clamp			1122950000	1123200000	1479920000	1123690000	1123930000
Note	Selection of preferred types, other modules upon request							

Selection table for D-SERIES
Industrial relay modules

Series	DRM		DRL			
Number of contacts / Type of contact Contact material / Current	2 CO AgNi 10 A	4 CO AgNi 5 A	1 CO AgCdO 16 A	2 CO AgCdO 10 A	3 CO AgCdO 10 A	4 CO AgCdO 10 A
Voltage / Input DC						
12 V DC	7760056068	7760056096	1133450000	1133510000	1133570000	1133620000
24 V DC	7760056069	7760056097	1133460000	1133520000	1133580000	1133630000
48 V DC	7760056070	7760056098	1133470000	1133530000	1133590000	1133640000
110 V DC	7760056071	7760056099	1133480000	1133540000	1133600000	1133650000
220 V DC	7760056072	7760056100	1133400000	1133550000	1133610000	1133660000
Input AC						
24 V AC	7760056073	7760056101	1133840000	1133870000	1133910000	1133940000
48 V AC	7760056074	7760056102				
120 V AC	7760056075	7760056103	1133850000	1133880000	1133920000	1133950000
230 V AC	7760056076	7760056104	1133860000	1133890000	1133930000	1133960000
Preferred suitable socket						
Screw, clamping yoke	7760056106	7760056107	7760056225	7760056225	7760056226	7760056227
Screw, tension clamp	7760056263	7760056264				
Note	Preferred types of D-SERIES incl. status indication and test key More coils and contact-types upon request					

Series	DRW		DRH		DRR	
Number of contacts / Type of contact Contact material / Current	2 CO AgCdO 16 A	3 CO AgCdO 16 A	1 NO AgCdO 16 A 10 A @ 220 V DC	2 NO AgCdO 16 A 3 A @ 220 V DC	2 CO AgNi 10 A without test key	3 CO AgNi 10 A without test key
Voltage / Input DC						
12 V DC	1219730000	1219780000	1220140000	1219840000	1133360000	1133410000
24 V DC	1219740000	1219790000	1220150000	1219850000	1133370000	1133420000
48 V DC	1219750000	1219810000	1220170000	1219860000	1133380000	1133430000
110 V DC	1219760000	1219820000	1220180000	1219870000	1133390000	1133440000
220 V DC	1219770000	1219830000	1220190000	1219880000	1133400000	1133560000
Input AC						
24 V AC	1219350000	1219410000	1220200000	1219890000	1133760000	1133810000
48 V AC	1219360000	1219420000	1220210000	1219910000		
120 V AC	1219370000	1219430000	1220220000	1219920000	1133780000	1133820000
230 V AC	1219380000	1219440000	1220230000	1219930000	1133800000	1133830000
400 V AC	1219390000	1219450000				
Preferred suitable socket						
Screw, clamping yoke	1220250000	1220250000	1220250000	1220250000	1132810000	1132820000
Note	Preferred types of D-SERIES incl. status indication and test key More coils and contact-types upon request					

Selection table for RIDERSERIES
Industrial relay modules



Series	RCI		RCM			RRD	
Number of contacts / Type of contact Contact material / Current	1 CO AgNi 16 A	2 CO AgNi 8 A	2 CO AgNi 12 A	3 CO AgNi 10 A	4 CO AgNi 6 A	2 CO AgNi 10 A without recovery diode	3 CO AgNi 10 A without LED
Voltage / Input DC							
12 V DC	8870240000	8870310000	8957020000	8957090000	8957160000		
24 V DC	8870250000	8870320000	8957030000	8957100000	8957170000	8690380000	8797650000
48 V DC	8870260000	8870330000	8957040000	8957110000	8957180000	8690400000	
110 V DC	8870270000	8870340000	8957050000	8957120000	8957190000		8797640000
220 V DC					8636230000		8797610000
Input AC							
24 V AC	8870280000	8870350000	8689770000	8689950000	8690120000	8690280000	8690460000
48 V AC				8689970000	8690130000		8690480000
120 V AC	8870290000	8870360000	8689810000	8689990000	8690150000	8690320000	8690560000
230 V AC	8870300000	8870370000	8689830000	8690010000	8690160000	8690340000	8690580000
Preferred suitable socket							
Screw	8869490000	8869490000	8869400000	8869410000	8869420000	8869360000	8869350000
Tension clamp or Push In	8869500000	8869500000	8876220000		8869430000		

Note Preferred types of RIDERSERIES incl. recovery diode (DC-coil), status indication and test key
More coils and contact-types upon request

Series		RCI KIT		RCM KIT		
Number of contacts / Type of contact Contact material		1 CO AgNi	2 CO AgNi	2 CO AgNi	3 CO AgNi	4 CO AgNi
Voltage / Input DC	**Connection**					
24 VDC	Screw	8881580000	8881610000	8920940000	8920980000	8921030000
	PUSH IN	8897190000	8897230000	8921080000		8921120000
Input AC						
24 V AC	Screw	8881590000	8881620000	8920950000	8920990000	8921040000
	PUSH IN	8897200000	8897240000	8921090000		8921130000
115 V / 120 V AC	Screw	8897060000	8897080000	8920960000	8921010000	8921060000
	PUSH IN	8897210000	8897250000	8921100000		8921140000
230 V AC	Screw	8881600000	8881630000	8920970000	8921020000	8921060000
	PUSH IN	8897220000	8897260000	8921110000		8921150000

Note Preferred types of RIDERSERIES incl. recovery diode (DC-coil), status indication and test key
More coils and contact-types upon request

Selection table for TERMOPTO and TERMSERIES

Solid-state relays from 6 mm width

Load side

Voltage type Switching voltage Switching current			DC 5...48 V < 100 mA	DC 5...48 V <= 500 mA	DC 24 V <= 2 A	DC 24 V <= 5 A	AC 24...240 V <=100 mA	AC 24...240 V <=1 A
Control side / Voltage AC	**Series**	**Connection**						
24 V AC	TERMOPTO	Screw	8950820000	8951020000			8951220000	
		PUSH IN	8950860000	8951060000			8951260000	
48...60 V AC	TERMOPTO	Screw	8950830000	8951030000			8951230000	
		PUSH IN	8950870000	8951070000			8951270000	
120 V AC	TERMOPTO	Screw	8950840000	8951040000			8951240000	
		PUSH IN	8950880000	8951080000			8951280000	
120 V AC RC	TERMSERIES	Screw	1127000000		1127230000			1127480000
		Tension clamp	1127110000		1127350000			1127600000
	TERMOPTO	Screw	1180290000					
		PUSH IN	1188830000					
230 V AC	TERMOPTO	Screw	8950850000	8951050000			8951250000	
		PUSH IN	8950890000	8951090000			8951290000	
230 V AC RC	TERMSERIES	Screw	1127010000		1127240000			1127490000
		Tension clamp	1127120000		1127370000			1127610000
	TERMOPTO	Screw	1189270000					
		PUSH IN	1189260000					
DC								
5 V DC	TERMSERIES	Screw	1126920000		1127140000			1127390000
		Tension clamp	1127030000		1127270000			1127510000
	TERMOPTO	Screw	8950700000	8950900000			8951100000	
		PUSH IN	8950760000	8950960000			8951160000	
12 V DC	TERMSERIES	Screw	1126930000		1127150000			1127400000
		Tension clamp	1127040000		1127280000			1127520000
	TERMOPTO	Screw	8950710000	8950910000			8951110000	
		PUSH IN	8950770000	8950970000			8951170000	
24 V DC	TERMSERIES	Screw	1126940000		1127170000	1127630000		1127410000
		Screw			1391680000	1127680000		
		Tension clamp	1127050000		1127290000	1127650000		1127530000
		Tension clamp			1391690000	1127700000		
	TERMOPTO	Screw	8950720000	8950920000		1275100000	8951120000	
		PUSH IN	8950780000	8950980000		1254880000	8951180000	
48...60 V DC	TERMOPTO	Screw	8950730000	8950930000			8951130000	
		PUSH IN	8950790000	8950990000			8951190000	
110 V DC	TERMOPTO	Screw	8950740000	8950940000			8951140000	
		PUSH IN	8950800000	8951000000			8951200000	
220 V DC	TERMOPTO	Screw	8950750000	8950950000			8951150000	
		PUSH IN	8950810000	8951010000			8951210000	
UC								
24 V UC	TERMSERIES	Screw	1126950000		1127180000			1127420000
		Tension clamp	1127060000		1127300000			1127540000
24...230 V UC	TERMSERIES	Screw	1127020000		1127250000	1127640000		1127500000
		Screw				1127690000		
		Tension clamp	1127130000		1127380000	1127670000		1127620000
		Tension clamp				1127710000		
48 V UC	TERMSERIES	Screw	1126960000		1127190000			1127430000
		Tension clamp	1127070000		1127310000			1127550000
60 V UC	TERMSERIES	Screw	1126970000		1127200000			1127440000
		Tension clamp	1127080000		1127320000			1127570000
115 V / 120 V UC	TERMSERIES	Screw	1126980000		1127210000			1127450000
		Tension clamp	1127090000		1127330000			1127580000
230 V UC	TERMSERIES	Screw	1126990000		1127220000			1127470000
		Tension clamp	1127100000		1127340000			1127590000
Note	Selection of preferred types, other modules upon request.							

Selection table for MICROOPTO

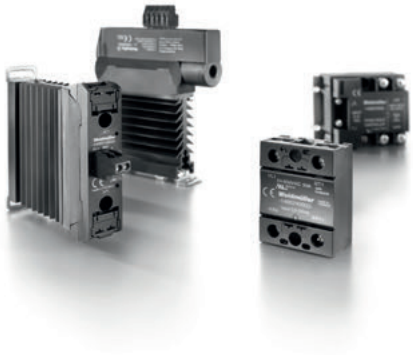
Solid-state relays in 6 mm width for specific applications

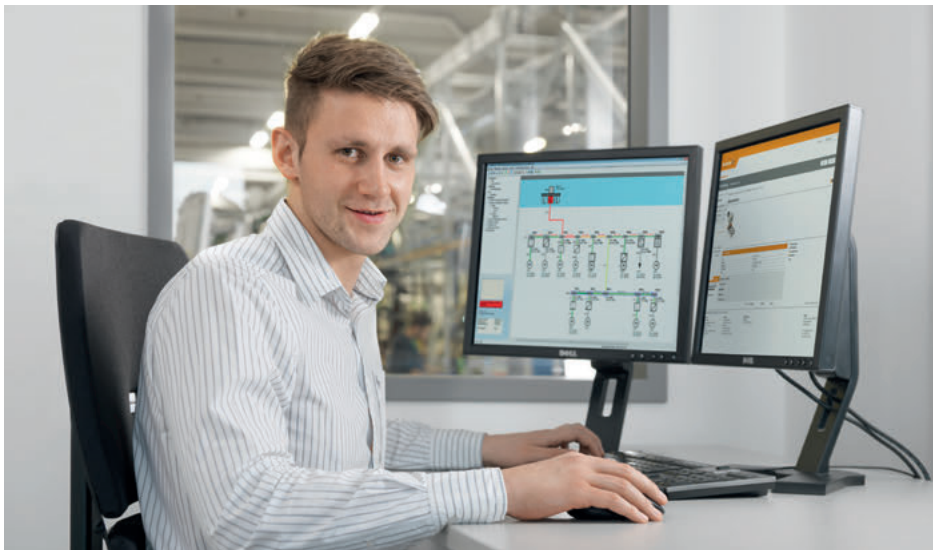
Load side

Voltage type Switching voltage Switching current	DC 5...48 V DC 0,5 A	DC 8...30 V DC 2 A	DC 5...33 V DC 10 A	DC 12...300 V DC 1 A
Control side / Voltage				
24 V DC	8937980000	8937970000	8937940000	8937830000
Remarks	Electronic CO contact 1 kHz switching frequency	Actuator switch 3-wire connection Short-circuit-proof Thermal overload fuse	Valve switch Short-circuit-proof Alarm contact	Switch for inductive loads Power Boost

Selection table for Power solid-state relays

Load side	1-phase				3-phase
Voltage type Switching voltage Switching current Heatsink	AC 12...275 V AC 25 A yes	AC 24...600 V AC 35 A yes	AC 24...600 V AC 50 A no	AC 24...600 V AC 75 A no	AC 24...520 V AC 20 A yes
Control side / Voltage					
3...32 V DC	1406200000	1406210000	1406240000	1406250000	
160...240 V AC/DC	1406220000				
Monitoring module (plug-in)	1406230000	1406230000			
8...30 V DC / 10...30 V AC					8952130000
9...240 V AC/DC					8952140000





Find all the information about our extensive range of relay modules and solid-state relays on our website or in our online catalog.

www.weidmueller.com/relay

Let's connect.

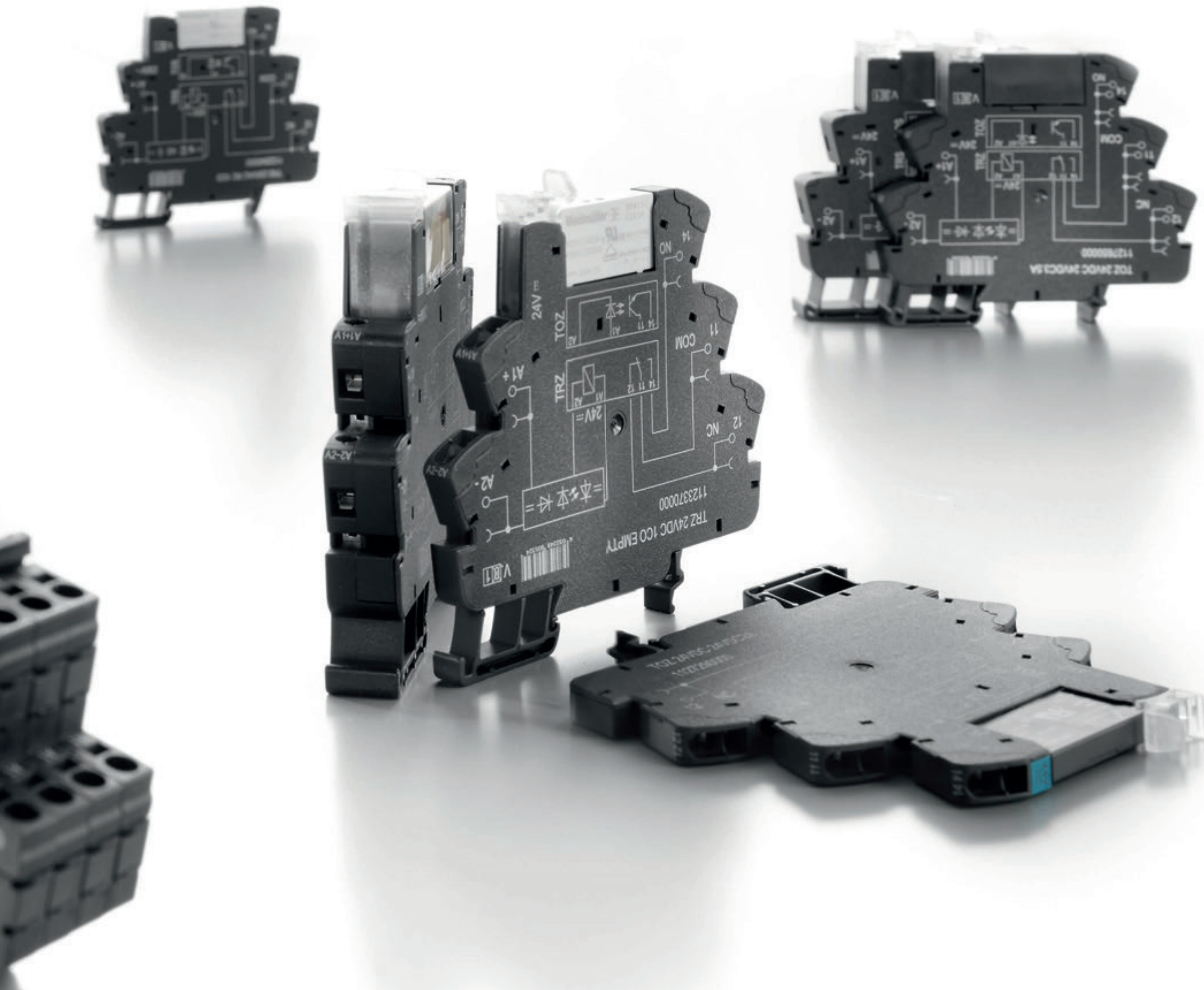
Relay modules and solid-state relays in 6 mm width

Coupling modules in a terminal block design

Relay modules and solid-state relays in 6 mm width

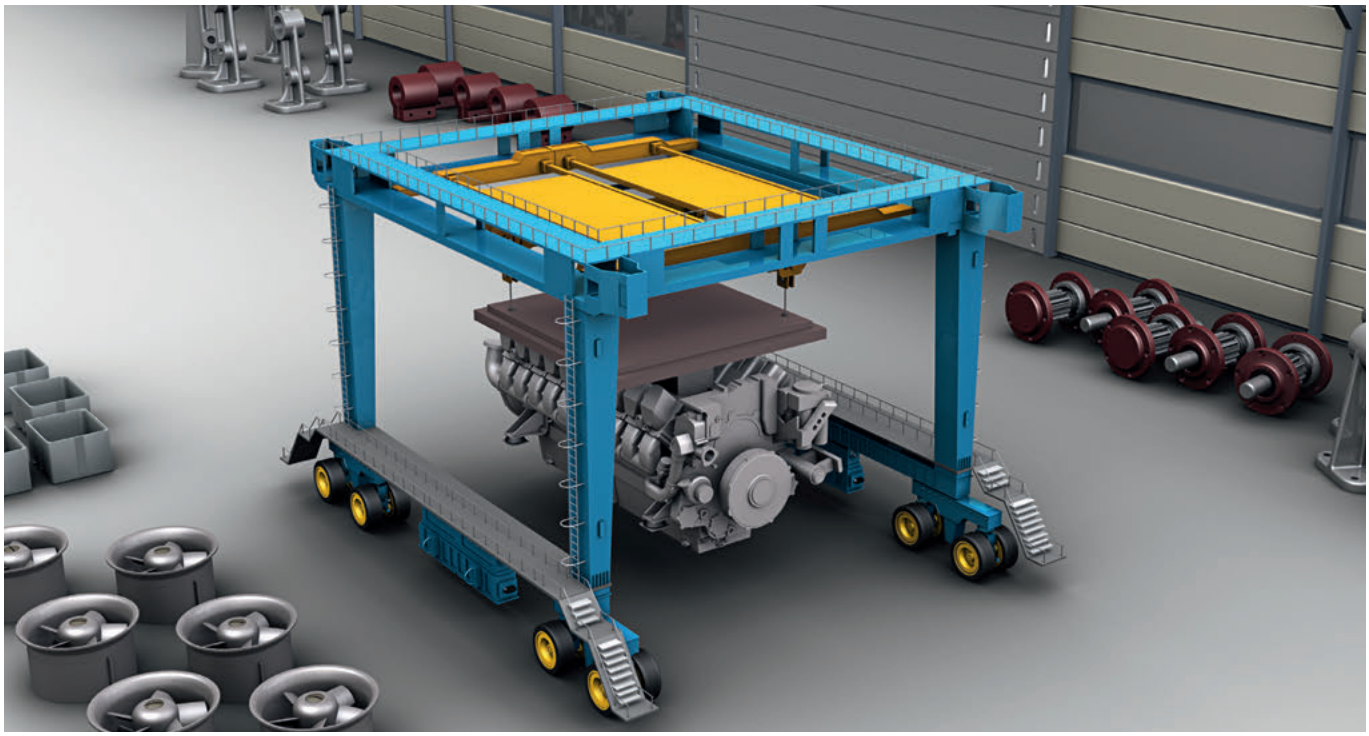
Weidmüller's relay couplers and solid-state relays feature excellent electrical characteristics. They also take advantage of the same reliable connection technology that has proven itself countless times in terminal products. This product line is ideally complimented by a wide variety of system accessories such as labelling material and end brackets. This helps to reduce your inventory overhead and stock levels. During the design of compact components, it is especially challenging to maintain minimal power loss since the small housing can exchange very little power with its surroundings. This challenge has already been mastered by Weidmüller since 1989. It was the first product in the terminal block format to come to market and it has been continually improved since then. Two compact but powerful semiconductor switches TERMOPTO and MICROOPTO also meet this challenge. The new TERMSERIES combines the proven properties of the established product lines with innovative technical solutions. A variable-voltage input has been specifically developed for the 6 mm disc design. This is the first time that the control of relay modules and solid- state relays can be used with voltages from 24 to 230 V DC/DC in this width. Another highlight is the ejector with integrated fibre-optic technology, which apart from allowing the simple and safe removal of the relay module and the solid-state relay, also illuminates the status indicator.

See for yourself, the quality of the Weidmüller's 6 mm products.


TOZ
TRZ
24V
A1+
A2-
NC
COM
14
11
12
1123370000
TRZ 24VDC 1CO EMPTY

Seamless integration is your wish
Enjoy the solutions in our TERMSERIES, MICROOPTO and SAI series

Let's connect.

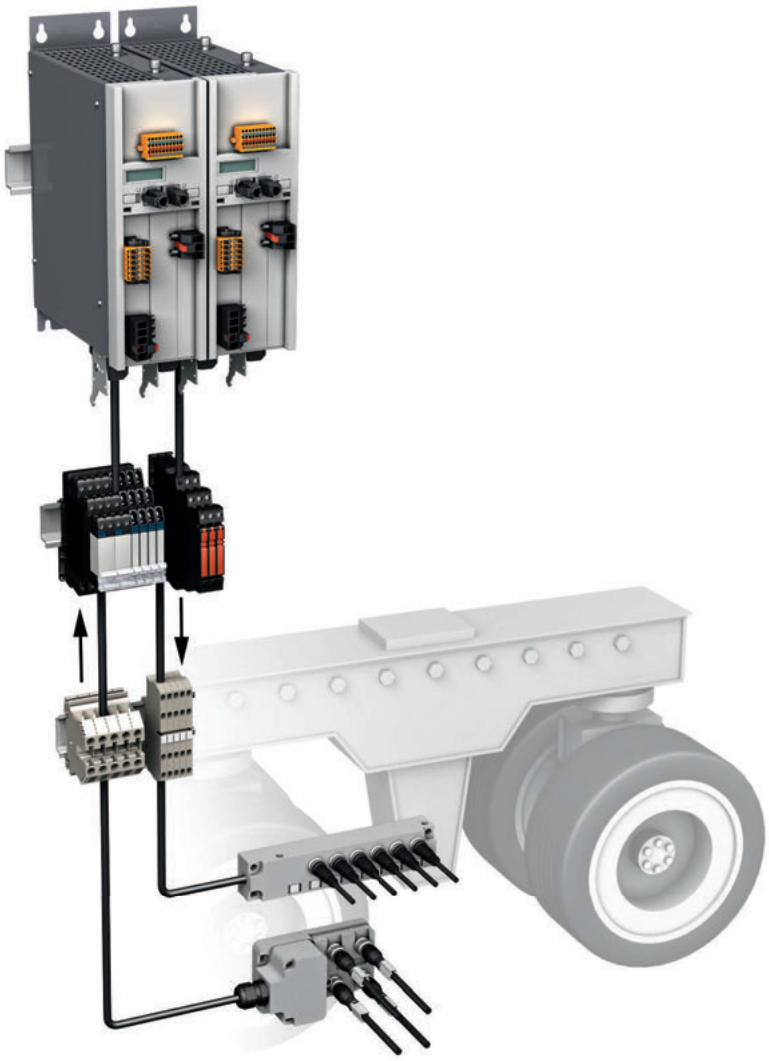


Materials and time savings in system and process automation are influenced by two critical factors. On the one hand, it is important to be able to work on complex systems with numerous sensor connections and a broad range of voltage inputs. On the other hand, the reliability of the actuator connections in terms of lifetime and speed play a major role.

The components in our TERMSERIES, MICROOPTO and SAI distributor series offer you this, in perfect combination. Our unique TERMSERIES multi-voltage input represents a universal relay coupler for all voltage inputs between 24 V and 230 V UC. These products also boast a slim terminal format and an eye-catching LED status display.

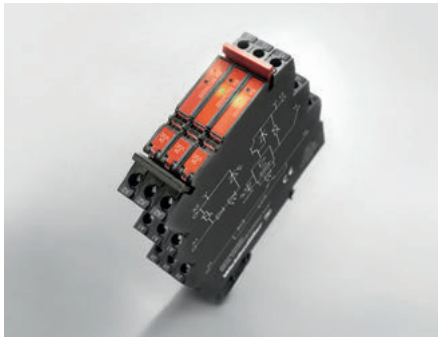
The MICROOPTO short circuit-proof semiconductor switch has the benefit of a practically unlimited lifetime, compared to traditional relay technology. Any alarms, e.g. such as those set off by a short circuit on the output side, are directly analysed by the SPS, which reports the service needed – for instance, examining the supply line or a solenoid valve – to the relevant post.

Our solution is rounded off with the SAI distributor in IP68, which ensures safe, protected and flexible signal connections in the field, such as those for the crane forward/reverse switch and for wear-and-tear monitors, overheating switches and impact sensors in materials handling technology.



TERMSERIES

- 6 and 12 mm relay couplers and semiconductor switches
- Multi-voltage input for 24 V to 230 V DC and AC
- Ideal visibility thanks to the illuminated ejector
- Partition plates and cross-connections for universal use



MICROOPTO Solenoid

- Semiconductor relays of 6 mm width earthed to mounting rail
- Short-circuit-proof output
- Short circuit alarm via signal contact
- MTBF means a long lifetime of more than 1,100 years

SAI distributors and lines

- M12 distributors which can be freely assembled in various formats
- Torsion-resistant wires available
- Very slim M8 distributor in line format
- All-metal distributor available

Reliably switch industrial loads on a permanent basis

TERMSERIES extension with increased power and longer service life

Generally speaking, industrial loads consist of either a capacitive element or an inductive element, which causes sparks during switch-on and switch-off operations. This shortens the service life of the relay contacts, thereby increasing the costs involved in running a plant.

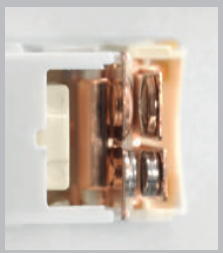
The new relay modules from our TERMSERIES family feature special contacts that have been optimised (as regards arrangement and material selection) to the severe stresses of industrial use.

Whether they're deployed in machinery and plant engineering, robot technology, wind power, offshore technology or marine engineering – the compact variants from the TERMSERIES family of products allow you to reliably switch industrial loads for a long time and permanently minimise your application's operating costs.

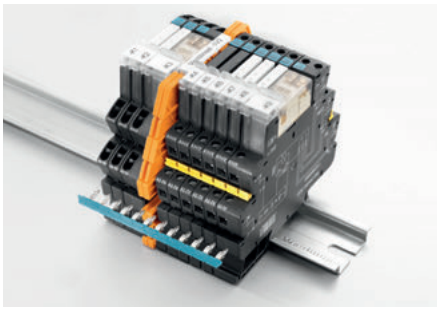
LED lamps feature an electronic ballast, with a switching regulator that guarantees a start-up peak more than 100 times higher thanks to its capacitive design. When plants are converted from conventional filament lamps to LED lighting, this quickly causes conventional relay contacts to overload. The compact and powerful TERMSERIES relays can be upgraded quickly and without any complications.

Your special advantages:

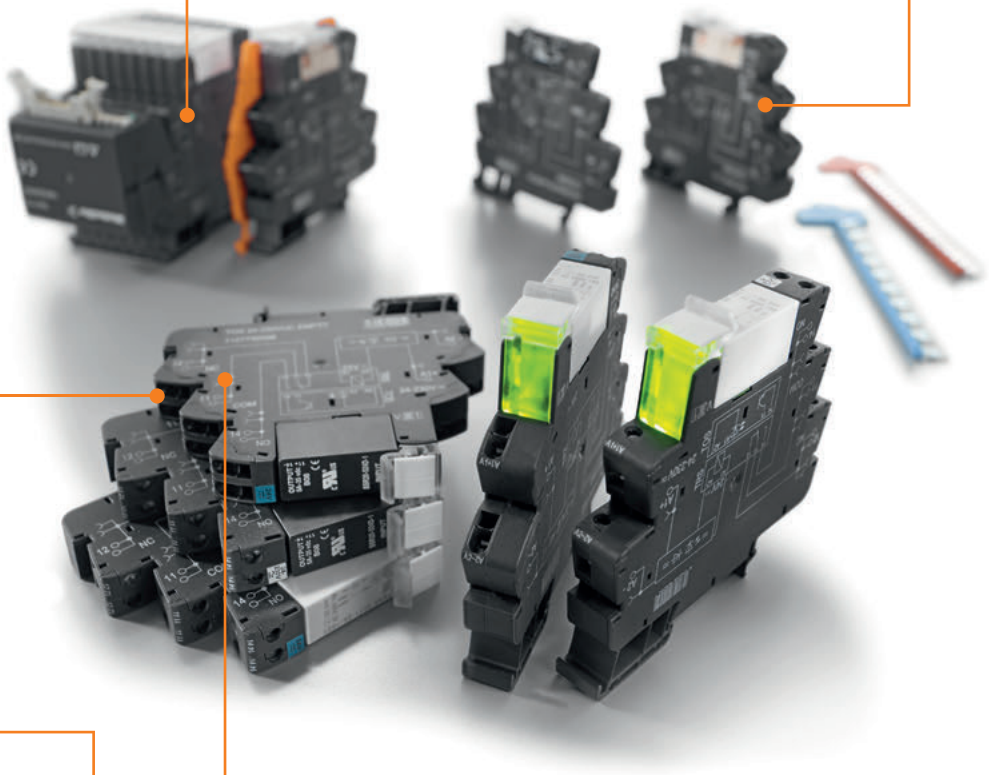
Permanently reliable
An pre-making tungsten contact prevents contacts from welding during switch-on when capacitive loads are being switched. This extends their service life.



Customised system approach
With suitable supply terminals, partition plates, cross-connections, other relay modules and solid-state relay variants, we offer you a flexible modular system to isolate and amplify signals.

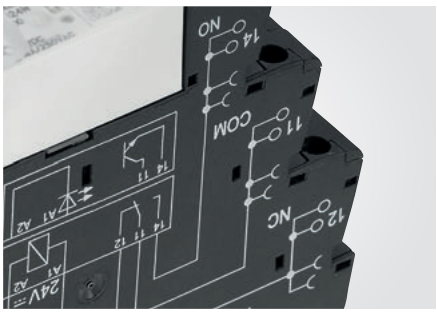


All-purpose in use
TERMSERIES is also available with the unique 24–230 V AC/DC multi-voltage input, which can be used with all relay and solid-state relay variants.

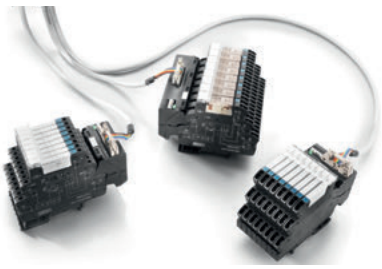


Extremely compact
Thanks to their compact width of just 12.8 mm, the modules fit just about anywhere on the DIN rail. This creates space in the cabinet.

Minimal intervention
The new TERMSERIES variants can instantly switch the full 16 A load current thanks to the integrated cross-connection system.

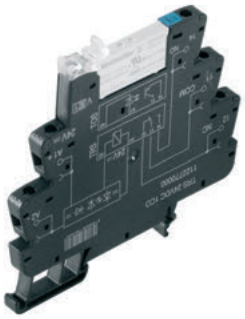


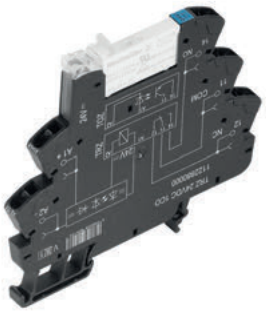
Interface adapter for TERMSERIES relays
Our pre-assembled plug-and-play solution with TERMSERIES interface adapter enables minimised cabling effort. The adapter has a universal fit and offers a genuine space advantage in interaction with the TERMSERIES products with identical contours.

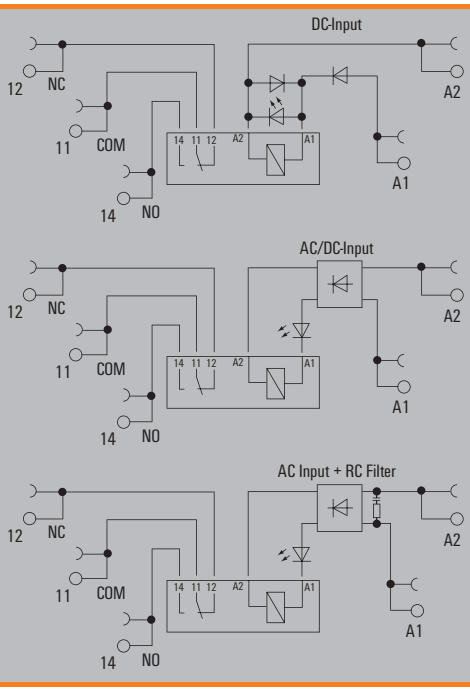


1 CO contact
AC/DC/UC coil

- Space saving, just 6.4 mm modular width
- AgNi contact
- Screw and tension clamp connection







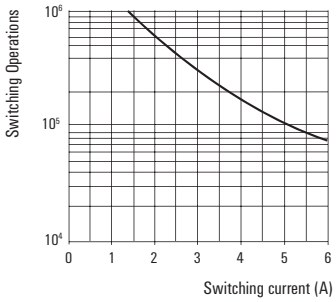
Technical data

Output			
Rated switching voltage / Continuous current		250 V AC / 6 A	
Max. switching voltage, AC		250 V	
Inrush current		20 A / 20 ms	
Min. switching power		100 mA / 5 V, 12 V / 10 mA, 24 V / 1 mA	
DC / AC Switching capacity (resistive), max.		144 W @ 24 V / 1500 VA	
Contact material		AgNi	
Mechanical service life		5 x 10^6 switching cycles	
Max. switching frequency at rated load		0.1 Hz	
Rated data			
Ambient temperature (operational)		-40 °C...60 °C	
Storage temperature		-40 °C...85 °C	
Humidity		5–95% rel. humidity, T_u = 40°C, no condensation	
Approvals		CE; cULus; EAC; GL	
Insulation coordination (EN 50178)			
Rated voltage		300 V	
Impulse withstand voltage		6 kV (1.2/50 µs)	
Dielectric strength input – output		4 kV_{eff} / 1 min.	
Dielectric strength, contact / contact			
Dielectric strength to mounting rail		4 kV_{eff} / 1 min.	
Creepage and clearance distance input – output		≥ 5.5 mm	
Overvoltage category		III	
Pollution degree		2	
Dimensions		**Screw connection**	**Tension clamp connection**
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.14 / 2.5	1.5 / 0.14 / 2.5
Depth x width x height	mm	88 / 6.4 / 90	88 / 6.4 / 90
Note		Accessories and dimensional drawings: refer to the TERMSERIES Accessories page.	

Applications

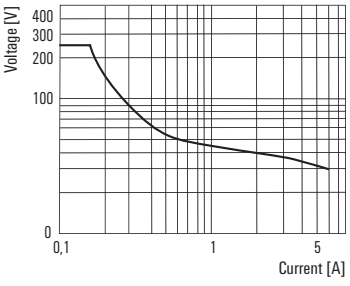
Electrical endurance

230 V AC resistive load

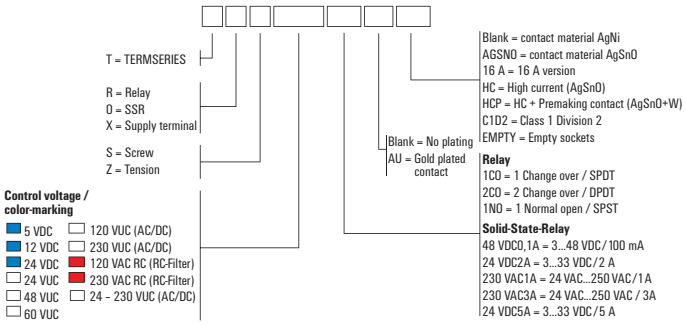


DC load breaking capacity

Resistive load



1 CO contact
AC/DC/UC coil



Ordering data

	5 V DC	12 V DC	24 V DC	24 V UC	48 V UC
Input					
Rated control voltage	5 V DC ±20 %	12 V DC ±20 %	24 V DC ±20 %	24 V UC ±10 %	48 V UC ±10 %
Rated current AC / DC	/ 35.8 mA	/ 18 mA	/ 10 mA	11.7 mA / 6.4 mA	8 mA / 7 mA
Power rating	200 mW	210 mW	240 mW	270 mVA / 154 mW	240 mVA / 192 mW
Pull-in/drop-out voltage, typ.	3.3 V / 1 V DC	8 V / 2 V DC	16 V / 4 V DC	16.5 V / 5.5 V AC 16.5 V / 5.5 V DC	29 V / 10 V AC 29 V / 10 V DC
Pull-in/drop-out current, typ.	21.6 mA / 8 mA DC	9 mA / 3 mA DC	7 mA / 2 mA DC	4 mA / 1.2 mA AC 4 mA / 1.2 mA DC	4 mA / 1.2 mA AC 4 mA / 1.2 mA DC
Status indicator	Green LED	Green LED	Green LED	Green LED	Green LED
Protective circuit	Integrated free-wheel diode, Reverse polarity protection	Integrated free-wheel diode, Reverse polarity protection	Integrated free-wheel diode, Reverse polarity protection	Rectifier	Rectifier
Output					
Switch-on delay	< 8 ms	< 7 ms	< 6 ms	< 4 ms	< 8 ms
Switch-off delay	< 4 ms	< 8 ms	< 7 ms	< 1.2 ms	< 4 ms

Ordering data						
Screw connection	Type	TRS 5VDC 1CO	TRS 12VDC 1CO	TRS 24VDC 1CO	TRS 24VUC 1CO	TRS 48VUC 1CO
	Order No.	**1122740000**	**1122750000**	**1122770000**	**1122780000**	**1122790000**
Tension clamp conn.	Type	TRZ 5VDC 1CO	TRZ 12VDC 1CO	TRZ 24VDC 1CO	TRZ 24VUC 1CO	TRZ 48VUC 1CO
	Order No.	**1122860000**	**1122870000**	**1122880000**	**1122890000**	**1122900000**
Note		Spare relay Type: RSS113005 Orderno.: 4061580000	Spare relay Type: RSS113012 Orderno.: 4061610000	Spare relay Type: RSS113024 Orderno.: 4060120000	Spare relay Type: RSS113024 Orderno.: 4060120000	Spare relay Type: RSS113024 Orderno.: 4060120000

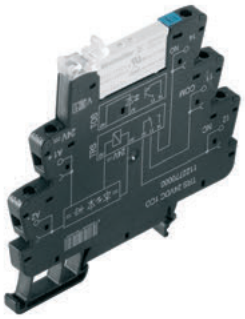
Ordering data

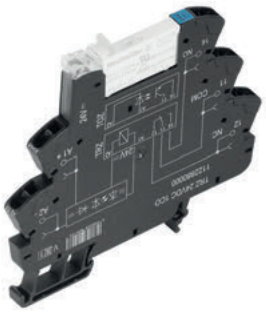
	60 V UC	120 V UC	230 V UC	120 V AC RC	230 V AC RC
Input					
Rated control voltage	60 V UC ±10 %	120 V UC ±10 %	230 V UC ±10%	120 V AC ±10 %	230 V AC ±10 %
Rated current AC / DC	6.1 mA / 3,3 mA	4 mA / 3.5 mA	3.5 mA / 2.9 mA	7 mA /	10.1 mA /
Power rating	360 mW	0.48 VA, 420 mW	0.8 VA, 700 mW	0.84 VA	2.3 VA
Pull-in/drop-out voltage, typ.	37 V / 10 V AC 40 V / 10 V DC	79 V / 60 V AC 98 V / 62 V DC	159 V / 89 V AC 159 V / 89 V DC	79 V / 60 V AC	145 V / 85 V AC
Pull-in/drop-out current, typ.		4 mA / 2.5 mA AC	2.2 mA / 1.3 mA AC 1.7 mA / 0.7 mA DC	4 mA / 2.5 mA AC	9.13 mA / 4.78 mA AC
Status indicator	Green LED	Green LED	Green LED	Green LED	Green LED
Protective circuit	Rectifier	Rectifier	Rectifier	Rectifier	Rectifier
Output					
Switch-on delay	< 6 ms	< 8 ms	< 22 ms	< 5.3 ms	< 22 ms
Switch-off delay	< 6.5 ms	< 7 ms	< 30 ms	< 4 ms	< 30 ms

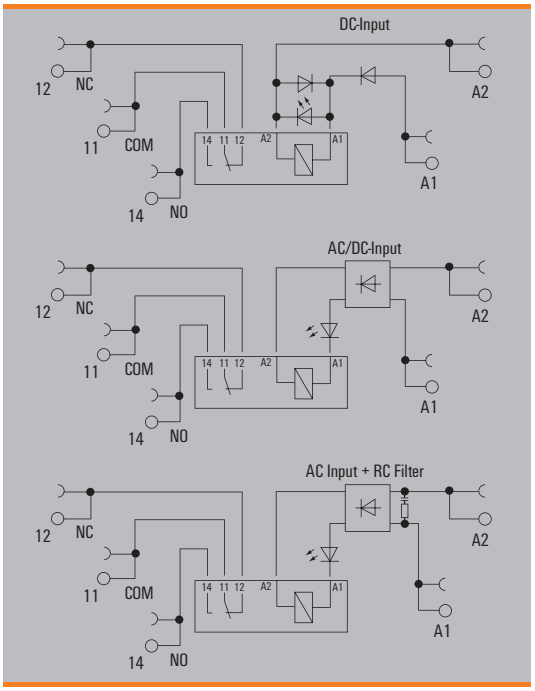
Ordering data						
Screw connection	Type	TRS 60VUC 1CO	TRS 120VUC 1CO	TRS 230VUC 1CO	TRS 120VAC RC 1CO	TRS 230VAC RC 1CO
	Order No.	**1122800000**	**1122810000**	**1122820000**	**1122830000**	**1122840000**
Tension clamp conn.	Type	TRZ 60VUC 1CO	TRZ 120VUC 1CO	TRZ 230VUC 1CO	TRZ 120VAC RC 1CO	TRZ 230VAC RC 1CO
	Order No.	**1122910000**	**1122920000**	**1122930000**	**1122940000**	**1122950000**
Note		Spare relay Type: RSS113060 Orderno.: 4061630000	Spare relay Type: RSS113060 Orderno.: 4061630000	Spare relay Type: RSS113060 Orderno.: 4061630000	Spare relay Type: RSS113060 Orderno.: 4061630000	Spare relay Type: RSS113060 Orderno.: 4061630000

1 CO contact with hard gold-plated contacts
AC/DC/UC coil

- Space saving, just 6.4 mm modular width
- AgNi contact with gold plating
- Screw and tension clamp connection







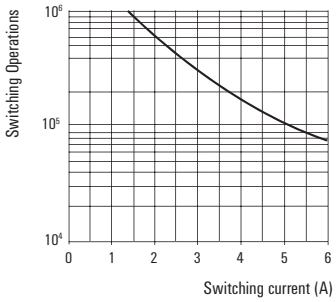
Technical data

Output			
Rated switching voltage / Continuous current		250 V AC / 6 A	
Max. switching voltage, AC		250 V	
Inrush current		20 A / 20 ms	
Min. switching power		1 V / 1 mA	
DC / AC Switching capacity (resistive), max.		144 W @ 24 V / 1500 VA	
Contact material		AgNi 5µm Au	
Mechanical service life		5 x 10^6 switching cycles	
Max. switching frequency at rated load		0.1 Hz	
Rated data			
Ambient temperature (operational)		-40 °C...60 °C	
Storage temperature		-40 °C...85 °C	
Humidity		5–95% rel. humidity, T_u = 40°C, no condensation	
Approvals		CE; cULus; EAC; GL	
Insulation coordination (EN 50178)			
Rated voltage		300 V	
Impulse withstand voltage		6 kV (1.2/50 µs)	
Dielectric strength input – output		4 kV_{eff} / 1 min.	
Dielectric strength, contact / contact			
Dielectric strength to mounting rail		4 kV_{eff} / 1 min.	
Creepage and clearance distance input – output		≥ 5.5 mm	
Overvoltage category		III	
Pollution degree		2	
Dimensions		**Screw connection**	**Tension clamp connection**
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.14 / 2.5	1.5 / 0.14 / 2.5
Depth x width x height	mm	88 / 6.4 / 90	88 / 6.4 / 90
Note		Accessories and dimensional drawings: refer to the TERMSERIES Accessories page.	

Applications

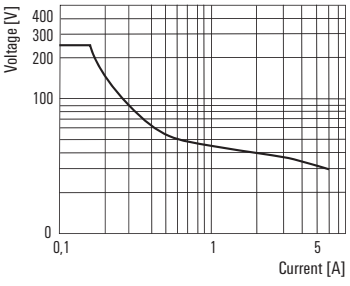
Electrical endurance

230 V AC resistive load

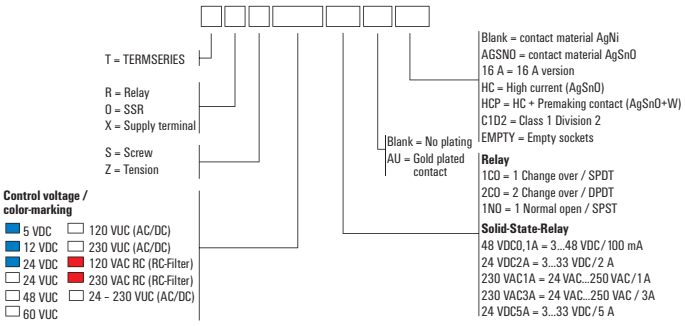


DC load breaking capacity

Resistive load



1 CO contact with hard gold-plated contacts
AC/DC/UC coil



Ordering data	5 V DC	12 V DC	24 V DC	24 V UC	48 V UC
Input					
Rated control voltage	5 V DC ±20 %	12 V DC ±20 %	24 V DC ±20 %	24 V UC ±10 %	48 V UC ±10 %
Rated current AC / DC	/ 35.8 mA	/ 18 mA	/ 10 mA	11.7 mA / 6.4 mA	8 mA / 7 mA
Power rating	200 mW	210 mW	240 mW	270 mVA / 154 mW	240 mVA / 192 mW
Pull-in/drop-out voltage, typ.	3.3 V / 1 V DC	8 V / 2 V DC	16 V / 4 V DC	16.5 V / 5.5 V AC 16.5 V / 5.5 V DC	29 V / 10 V AC 29 V / 10 V DC
Pull-in/drop-out current, typ.	21.6 mA / 8 mA DC	9 mA / 3 mA DC	7 mA / 2 mA DC	4 mA / 1.2 mA AC 4 mA / 1.2 mA DC	4 mA / 1.2 mA AC 4 mA / 1.2 mA DC
Status indicator	Green LED	Green LED	Green LED	Green LED	Green LED
Protective circuit	Integrated free-wheel diode, Reverse polarity protection	Integrated free-wheel diode, Reverse polarity protection	Integrated free-wheel diode, Reverse polarity protection	Rectifier	Rectifier
Output					
Switch-on delay	< 8 ms	< 7 ms	< 6 ms	< 4 ms	< 8 ms
Switch-off delay	< 4 ms	< 8 ms	< 7 ms	< 1.2 ms	< 4 ms

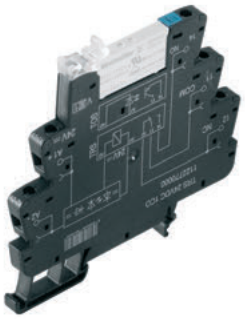
Ordering data						
Screw connection	Type	TRS 5VDC 1CO AU	TRS 12VDC 1CO AU	TRS 24VDC 1CO AU	TRS 24VUC 1CO AU	TRS 48VUC 1CO AU
	Order No.	**1122980000**	**1122990000**	**1123000000**	**1123010000**	**1123020000**
Tension clamp conn.	Type	TRZ 5VDC 1CO AU	TRZ 12VDC 1CO AU	TRZ 24VDC 1CO AU	TRZ 24VUC 1CO AU	TRZ 48VUC 1CO AU
	Order No.	**1123100000**	**1123110000**	**1123120000**	**1123130000**	**1123140000**
Note		Spare relay Type: RSS112005 Orderno.: 1174540000	Spare relay Type: RSS112012 Orderno.: 1220670000	Spare relay Type: RSS112024 Orderno.: 4061590000	Spare relay Type: RSS112024 Orderno.: 4061590000	Spare relay Type: RSS112024 Orderno.: 4061590000

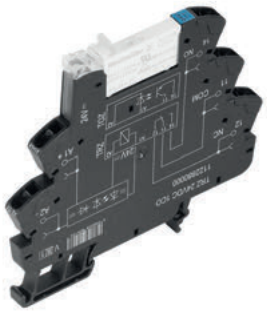
Ordering data	60 V UC	120 V UC	230 V UC	120 V AC RC	230 V AC RC
Input					
Rated control voltage	60 V UC ±10 %	120 V UC ±10 %	230 V UC ±10%	120 V AC ±10 %	230 V AC ±10 %
Rated current AC / DC	6.1 mA / 3,3 mA	4 mA / 3.5 mA	3.5 mA / 2.9 mA	7 mA /	10.1 mA /
Power rating	360 mW	0.48 VA, 420 mW	0.8 VA, 700 mW	0.84 VA	2.3 VA
Pull-in/drop-out voltage, typ.	37 V / 10 V AC 40 V / 10 V DC	79 V / 60 V AC 98 V / 62 V DC	159 V / 89 V AC 159 V / 89 V DC	79 V / 60 V AC	145 V / 85 V AC
Pull-in/drop-out current, typ.		4 mA / 2.5 mA AC	2.2 mA / 1.3 mA AC 1.7 mA / 0.7 mA DC	4 mA / 2.5 mA AC	9.13 mA / 4.78 mA AC
Status indicator	Green LED	Green LED	Green LED	Green LED	Green LED
Protective circuit	Rectifier	Rectifier	Rectifier	Rectifier	Rectifier
Output					
Switch-on delay	< 6 ms	< 8 ms	< 22 ms	< 5.3 ms	< 22 ms
Switch-off delay	< 6.5 ms	< 7 ms	< 30 ms	< 4 ms	< 30 ms

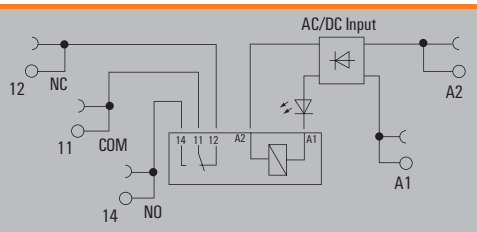
Ordering data						
Screw connection	Type	TRS 60VUC 1CO AU	TRZ 120VUC 1CO AU	TRS 230VUC 1CO AU	TRS 120VAC RC 1CO AU	TRS 230VAC RC 1CO AU
	Order No.	**1123030000**	**1123170000**	**1123050000**	**1123070000**	**1123080000**
Tension clamp conn.	Type	TRZ 60VUC 1CO AU	TRS 120VUC 1CO AU	TRZ 230VUC 1CO AU	TRZ 120VAC RC 1CO AU	TRZ 230VAC RC 1CO AU
	Order No.	**1123150000**	**1123040000**	**1123180000**	**1123190000**	**1123200000**
Note		Spare relay Type: RSS112060 Orderno.: 4061600000	Spare relay Type: RSS112060 Orderno.: 4061600000	Spare relay Type: RSS112060 Orderno.: 4061600000	Spare relay Type: RSS112060 Orderno.: 4061600000	Spare relay Type: RSS112060 Orderno.: 4061600000

1 CO contact
multi-voltage input

- Space saving, just 6.4 mm modular width
- AgNi contact
- Screw and tension clamp connection
- Multi-voltage input: 24 to 230 V UC in one module







Technical data

Output			
Rated switching voltage / Continuous current		250 V AC / 6 A	
Max. switching voltage, AC		250 V	
Inrush current		20 A / 20 ms	
Min. switching power		100 mA / 5 V, 12 V / 10 mA, 24 V / 1 mA	
DC / AC Switching capacity (resistive), max.		144 W @ 24 V / 1500 VA	
Contact material		AgNi	
Mechanical service life		5 x 10^6 switching cycles	
Max. switching frequency at rated load		0.1 Hz	
Rated data			
Ambient temperature (operational)		-40 °C...60 °C	
Storage temperature		-40 °C...85 °C	
Humidity		5–95% rel. humidity, T_u = 40°C, no condensation	
Approvals		CE; cULus; EAC; GL	
Insulation coordination (EN 50178)			
Rated voltage		300 V	
Impulse withstand voltage		6 kV (1.2/50 µs)	
Dielectric strength input – output		4 kV_{eff} / 1 min.	
Dielectric strength, contact / contact			
Dielectric strength to mounting rail		4 kV_{eff} / 1 min.	
Creepage and clearance distance input – output		≥ 5.5 mm	
Overvoltage category		III	
Pollution degree		2	
Dimensions		**Screw connection**	**Tension clamp connection**
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.14 / 2.5	1.5 / 0.14 / 2.5
Depth x width x height	mm	88 / 6.4 / 90	88 / 6.4 / 90
Note		Accessories and dimensional drawings: refer to the TERMSERIES Accessories page.	

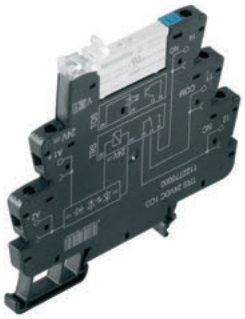
Ordering data

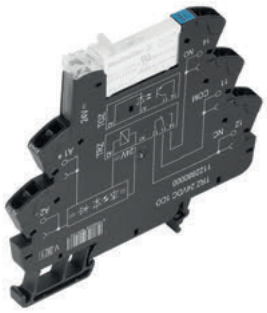
	24 V - 230 V UC
Input	
Rated control voltage	24...230 V UC ±10 %
Rated current AC / DC	4 mA @ 230 V AC ±10 %, 28 mA @ 24 V AC ±10 % / 22 mA @ 24 V DC ±10 %
Power rating	530 mW @ 24 V DC, 930 mVA @ 230 V AC
Pull-in/drop-out voltage, typ.	11.5 V / 6 V AC 11.5 V / 5 V DC
Pull-in/drop-out current, typ.	
Status indicator	Green LED
Protective circuit	Rectifier
Output	
Switch-on delay	< 22 ms
Switch-off delay	< 100 ms

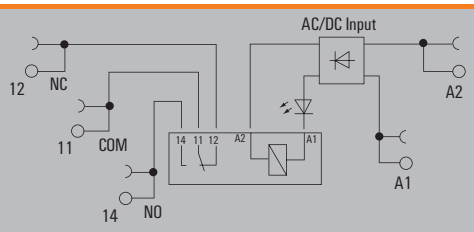
Ordering data		
Screw connection	Type	TRS 24-230VUC 1CO
	Order No.	**1122850000**
Tension clamp conn.	Type	TRZ 24-230VUC 1CO
	Order No.	**1122970000**
Note		Spare relay Type: RSS113024 Orderno.: 4060120000

1 CO contact with hard gold-plated contacts
multi-voltage input

- Space saving, just 6.4 mm modular width
- AgNi contact with gold plating
- Screw and tension clamp connection
- Multi-voltage input: 24 to 230 V UC in one module







Technical data

Output		
Rated switching voltage / Continuous current		250 V AC / 6 A
Max. switching voltage, AC		250 V
Inrush current		20 A / 20 ms
Min. switching power		1 V / 1 mA
DC / AC Switching capacity (resistive), max.		144 W @ 24 V / 1500 VA
Contact material		AgNi 5µm Au
Mechanical service life		5 x 10^6 switching cycles
Max. switching frequency at rated load		0.1 Hz
Rated data		
Ambient temperature (operational)		-40 °C...60 °C
Storage temperature		-40 °C...85 °C
Humidity		5–95% rel. humidity, T_u = 40°C, no condensation
Approvals		CE; cULus; EAC; GL
Insulation coordination (EN 50178)		
Rated voltage		300 V
Impulse withstand voltage		6 kV (1.2/50 µs)
Dielectric strength input – output		4 kV_{eff} / 1 min.
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		4 kV_{eff} / 1 min.
Creepage and clearance distance input – output		≥ 5.5 mm
Overvoltage category		III
Pollution degree		2

Dimensions		Screw connection	Tension clamp connection
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.14 / 2.5	1.5 / 0.14 / 2.5
Depth x width x height	mm	88 / 6.4 / 90	88 / 6.4 / 90
Note		Accessories and dimensional drawings: refer to the TERMSERIES Accessories page.	

Ordering data

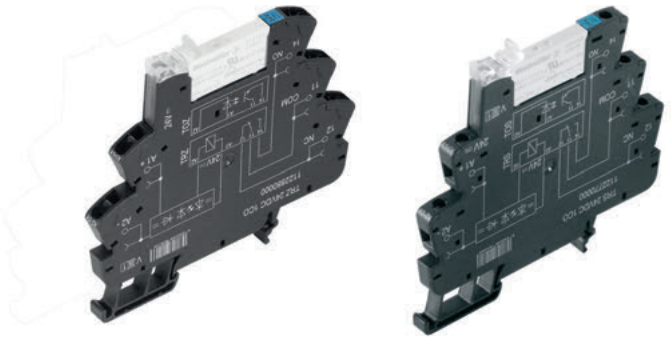
	24 V - 230 V UC
Input	
Rated control voltage	24...230 V UC ±10 %
Rated current AC / DC	4 mA @ 230 V AC ±10 %, 28 mA @ 24 V AC ±10 % / 22 mA @ 24 V DC ±10 %
Power rating	530 mW @ 24 V DC, 930 mVA @ 230 V AC
Pull-in/drop-out voltage, typ.	11.5 V / 6 V AC 11.5 V / 5 V DC
Pull-in/drop-out current, typ.	
Status indicator	Green LED
Protective circuit	Rectifier
Output	
Switch-on delay	< 22 ms
Switch-off delay	< 100 ms

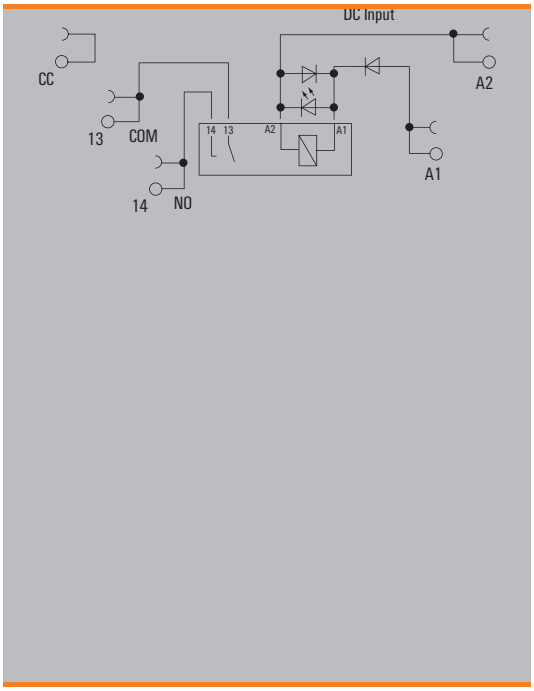
Ordering data		
Screw connection	Type	TRS 24-230VUC 1CO AU
	Order No.	**1123090000**
Tension clamp conn.	Type	TRZ 24-230VUC 1CO AU
	Order No.	**1123210000**
Note		Spare relay Type: RSS112024 Orderno.: 4061590000

1 NO contact (actuator)

- Space-saving, only 6.4 mm wide
- AgNi contact
- Screw and tension clamp connection
- 24 V DC actuator version:

Bridgeable, potential-free connection in the output (CC)





Technical data

Output			
Rated switching voltage / Continuous current		250 V AC / 6 A	
Max. switching voltage, AC		250 V	
Inrush current		20 A / 20 ms	
Min. switching power		100 mA / 5 V, 12 V / 10 mA, 24 V / 1 mA	
DC / AC Switching capacity (resistive), max.		144 W @ 24 V / 1500 VA	
Contact material		AgNi	
Mechanical service life		5 x 10^6 switching cycles	
Max. switching frequency at rated load		0.1 Hz	
Rated data			
Ambient temperature (operational)		-40 °C...60 °C	
Storage temperature		-40 °C...85 °C	
Humidity		5–95% rel. humidity, T_u = 40°C, no condensation	
Approvals		CE; EAC	
Insulation coordination (EN 50178)			
Rated voltage		300 V	
Impulse withstand voltage		6 kV (1.2/50 µs)	
Dielectric strength input – output		4 kV_{eff} / 1 min.	
Dielectric strength, contact / contact			
Dielectric strength to mounting rail		4 kV_{eff} / 1 min.	
Creepage and clearance distance input – output		≥ 5.5 mm	
Overvoltage category		III	
Pollution degree		2	
Dimensions		**Screw connection**	**Tension clamp connection**
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.14 / 1.5	1.5 / 0.14 / 1.5
Depth x width x height	mm	88 / 6.4 / 90	88 / 6.4 / 90
Note		Accessories and dimensional drawings: refer to the TERMSERIES Accessories page.	

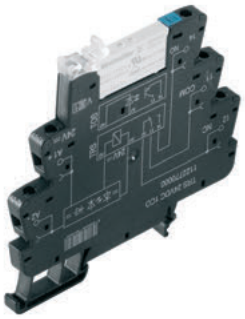
Ordering data

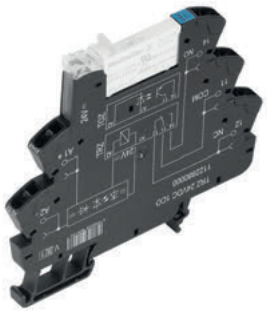
	24 V DC ACT
Input	
Rated control voltage	24 V DC ±20 %
Rated current AC / DC	/ 10 mA
Power rating	240 mW
Pull-in/drop-out voltage, typ.	16 V / 4 V DC
Pull-in/drop-out current, typ.	7 mA / 2 mA DC
Status indicator	Green LED
Protective circuit	Integrated free-wheel diode, Reverse polarity protection
Output	
Switch-on delay	< 6 ms
Switch-off delay	< 7 ms

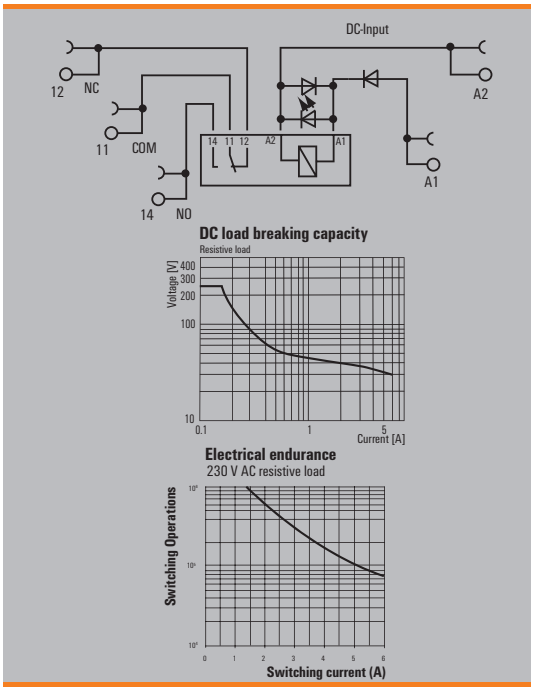
Ordering data		
Screw connection	Type	TRS 24VDC ACT
	Order No.	**1381900000**
Tension clamp conn.	Type	TRZ 24VDC ACT
	Order No.	**1391670000**
Note		

1 CO contact (AgSnO)

- Space-saving, only 6.4 mm wide
- AgSnO contact
- For capacitive and inductive loads
- Screw and tension clamp connection







Technical data

Output		
Rated switching voltage / Continuous current		250 V AC / 6 A
Max. switching voltage, AC		250 V
Inrush current		20 A / 20 ms
Min. switching power		100 mA / 5 V, 12 V / 10 mA, 24 V / 1 mA
DC / AC Switching capacity (resistive), max.		144 W @ 24 V / 1500 VA
Contact material		AgSnO
Mechanical service life		5 x 10^6 switching cycles
Max. switching frequency at rated load		0.1 Hz
Rated data		
Ambient temperature (operational)		-40 °C...60 °C
Storage temperature		-40 °C...85 °C
Humidity		5–95% rel. humidity, T_u = 40°C, no condensation
Approvals		CE
Insulation coordination (EN 50178)		
Rated voltage		300 V
Impulse withstand voltage		6 kV (1.2/50 µs)
Dielectric strength input – output		4 kV_{eff} / 1 min.
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		4 kV_{eff} / 1 min.
Creepage and clearance distance input – output		≥ 5.5 mm
Overvoltage category		III
Pollution degree		2

Dimensions		Screw connection	Tension clamp connection
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.14 / 2.5	1.5 / 0.14 / 2.5
Depth x width x height	mm	88 / 6.4 / 90	88 / 6.4 / 90
Note			

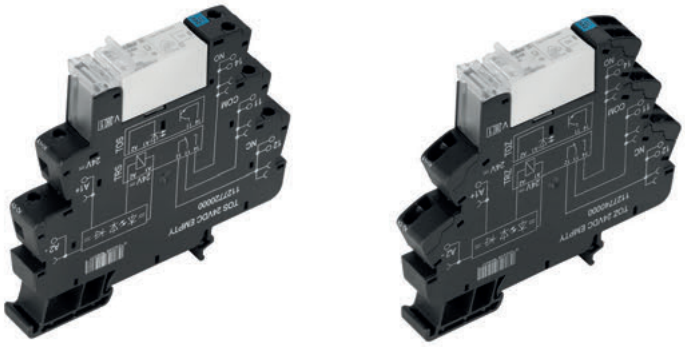
Ordering data

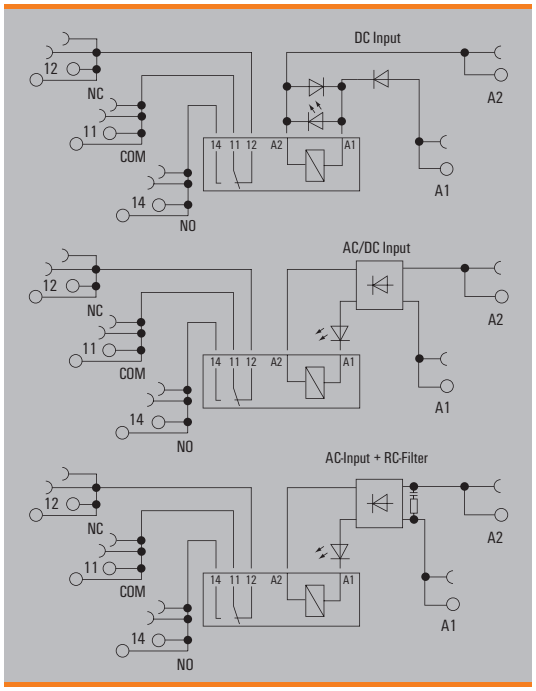
	24 V DC
Input	
Rated control voltage	24 V DC ±20 %
Rated current AC / DC	/ 10 mA
Power rating	240 mW
Pull-in/drop-out voltage, typ.	16 V / 4 V DC
Pull-in/drop-out current, typ.	7 mA / 2 mA DC
Status indicator	Green LED
Protective circuit	Integrated free-wheel diode, Reverse polarity protection
Output	
Switch-on delay	< 6 ms
Switch-off delay	< 7 ms

Ordering data		
Screw connection	Type	TRS 24VDC 1CO AGSNO
	Order No.	**1984540000**
Tension clamp conn.	Type	TRZ 24VDC 1CO AGSNO
	Order No.	**1984550000**
Note		

1 CO contact
AC / DC / UC coil

- Space-saving, 12.8 mm wide
- 16 A AgNi contact
- Internal cross-connection of the output terminals
- Screw and tension clamp connection



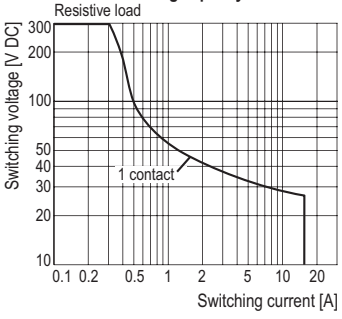


Technical data

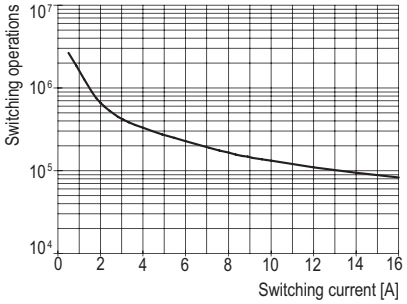
Output			
Rated switching voltage / Continuous current		250 V AC / 16 A	
Max. switching voltage, AC		250 V	
Inrush current		30 A / 4 s	
Min. switching power		100 mA / 5 V, 10 V / 10 mA	
DC / AC Switching capacity (resistive), max.		384 W @ 24 V / 4000 VA	
Contact material		AgNi	
Mechanical service life		30 x 10^6 switching cycles	
Max. switching frequency at rated load		0.1 Hz	
Rated data			
Ambient temperature (operational)		-40 °C...60 °C	
Storage temperature		-40 °C...85 °C	
Humidity		5–95% rel. humidity, T_u = 40°C, no condensation	
Approvals		CE	
Insulation coordination (EN 50178)			
Rated voltage		300 V	
Impulse withstand voltage		6 kV (1.2/50 µs)	
Dielectric strength input – output		1.2 kV_{eff} / 5 s	
Dielectric strength, contact / contact			
Dielectric strength to mounting rail		4 kV_{eff} / 1 min.	
Creepage and clearance distance input – output		≥ 5.5 mm	
Overvoltage category		III	
Pollution degree		2	
Dimensions		**Screw connection**	**Tension clamp connection**
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.14 / 2.5	1.5 / 0.14 / 2.5
Depth x width x height	mm	88 / 12.8 / 90	88 / 12.8 / 90
Note			

Applications

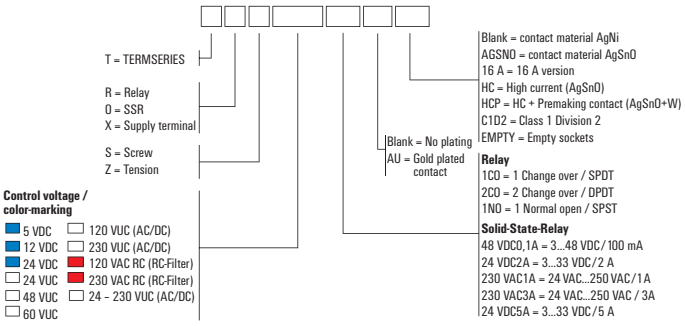
DC load breaking capacity
Resistive load



Electrical endurance
250 V AC resistive load



1 CO contact
AC / DC / UC coil



Ordering data	5 V DC	12 V DC	24 V DC	24 V UC	48 V UC
Input					
Rated control voltage	5 V DC ±20 %	12 V DC ±20 %	24 V DC ±20 %	24 V UC ±10 %	48 V UC ±10 %
Rated current AC / DC	/ 80 mA	/ 33.3 mA	/ 20 mA	16 mA / 14 mA	9 mA / 7 mA
Power rating	400 mW	420 mW	480 mW	390 mVA / 350 mW	340 mW / 0.4 VA
Pull-in/drop-out voltage, typ.	3 V / 1.6 V DC	8 V / 3 V DC	18 V / 3.5 V DC	16 V / 9 V AC 18 V / 8 V DC	29 V / 11 V AC 33 V / 11 V DC
Pull-in/drop-out current, typ.	21.6 mA / 8 mA DC	21 mA / 5 mA DC	10 mA / 3 mA DC	11 mA / 4 mA AC 10 mA / 2 mA DC	6 mA / 3 mA AC 5 mA / 1.5 mA DC
Status indicator	Green LED	Green LED	Green LED	Green LED	Green LED
Protective circuit	Integrated free-wheel diode, Reverse polarity protection	Integrated free-wheel diode, Reverse polarity protection	Integrated free-wheel diode, Reverse polarity protection	Rectifier	Rectifier
Output					
Switch-on delay	< 11 ms	< 11 ms	< 11 ms	< 11 ms	< 11 ms
Switch-off delay	< 7 ms	< 8 ms	< 10 ms	< 7 ms	< 7 ms

Ordering data						
Screw connection	Type	TRS 5VDC 1CO 16A	TRS 12VDC 1CO 16A	TRS 24VDC 1CO 16A	TRS 24VUC 1CO 16A	TRS 48VUC 1CO 16A
	Order No.	**1479650000**	**1479670000**	**1479680000**	**1479690000**	**1479700000**
Tension clamp conn.	Type	TRZ 5VDC 1CO 16A	TRZ 12VDC 1CO 16A	TRZ 24VDC 1CO 16A	TRZ 24VUC 1CO 16A	TRZ 48VUC 1CO 16A
	Order No.	**1479800000**	**1479820000**	**1479840000**	**1479850000**	**1479870000**
Note						

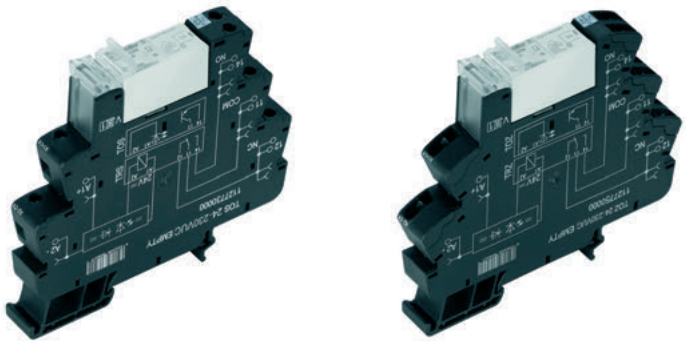
Ordering data	60 V UC	120 V UC	230 V UC	120 V AC RC	230 V AC RC
Input					
Rated control voltage	60 V UC ±10 %	120 V UC ±10 %	230 V UC ±5 %	120 V AC ±10 %	230 V AC ±5 %
Rated current AC / DC	8 mA / 6.1 mA	3.5 mA / 3.5 mA	4 mA / 4 mA	5.5 mA /	10 mA /
Power rating	480 mVA / 360 mW	420 mVA / 420 mW	920 mVA / 920 mW	0.73 VA	2.3 VA
Pull-in/drop-out voltage, typ.	36 V / 13 V AC 40 V / 14 V DC	64 V / 26 V AC 69 V / 22 V DC	112 V / 43 V AC 129 V / 36 V DC	65 V / 23 V AC	112 V / 45 V AC
Pull-in/drop-out current, typ.	5 mA / 2.5 mA AC 4 mA / 1.2 mA DC	2 mA / 1 mA AC 2 mA / 1 mA DC	2 mA / 1 mA AC 2 mA / 1 mA DC	3.5 mA / 1 mA AC	5 mA / 2 mA AC
Status indicator	Green LED	Green LED	Green LED	Green LED	Green LED
Protective circuit	Rectifier	Rectifier	Rectifier	Rectifier	Rectifier
Output					
Switch-on delay	< 11 ms	< 11 ms	< 14 ms	< 11 ms	< 14 ms
Switch-off delay	< 7 ms	< 7 ms	< 22 ms	< 7 ms	< 12 ms

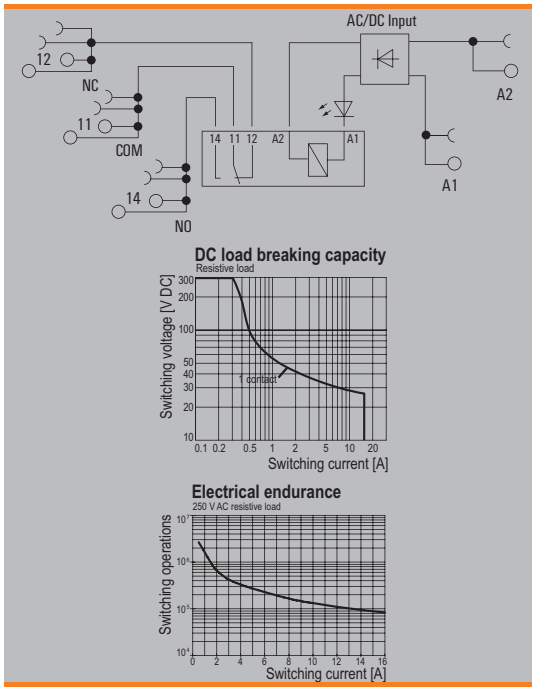
Ordering data						
Screw connection	Type	TRS 60VUC 1CO 16A	TRS 120VUC 1CO 16A	TRS 230VUC 1CO 16A	TRS 120VAC RC 1CO 16A	TRS 230VAC RC 1CO 16A
	Order No.	**1479710000**	**1479730000**	**1479740000**	**1479750000**	**1479760000**
Tension clamp conn.	Type	TRZ 60VUC 1CO 16A	TRZ 120VUC 1CO 16A	TRZ 230VUC 1CO 16A	TRZ 120VAC RC 1CO 16A	TRZ 230VAC RC 1CO 16A
	Order No.	**1479880000**	**1479890000**	**1479900000**	**1479910000**	**1479920000**
Note						

1 CO contact

Variable-voltage input

- Space-saving, 12.8 mm wide
- 16 A AgNi contact
- Internal cross-connection of the output terminals
- Screw and tension clamp connection
- Multi-voltage input: 24...230 V UC in one module





Technical data

Output			
Rated switching voltage / Continuous current		250 V AC / 16 A	
Max. switching voltage, AC		250 V	
Inrush current		30 A / 4 s	
Min. switching power		100 mA / 5 V, 10 V / 10 mA	
DC / AC Switching capacity (resistive), max.		384 W @ 24 V / 4000 VA	
Contact material		AgNi	
Mechanical service life		30 x 10^6 switching cycles	
Max. switching frequency at rated load		0.1 Hz	
Rated data			
Ambient temperature (operational)		-40 °C...60 °C	
Storage temperature		-40 °C...85 °C	
Humidity		5–95% rel. humidity, T_u = 40°C, no condensation	
Approvals			
Insulation coordination (EN 50178)			
Rated voltage		300 V	
Impulse withstand voltage		6 kV (1.2/50 µs)	
Dielectric strength input – output		1.2 kV_{eff} / 5 s	
Dielectric strength, contact / contact			
Dielectric strength to mounting rail		4 kV_{eff} / 1 min.	
Creepage and clearance distance input – output		≥ 5.5 mm	
Overvoltage category		III	
Pollution degree		2	
Dimensions		**Screw connection**	**Tension clamp connection**
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.14 / 2.5	1.5 / 0.14 / 2.5
Depth x width x height	mm	88 / 12.8 / 90	88 / 12.8 / 90
Note			

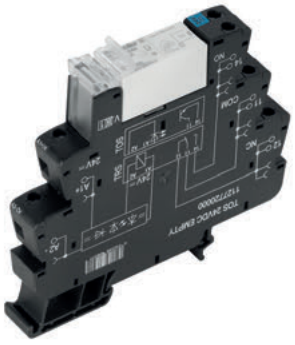
Ordering data

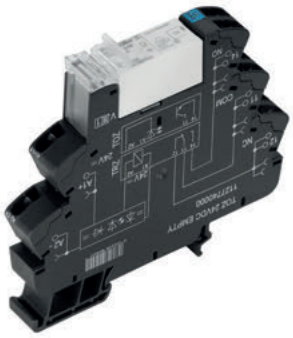
	24 V - 230 V UC
Input	
Rated control voltage	24...230 V UC ±10 %
Rated current AC / DC	6 mA @ 230 V UC / 45 mA @ 24 VUC
Power rating	1.08 W @ 24 V UC, 1.38 W @ 230 V UC
Pull-in/drop-out voltage, typ.	16 V / 6 V AC 16 V / 5 V DC
Pull-in/drop-out current, typ.	
Status indicator	Green LED
Protective circuit	Rectifier
Output	
Switch-on delay	< 22 ms
Switch-off delay	< 125 ms

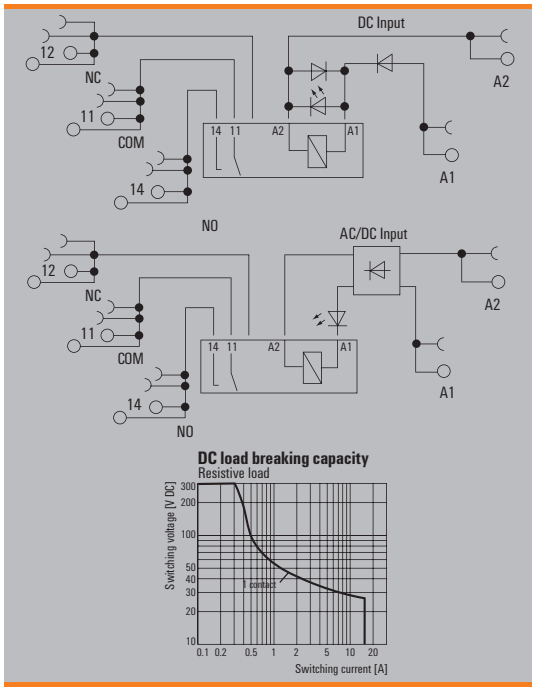
Ordering data		
Screw connection	Type	TRS 24-230VUC 1CO 16A
	Order No.	**1479770000**
Tension clamp conn.	Type	TRZ 24-230VUC 1CO 16A
	Order No.	**1479930000**
Note		

1 NO contact, inrush power HC

- Space-saving, 12.8 mm wide
- 16 A AgSnO contact
- Internal cross-connection of the output terminals
- Especially for inductive loads
- Screw and tension clamp connection
- Multi-voltage input: 24...230 V UC in one module







Technical data

Output			
Rated switching voltage / Continuous current		250 V AC / 16 A	
Max. switching voltage, AC		250 V	
Inrush current			
Min. switching power		1 W	
DC / AC Switching capacity (resistive), max.		384 W @ 24 V / 4000 VA	
Contact material		AgSnO	
Mechanical service life		10 x 10^6 switching cycles	
Max. switching frequency at rated load		0.1 Hz	
Rated data			
Ambient temperature (operational)		-40 °C...60 °C	
Storage temperature		-40 °C...85 °C	
Humidity		5–95% rel. humidity, T_u = 40°C, no condensation	
Approvals			
Insulation coordination (EN 50178)			
Rated voltage		300 V	
Impulse withstand voltage		6 kV (1.2/50 µs)	
Dielectric strength input – output		1.2 kV_{eff} / 5 s	
Dielectric strength, contact / contact			
Dielectric strength to mounting rail		4 kV_{eff} / 1 min.	
Creepage and clearance distance input – output		≥ 5.5 mm	
Overvoltage category		III	
Pollution degree		2	
Dimensions		**Screw connection**	**Tension clamp connection**
Clamping range (nominal / min. / max.)	mm²	1.5 / 0.14 / 2.5	1.5 / 0.14 / 2.5
Depth x width x height	mm	88 / 12.8 / 90	88 / 12.8 / 90
Note			

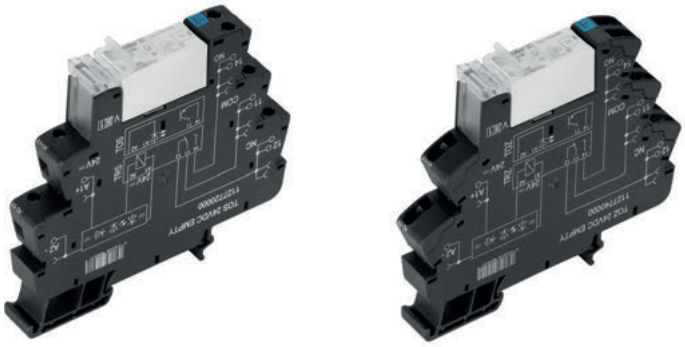
Ordering data

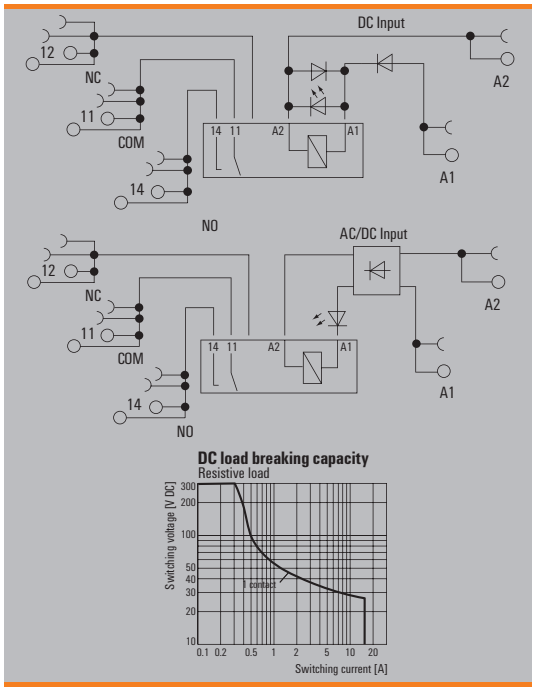
	24 V DC	24 - 230 V UC
Input		
Rated control voltage	24 V DC ±20 %	24...230 V UC ±10 %
Rated current AC / DC	/ 20 mA	6 mA @ 230 V UC / 45 mA @ 24 VUC
Power rating	480 mW	1.08 W @ 24 V UC, 1.38 W @ 230 V UC
Pull-in/drop-out voltage, typ.	18 V / 3.5 V DC	16 V / 6 V AC 16 V / 5 V DC
Pull-in/drop-out current, typ.		
Status indicator	Green LED	Green LED
Protective circuit	Integrated free-wheel diode, Reverse polarity protection	Rectifier
Output		
Switch-on delay	≤ 10 ms	< 22 ms
Switch-off delay	< 10 ms	< 125 ms

Ordering data			
Screw connection	Type	TRS 24VDC 1NO HC	TRS 24-230VUC 1NO HC
	Order No.	**1479780000**	**1479790000**
Tension clamp conn.	Type	TRZ 24VDC 1NO HC	TRZ 24-230VUC 1NO HC
	Order No.	**1479940000**	**1479950000**
Note			

1 NO contact, inrush power HCP

- Space-saving, only 12.8 mm wide
- 16 A AgSnO contact + leading tungsten contact
- Internal cross-connection of the output terminals
- Especially for capacitive loads
- Screw and tension clamp connection
- Multi-voltage input: 24–230 V UC in one module





Technical data

Output		
Rated switching voltage / Continuous current		250 V AC / 16 A
Max. switching voltage, AC		250 V
Inrush current		165 A / 20 ms, 800 A / 200 µs
Min. switching power		1 W
DC / AC Switching capacity (resistive), max.		384 W @ 24 V / 4000 VA
Contact material		AgSnO2 + W
Mechanical service life		5 x 10^6 switching cycles
Max. switching frequency at rated load		0.1 Hz
Rated data		
Ambient temperature (operational)		-40 °C...60 °C
Storage temperature		-40 °C...85 °C
Humidity		5–95% rel. humidity, T_u = 40°C, no condensation
Approvals		
Insulation coordination (EN 50178)		
Rated voltage		300 V
Impulse withstand voltage		6 kV (1.2/50 µs)
Dielectric strength input – output		1.2 kV_{eff} / 5 s
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		4 kV_{eff} / 1 min.
Creepage and clearance distance input – output		≥ 5.5 mm
Overvoltage category		III
Pollution degree		2

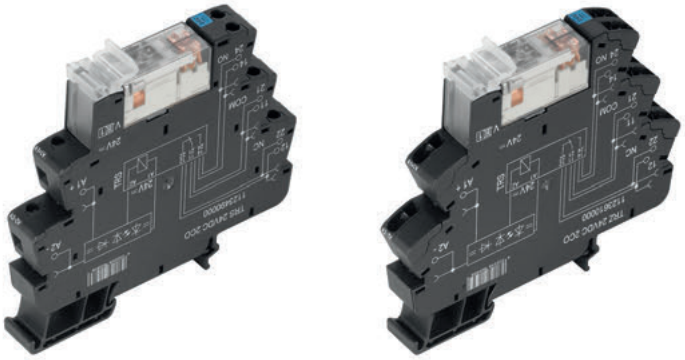
Dimensions		Screw connection	Tension clamp connection
Clamping range (nominal / min. / max.)	mm²	1.5 / 0.14 / 2.5	1.5 / 0.14 / 2.5
Depth x width x height	mm	88 / 12.8 / 90	88 / 12.8 / 90
Note			

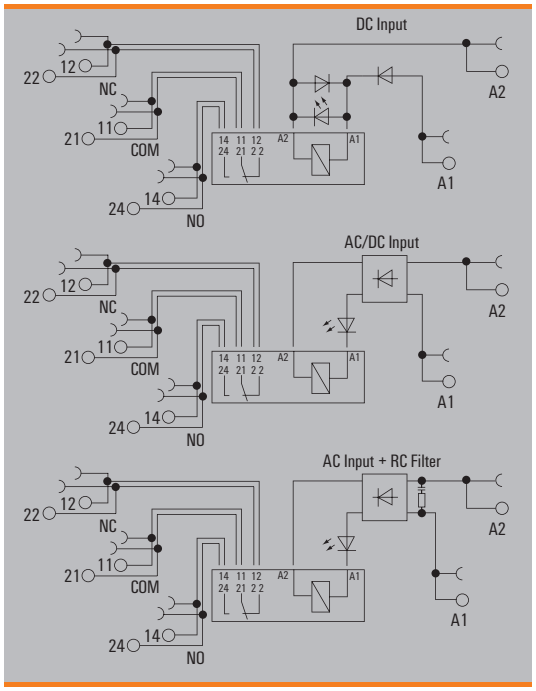
Ordering data

Ordering data		24 V DC	24 V - 230 V UC
Input			
Rated control voltage		24 V DC ±20 %	24...230 V UC ±10 %
Rated current AC / DC		/ 20 mA	6 mA @ 230 V UC / 45 mA @ 24 VUC
Power rating		480 mW	1.08 W @ 24 V UC, 1.38 W @ 230 V UC
Pull-in/drop-out voltage, typ.		18 V / 3.5 V DC	16 V / 6 V AC 16 V / 5 V DC
Pull-in/drop-out current, typ.			
Status indicator		Green LED	Green LED
Protective circuit		Integrated free-wheel diode, Reverse polarity protection	Rectifier
Output			
Switch-on delay		≤ 10 ms	< 22 ms
Switch-off delay		< 10 ms	< 125 ms
Ordering data			
Screw connection	Type	TRS 24VDC 1NO HCP	TRS 24-230VUC 1NO HCP
	Order No.	**1479810000**	**1479830000**
Tension clamp conn.	Type	TRZ 24VDC 1NO HCP	TRZ 24-230VUC 1NO HCP
	Order No.	**1479970000**	**1479980000**
Note			

2 CO contacts
AC/DC/UC coil

- Space saving, just 12.8 mm modular width
- AgNi contact
- Screw and tension clamp connection



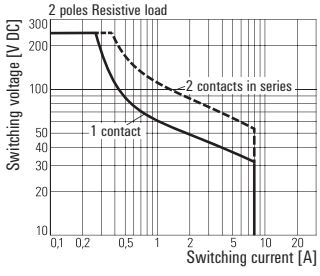


Technical data

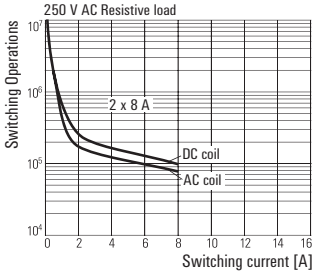
Output			
Rated switching voltage / Continuous current		250 V AC / 8 A	
Max. switching voltage, AC		250 V	
Inrush current		15 A / 4 s	
Min. switching power		100 mA / 5 V, 10 V / 10 mA	
DC / AC Switching capacity (resistive), max.		192 W @ 24 V / 2000 VA	
Contact material		AgNi	
Mechanical service life		30 x 10^6 switching cycles	
Max. switching frequency at rated load		0.1 Hz	
Rated data			
Ambient temperature (operational)		-40 °C...60 °C	
Storage temperature		-40 °C...85 °C	
Humidity		5–95% rel. humidity, T_u = 40°C, no condensation	
Approvals		CE; cULus; EAC; GL	
Insulation coordination (EN 50178)			
Rated voltage		300 V	
Impulse withstand voltage		6 kV (1.2/50 µs)	
Dielectric strength input – output		1.2 kV_{eff} / 5 s	
Dielectric strength, contact / contact			
Dielectric strength to mounting rail		4 kV_{eff} / 1 min.	
Creepage and clearance distance input – output		≥ 5.5 mm	
Overvoltage category		III	
Pollution degree		2	
Dimensions		**Screw connection**	**Tension clamp connection**
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.14 / 2.5	1.5 / 0.14 / 2.5
Depth x width x height	mm	88 / 12.8 / 90	88 / 12.8 / 90
Note		Accessories and dimensional drawings: refer to the TERMSERIES Accessories page.	

Applications

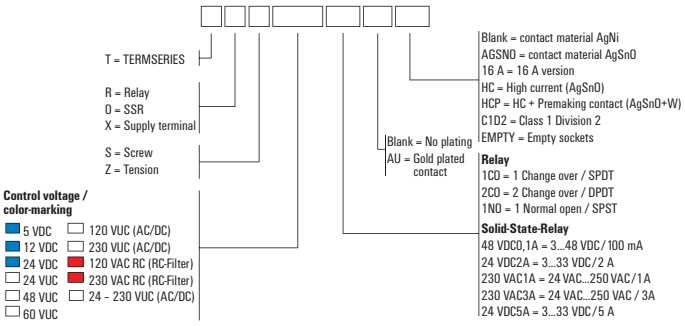
DC load breaking capacity



Electrical endurance



2 CO contacts
AC/DC/UC coil



Ordering data	5 V DC	12 V DC	24 V DC	24 V UC	48 V UC
Input					
Rated control voltage	5 V DC ±20 %	12 V DC ±20 %	24 V DC ±20 %	24 V UC ±10 %	48 V UC ±10 %
Rated current AC / DC	/ 80 mA	/ 33.3 mA	/ 20 mA	16 mA / 14 mA	9 mA / 7 mA
Power rating	400 mW	420 mW	480 mW	390 mVA / 350 mW	340 mW / 0.4 VA
Pull-in/drop-out voltage, typ.	3 V / 1.6 V DC	8 V / 3 V DC	18 V / 3.5 V DC	16 V / 9 V AC 18 V / 8 V DC	29 V / 11 V AC 33 V / 11 V DC
Pull-in/drop-out current, typ.	21.6 mA / 8 mA DC	21 mA / 5 mA DC	10 mA / 3 mA DC	11 mA / 4 mA AC 10 mA / 2 mA DC	6 mA / 3 mA AC 5 mA / 1.5 mA DC
Status indicator	Green LED	Green LED	Green LED	Green LED	Green LED
Protective circuit	Integrated free-wheel diode, Reverse polarity protection	Integrated free-wheel diode, Reverse polarity protection	Integrated free-wheel diode, Reverse polarity protection	Rectifier	Rectifier
Output					
Switch-on delay	< 11 ms	< 11 ms	< 11 ms	< 11 ms	< 11 ms
Switch-off delay	< 7 ms	< 8 ms	< 10 ms	< 7 ms	< 7 ms

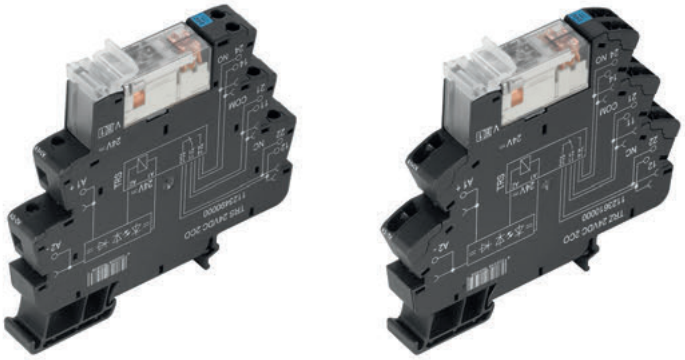
Ordering data						
Screw connection	Type	TRS 5VDC 2CO	TRS 12VDC 2CO	TRS 24VDC 2CO	TRS 24VUC 2CO	TRS 48VUC 2CO
	Order No.	**1123470000**	**1123480000**	**1123490000**	**1123500000**	**1123510000**
Tension clamp conn.	Type	TRZ 5VDC 2CO	TRZ 12VDC 2CO	TRZ 24VDC 2CO	TRZ 24VUC 2CO	TRZ 48VUC 2CO
	Order No.	**1123590000**	**1123600000**	**1123610000**	**1123620000**	**1123630000**
Note		Spare relay Type: RCL424005 Orderno.: 8693790000	Spare relay Type: RCL424012 Orderno.: 4058560000	Spare relay Type: RCL424024 Orderno.: 4058570000	Spare relay Type: RCL424024 Orderno.: 4058570000	Spare relay Type: RCL424048 Orderno.: 4058750000

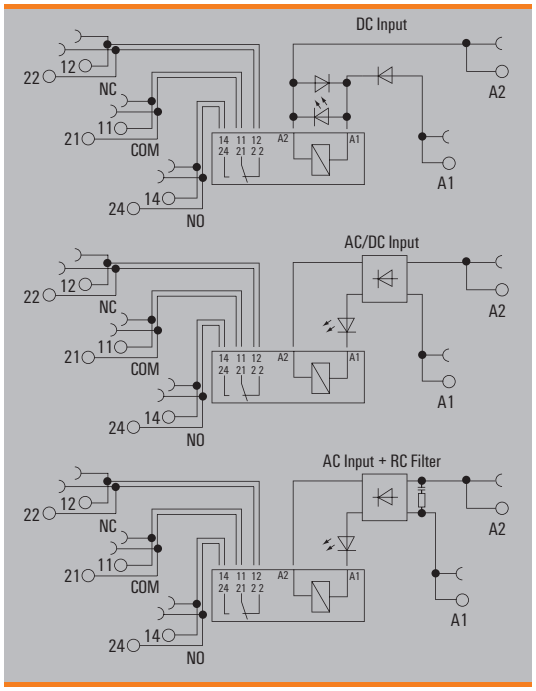
Ordering data	60 V UC	120 V UC	230 V UC	120 V AC RC	230 V AC RC
Input					
Rated control voltage	60 V UC ±10 %	120 V UC ±10 %	230 V UC ±5 %	120 V AC ±10 %	230 V AC ±5 %
Rated current AC / DC	8 mA / 6.1 mA	3.5 mA / 3.5 mA	4 mA / 4 mA	5.5 mA /	10 mA /
Power rating	480 mVA / 360 mW	420 mVA / 420 mW	920 mVA / 920 mW	0.73 VA	2.3 VA
Pull-in/drop-out voltage, typ.	36 V / 13 V AC 40 V / 14 V DC	64 V / 26 V AC 69 V / 22 V DC	112 V / 43 V AC 129 V / 36 V DC	65 V / 23 V AC	112 V / 45 V AC
Pull-in/drop-out current, typ.	5 mA / 2.5 mA AC 4 mA / 1.2 mA DC	2 mA / 1 mA AC 2 mA / 1 mA DC	2 mA / 1 mA AC 2 mA / 1 mA DC	3.5 mA / 1 mA AC	5 mA / 2 mA AC
Status indicator	Green LED	Green LED	Green LED	Green LED	Green LED
Protective circuit	Rectifier	Rectifier	Rectifier	Rectifier	Rectifier
Output					
Switch-on delay	< 11 ms	< 11 ms	< 14 ms	< 11 ms	< 14 ms
Switch-off delay	< 7 ms	< 7 ms	< 22 ms	< 7 ms	< 12 ms

Ordering data						
Screw connection	Type	TRS 60VUC 2CO	TRS 120VUC 2CO	TRS 230VUC 2CO	TRS 120VAC RC 2CO	TRS 230VAC RC 2CO
	Order No.	**1123520000**	**1123530000**	**1123540000**	**1123550000**	**1123570000**
Tension clamp conn.	Type	TRZ 60VUC 2CO	TRZ 120VUC 2CO	TRZ 230VUC 2CO	TRZ 120VAC RC 2CO	TRZ 230VAC RC 2CO
	Order No.	**1123640000**	**1123650000**	**1123670000**	**1123680000**	**1123690000**
Note		Spare relay Type: RCL424060 Orderno.: 4058760000	Spare relay Type: RCL424110 Orderno.: 4058590000	Spare relay Type: RCL424110 Orderno.: 4058590000	Spare relay Type: RCL424110 Orderno.: 4058590000	Spare relay Type: RCL424110 Orderno.: 4058590000

2 CO contact with hard gold-plated contacts
AC/DC/UC coil

- Space saving, just 12.8 mm modular width
- AgNi contact with gold plating
- Screw and tension clamp connection



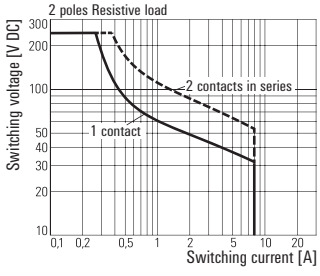


Technical data

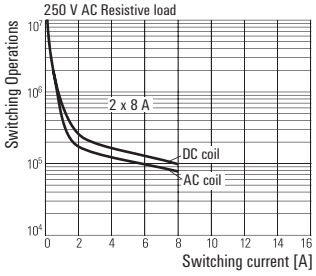
Output			
Rated switching voltage / Continuous current		250 V AC / 8 A	
Max. switching voltage, AC		250 V	
Inrush current		15 A / 4 s	
Min. switching power		1 V / 1 mA	
DC / AC Switching capacity (resistive), max.		192 W @ 24 V / 2000 VA	
Contact material		AgNi 5µm Au	
Mechanical service life		30 x 10^6 switching cycles	
Max. switching frequency at rated load		0.1 Hz	
Rated data			
Ambient temperature (operational)		-40 °C...60 °C	
Storage temperature		-40 °C...85 °C	
Humidity		5–95% rel. humidity, T_u = 40°C, no condensation	
Approvals		CE; cULus; EAC; GL	
Insulation coordination (EN 50178)			
Rated voltage		300 V	
Impulse withstand voltage		6 kV (1.2/50 µs)	
Dielectric strength input – output		1.2 kV_{eff} / 5 s	
Dielectric strength, contact / contact			
Dielectric strength to mounting rail		4 kV_{eff} / 1 min.	
Creepage and clearance distance input – output		≥ 5.5 mm	
Overvoltage category		III	
Pollution degree		2	
Dimensions		**Screw connection**	**Tension clamp connection**
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.14 / 2.5	1.5 / 0.14 / 2.5
Depth x width x height	mm	88 / 12.8 / 90	88 / 12.8 / 90
Note		Accessories and dimensional drawings: refer to the TERMSERIES Accessories page.	

Applications

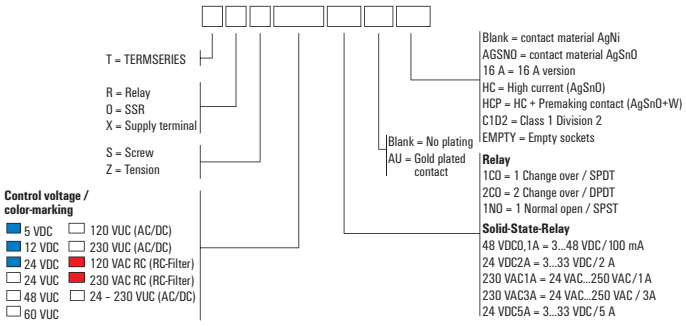
DC load breaking capacity



Electrical endurance



2 CO contact with hard gold-plated contacts
AC/DC/UC coil



Ordering data	5 V DC	12 V DC	24 V DC	24 V UC	48 V UC
Input					
Rated control voltage	5 V DC ±20 %	12 V DC ±20 %	24 V DC ±20 %	24 V UC ±10 %	48 V UC ±10 %
Rated current AC / DC	/ 80 mA	/ 33.3 mA	/ 20 mA	16 mA / 14 mA	9 mA / 7 mA
Power rating	400 mW	420 mW	480 mW	390 mVA / 350 mW	340 mW / 0.4 VA
Pull-in/drop-out voltage, typ.	3 V / 1.6 V DC	8 V / 3 V DC	18 V / 3.5 V DC	16 V / 9 V AC 18 V / 8 V DC	29 V / 11 V AC 33 V / 11 V DC
Pull-in/drop-out current, typ.	21.6 mA / 8 mA DC	21 mA / 5 mA DC	10 mA / 3 mA DC	11 mA / 4 mA AC 10 mA / 2 mA DC	6 mA / 3 mA AC 5 mA / 1.5 mA DC
Status indicator	Green LED	Green LED	Green LED	Green LED	Green LED
Protective circuit	Integrated free-wheel diode, Reverse polarity protection	Integrated free-wheel diode, Reverse polarity protection	Integrated free-wheel diode, Reverse polarity protection	Rectifier	Rectifier
Output					
Switch-on delay	< 11 ms	< 11 ms	< 11 ms	< 11 ms	< 11 ms
Switch-off delay	< 7 ms	< 8 ms	< 10 ms	< 7 ms	< 7 ms

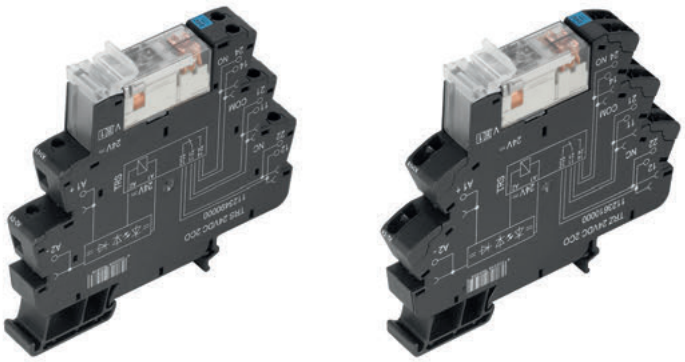
Ordering data						
Screw connection	Type	TRS 5VDC 2CO AU	TRS 12VDC 2CO AU	TRS 24VDC 2CO AU	TRS 24VUC 2CO AU	TRS 48VUC 2CO AU
	Order No.	**1123710000**	**1123720000**	**1123730000**	**1123740000**	**1123750000**
Tension clamp conn.	Type	TRZ 5VDC 2CO AU	TRZ 12VDC 2CO AU	TRZ 24VDC 2CO AU	TRZ 24VUC 2CO AU	TRZ 48VUC 2CO AU
	Order No.	**1123830000**	**1123840000**	**1123850000**	**1123870000**	**1123880000**
Note		Spare relay Type: RCL425005 Orderno.: 1174490000	Spare relay Type:RCL425012 Orderno.: 4074580000	Spare relay Type: RCL425024 Orderno.: 4058580000	Spare relay Type: RCL425024 Orderno.: 4058580000	Spare relay Type: RCL425048 Orderno.: 1201230000

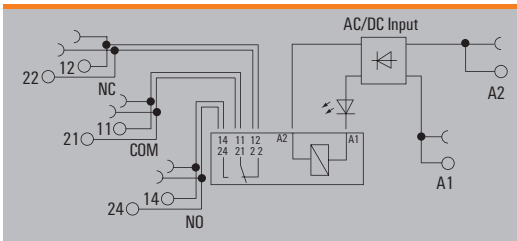
Ordering data	60 V UC	120 V UC	230 V UC	120 V AC RC	230 V AC RC
Input					
Rated control voltage	60 V UC ±10 %	120 V UC ±10 %	230 V UC ±5 %	120 V AC ±10 %	230 V AC ±5 %
Rated current AC / DC	8 mA / 6.1 mA	3.5 mA / 3.5 mA	4 mA / 4 mA	5.5 mA /	10 mA /
Power rating	480 mVA / 360 mW	420 mVA / 420 mW	920 mVA / 920 mW	0.73 VA	2.3 VA
Pull-in/drop-out voltage, typ.	36 V / 13 V AC 40 V / 14 V DC	64 V / 26 V AC 69 V / 22 V DC	112 V / 43 V AC 129 V / 36 V DC	65 V / 23 V AC	112 V / 45 V AC
Pull-in/drop-out current, typ.	5 mA / 2.5 mA AC 4 mA / 1.2 mA DC	2 mA / 1 mA AC 2 mA / 1 mA DC	2 mA / 1 mA AC 2 mA / 1 mA DC	3.5 mA / 1 mA AC	5 mA / 2 mA AC
Status indicator	Green LED	Green LED	Green LED	Green LED	Green LED
Protective circuit	Rectifier	Rectifier	Rectifier	Rectifier	Rectifier
Output					
Switch-on delay	< 11 ms	< 11 ms	< 14 ms	< 11 ms	< 14 ms
Switch-off delay	< 7 ms	< 7 ms	< 22 ms	< 7 ms	< 12 ms

Ordering data						
Screw connection	Type	TRS 60VUC 2CO AU	TRS 120VUC 2CO AU	TRS 230VUC 2CO AU	TRS 120VAC RC 2CO AU	TRS 230VAC RC 2CO AU
	Order No.	**1123770000**	**1123780000**	**1123790000**	**1123800000**	**1123810000**
Tension clamp conn.	Type	TRZ 60VUC 2CO AU	TRZ 120VUC 2CO AU	TRZ 230VUC 2CO AU	TRZ 120VAC RC 2CO AU	TRZ 230VAC RC 2CO AU
	Order No.	**1123890000**	**1123900000**	**1123910000**	**1123920000**	**1123930000**
Note		Spare relay Type: RCL425060 Orderno.: 1201260000	Spare relay Type: RCL425110 Orderno.: 8828370000	Spare relay Type: RCL425110 Orderno.: 8828370000	Spare relay Type: RCL425110 Orderno.: 8828370000	Spare relay Type: RCL425110 Orderno.: 8828370000

2 CO contacts
multi-voltage input

- Space saving, just 12.8 mm modular width
- AgNi contact
- Screw and tension clamp connection
- Multi-voltage input: 24 to 230 V UC in one module





Technical data

Output			
Rated switching voltage / Continuous current		250 V AC / 8 A	
Max. switching voltage, AC		250 V	
Inrush current		15 A / 4 s	
Min. switching power		100 mA / 5 V, 10 V / 10 mA	
DC / AC Switching capacity (resistive), max.		192 W @ 24 V / 2000 VA	
Contact material		AgNi	
Mechanical service life		30 x 10^6 switching cycles	
Max. switching frequency at rated load		0.1 Hz	
Rated data			
Ambient temperature (operational)		-40 °C...60 °C	
Storage temperature		-40 °C...85 °C	
Humidity		5–95% rel. humidity, T_u = 40°C, no condensation	
Approvals		CE; cULus; EAC; GL	
Insulation coordination (EN 50178)			
Rated voltage		300 V	
Impulse withstand voltage		6 kV (1.2/50 µs)	
Dielectric strength input – output		1.2 kV_{eff} / 5 s	
Dielectric strength, contact / contact			
Dielectric strength to mounting rail		4 kV_{eff} / 1 min.	
Creepage and clearance distance input – output		≥ 5.5 mm	
Overvoltage category		III	
Pollution degree		2	
Dimensions		**Screw connection**	**Tension clamp connection**
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.14 / 2.5	1.5 / 0.14 / 2.5
Depth x width x height	mm	88 / 12.8 / 90	88 / 12.8 / 90
Note		Accessories and dimensional drawings: refer to the TERMSERIES Accessories page.	

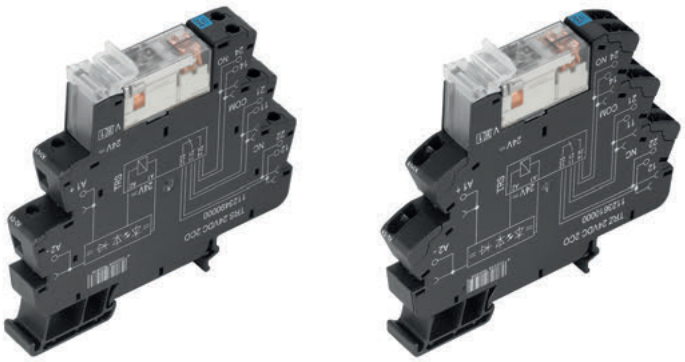
Ordering data

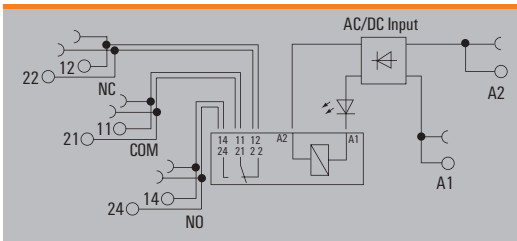
	24 V - 230 V UC
Input	
Rated control voltage	24...230 V UC ±10 %
Rated current AC / DC	6 mA @ 230 V UC / 45 mA @ 24 VUC
Power rating	1.08 W @ 24 V UC, 1.38 W @ 230 V UC
Pull-in/drop-out voltage, typ.	16 V / 6 V AC 16 V / 5 V DC
Pull-in/drop-out current, typ.	
Status indicator	Green LED
Protective circuit	Rectifier
Output	
Switch-on delay	< 22 ms
Switch-off delay	< 125 ms

Ordering data		
Screw connection	Type	TRS 24-230VUC 2CO
	Order No.	**1123580000**
Tension clamp conn.	Type	TRZ 24-230VUC 2CO
	Order No.	**1123700000**
Note		Spare relay Type: RCL424024 Orderno.: 4058570000

2 CO contact with hard gold-plated contacts
multi-voltage input

- Space saving, just 12.8 mm modular width
- AgNi contact with gold plating
- Screw and tension clamp connection
- Multi-voltage input: 24 to 230 V UC in one module





Technical data

Output		
Rated switching voltage / Continuous current		250 V AC / 8 A
Max. switching voltage, AC		250 V
Inrush current		15 A / 4 s
Min. switching power		1 V / 1 mA
DC / AC Switching capacity (resistive), max.		192 W @ 24 V / 2000 VA
Contact material		AgNi 5µm Au
Mechanical service life		30 x 10^6 switching cycles
Max. switching frequency at rated load		0.1 Hz
Rated data		
Ambient temperature (operational)		-40 °C...60 °C
Storage temperature		-40 °C...85 °C
Humidity		5–95% rel. humidity, T_u = 40°C, no condensation
Approvals		CE; cULus; EAC; GL
Insulation coordination (EN 50178)		
Rated voltage		300 V
Impulse withstand voltage		6 kV (1.2/50 µs)
Dielectric strength input – output		1.2 kV_{eff} / 5 s
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		4 kV_{eff} / 1 min.
Creepage and clearance distance input – output		≥ 5.5 mm
Overvoltage category		III
Pollution degree		2

Dimensions		Screw connection	Tension clamp connection
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.14 / 2.5	1.5 / 0.14 / 2.5
Depth x width x height	mm	88 / 12.8 / 90	88 / 12.8 / 90
Note		Accessories and dimensional drawings: refer to the TERMSERIES Accessories page.	

Ordering data

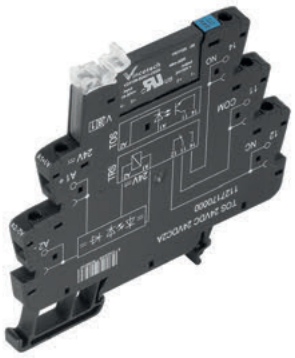
	24 V - 230 V UC
Input	
Rated control voltage	24...230 V UC ±10 %
Rated current AC / DC	6 mA @ 230 V UC / 45 mA @ 24 VUC
Power rating	1.08 W @ 24 V UC, 1.38 W @ 230 V UC
Pull-in/drop-out voltage, typ.	16 V / 6 V AC 16 V / 5 V DC
Pull-in/drop-out current, typ.	
Status indicator	Green LED
Protective circuit	Rectifier
Output	
Switch-on delay	< 22 ms
Switch-off delay	< 125 ms

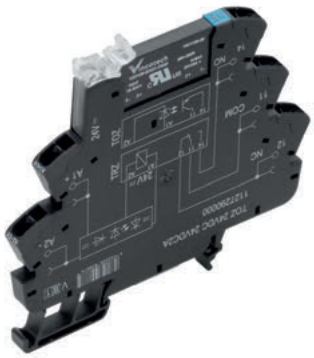
Ordering data		
Screw connection	Type	TRS 24-230VUC 2CO AU
	Order No.	**1123820000**
Tension clamp conn.	Type	TRZ 24-230VUC 2CO AU
	Order No.	**1123940000**
Note		Spare relay Type: RCL425024 Orderno.: 4058580000

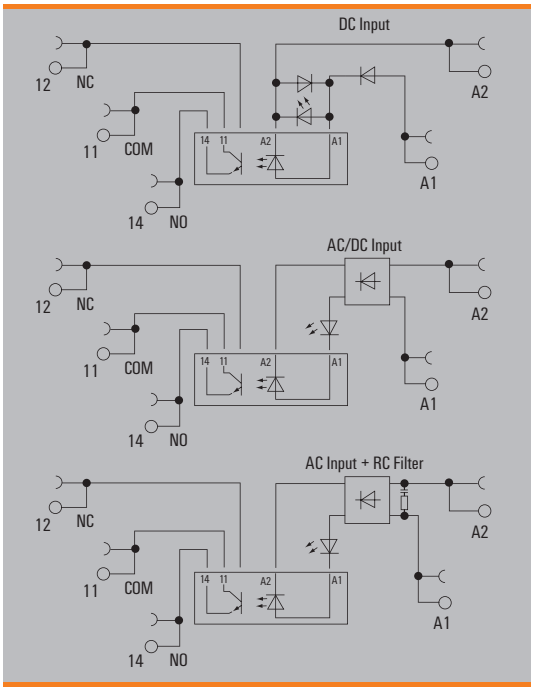
Solid-state relay, 3...48 V DC / 100 mA

Output versions

- Space saving, just 6.4 mm modular width
- 5 cross-connection levels
- Screw and tension clamp connection







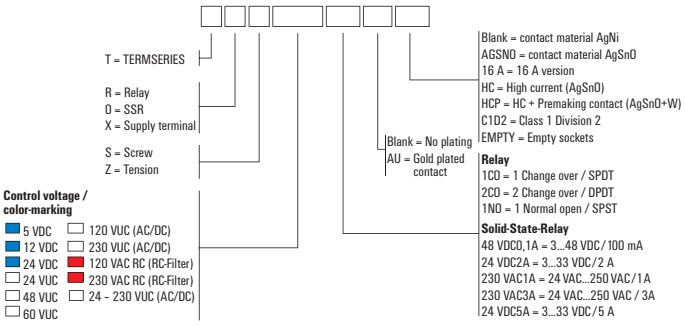
Technical data

Load side	
Rated switching voltage	3... 48 V DC
Continuous current	100 mA
Inrush current	
Solid-state type	Bipolar transistor
Voltage drop at max. load	≤ 1 V
Leakage current	< 10 µA
Protective circuit, load side	Integrated free-wheel diode
Short-circuit-proof / Protective circuit, load side	No / Integrated free-wheel diode
General data	
Ambient temperature (operational)	-20 °C...60 °C
Storage temperature	-40 °C...70 °C
Humidity	5–95% rel. humidity, T_u = 40°C, no condensation
Approvals	CE; cULus; EAC; GL
Insulation coordination (EN 50178)	
Rated voltage	300 V
Impulse withstand voltage	6 kV (1.2/50 µs)
Dielectric strength for control side - load side	2.5 kV_{eff}
Dielectric strength to mounting rail	4 kV_{eff} / 1 min.
Clearance and creepage distances for control side - load side	≥ 5.5 mm
Overvoltage category	III
Pollution degree	2

Dimensions		**Screw connection**	**Tension clamp conn.**
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.14 / 2.5	1.5 / 0.14 / 2.5
Depth x width x height	mm	88 / 6.4 / 90	88 / 6.4 / 90
Note		Accessories and dimensional drawings: refer to the TERMSERIES Accessories page.	

Solid-state relay, 3...48 V DC / 100 mA

Output versions



Ordering data	5 V DC	12 V DC	24 V DC	24 V UC	48 V UC
Control side					
Rated control voltage	5 V DC ±20 %	12 V DC ±20 %	24 V DC ±20 %	24 V UC ±10 %	48 V UC ±10 %
Nominal control current	7 mA DC (±20 %)	9.6 mA DC (±20 %)	10 mA DC ±20 %	10 mA AC ±20 %, 6 mA DC (±20 %)	8 mA AC (±20 %), 7 mA DC (±20 %)
Power rating	35 mW	112 mW	240 mW	154 mW	290 mVA / 192 mW
Cut-in / dropout voltage	3.4 V / 1.5 V DC	4.7 V / 4.6 V DC	17 V / 10 V DC	18 V / 12 V AC 14 V / 13 V DC	36 V / 19 V AC 36 V / 19 V DC
Input frequency	10 Hz	10 Hz	300 Hz	DC: 100 Hz / AC: 3 Hz	DC: 100 Hz / AC: 3 Hz
Status indicator	Green LED	Green LED	Green LED	Green LED	Green LED
Protective circuit	Reverse polarity protection, Integrated free-wheel diode	Reverse polarity protection, Integrated free-wheel diode	Reverse polarity protection, Integrated free-wheel diode	Rectifier	Rectifier
Load side					
Switch-on delay	< 6.5 ms	< 6.5 ms	< 35 µs	< 55 µs	< 55 µs
Switch-off delay	< 10 ms	< 10 ms	< 355 µs	< 4 ms	< 4 ms

Ordering data						
Screw connection	Type	TOS 5VDC 48VDC0,1A	TOS 12VDC 48VDC0,1A	TOS 24VDC 48VDC0,1A	TOS 24VUC 48VDC0,1A	TOS 48VUC 48VDC0,1A
	Order No.	**1126920000**	**1126930000**	**1126940000**	**1126950000**	**1126960000**
Tension clamp conn.	Type	TOZ 5VDC 48VDC0,1A	TOZ 12VDC 48VDC0,1A	TOZ 24VDC 48VDC0,1A	TOZ 24VDC 48VDC0,1A	TOZ 48VUC 48VDC0,1A
	Order No.	**1127030000**	**1127040000**	**1127050000**	**1127060000**	**1127070000**
Note		Spare solid-state relay Type: SSS 5 V/24 V 0.1 A DC Orderno.: 4064320000	Spare solid-state relay Type: SSS 5 V/24 V 0.1A DC Orderno.: 4064320000	Spare solid-state relay Type: SSS 24 V/24 V 0.1A DC Orderno.: 4061180000	Spare solid-state relay Type: SSS 24 V/24 V 0.1A DC Orderno.: 4061180000	Spare solid-state relay Type: SSS 24 V/24 V 0.1A DC Orderno.: 4061180000

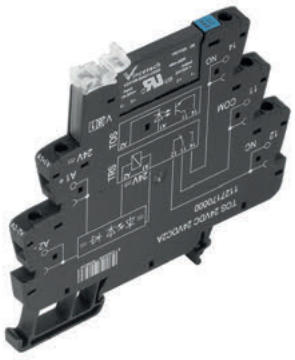
Ordering data	60 V UC	120 V UC	230 V UC	120 V AC RC	230 V AC RC
Control side					
Rated control voltage	60 V UC ±10 %	120 V UC ±10 %	230 V UC ±10%	120 V AC ±10 %	230 V AC ±10 %
Nominal control current	5 mA AC (±20 %), 3 mA DC (±20 %)	5 mA AC (±30 %), 3 mA DC (±30 %)	3.5 mA AC (±30 %), 3 mA DC (±30 %)	7 mA AC (±20 %)	9 mA AC
Power rating	< 300 mW	0.48 VA	0.8 VA / 660 mW	0.84 VA	2.1 VA
Cut-in / dropout voltage	37 V / 20 V AC 35 V / 26 V DC	82 V / 65 V AC 86 V / 74 V DC	159 V / 99 V AC 145 V / 128 V DC	79 V / 60 V AC	129 V / 90 V AC
Input frequency	DC: 10 Hz / AC: 3 Hz	3 Hz	3 Hz	3 Hz	3 Hz
Status indicator	Green LED	Green LED	Green LED	Green LED	Green LED
Protective circuit	Rectifier	Rectifier	Rectifier	RC element	RC element
Load side					
Switch-on delay	< 6.5 ms	< 6.5 ms	< 7 ms	< 6.5 ms	< 7 ms
Switch-off delay	< 10 ms	< 10 ms	< 10 ms	< 10 ms	< 10 ms

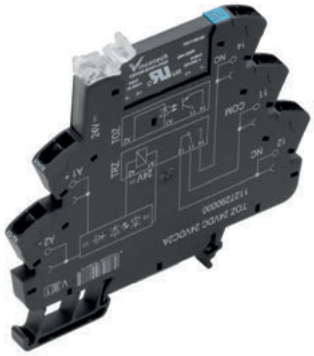
Ordering data						
Screw connection	Type	TOS 60VUC 48VDC0,1A	TOS 120VUC 48VDC0,1A	TOS 230VUC 48VDC0,1A	TOS 120VAC RC 48VDC0,1A	TOS 230VAC RC 48VDC0,1A
	Order No.	**1126970000**	**1126980000**	**1126990000**	**1127000000**	**1127010000**
Tension clamp conn.	Type	TOZ 60VUC 48VDC0,1A	TOZ 120VUC 48VDC0,1A	TOZ 230VUC 48VDC0,1A	TOZ 120VAC RC 48VDC0,1A	TOZ 230VAC RC 48VDC0,1A
	Order No.	**1127080000**	**1127090000**	**1127100000**	**1127110000**	**1127120000**
Note		Spare solid-state relay Type: SSS 60 V/24 V 0.1A DC Orderno.: 4061230000	Spare solid-state relay Type: SSS 60 V/24 V 0.1A DC Orderno.: 4061230000	Spare solid-state relay Type: SSS 60 V/24 V 0.1A DC Orderno.: 4061230000	Spare solid-state relay Type: SSS 60 V/24 V 0.1A DC Orderno.: 4061230000	Spare solid-state relay Type: SSS 60 V/24 V 0.1A DC Orderno.: 4061230000

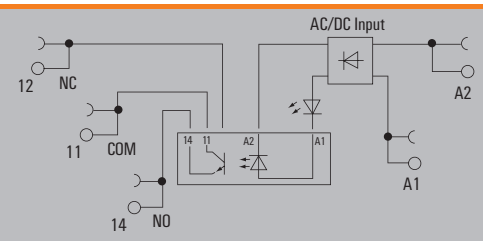
Solid-state relay, 3...48 V DC / 100 mA

Output versions, multi-voltage input

- Space saving, just 6.4 mm modular width
- 5 cross-connection levels
- Screw and tension clamp connection
- Multi-voltage input: 24 to 230 V UC in one module







Technical data

Load side	
Rated switching voltage	3... 48 V DC
Continuous current	100 mA
Inrush current	
Solid-state type	Bipolar transistor
Voltage drop at max. load	≤ 1 V
Leakage current	< 10 µA
Protective circuit, load side	Integrated free-wheel diode
Short-circuit-proof / Protective circuit, load side	No / Integrated free-wheel diode
General data	
Ambient temperature (operational)	-20 °C...60 °C
Storage temperature	-40 °C...70 °C
Humidity	5–95% rel. humidity, T_u = 40°C, no condensation
Approvals	CE; cULus; EAC; GL
Insulation coordination (EN 50178)	
Rated voltage	300 V
Impulse withstand voltage	6 kV (1.2/50 µs)
Dielectric strength for control side - load side	2.5 kV_{eff}
Dielectric strength to mounting rail	4 kV_{eff} / 1 min.
Clearance and creepage distances for control side - load side	≥ 5.5 mm
Overvoltage category	III
Pollution degree	2

Dimensions		**Screw connection**	**Tension clamp conn.**
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.14 / 2.5	1.5 / 0.14 / 2.5
Depth x width x height	mm	88 / 6.4 / 90	88 / 6.4 / 90
Note		Accessories and dimensional drawings: refer to the TERMSERIES Accessories page.	

Ordering data

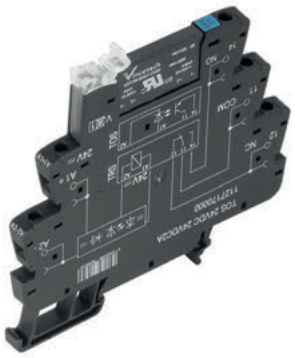
	24 V - 230 V UC
Control side	
Rated control voltage	24...230 V UC ±10 %
Nominal control current	22 mA @ 24 V DC, 4 mA @ 230 V AC
Power rating	530 mW @ 24 V DC, 930 mVA @ 230 V AC
Cut-in / dropout voltage	11.5 V / 6 V AC 11.5 V / 5 V DC
Input frequency	3 Hz
Status indicator	Green LED
Protective circuit	Rectifier
Load side	
Switch-on delay	< 20 ms
Switch-off delay	< 100 ms

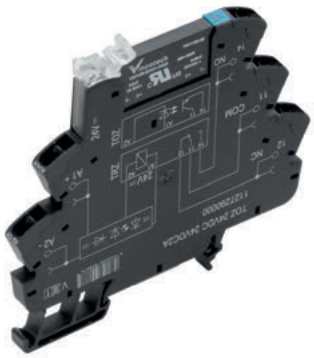
Ordering data		
Screw connection	Type	TOS 24-230VUC 48VDC0,1A
	Order No.	**1127020000**
Tension clamp conn.	Type	TOZ 24-230VUC 48VDC0,1A
	Order No.	**1127130000**
Note		Spare solid-state relay Type: SSS 24 V/24 V 0.1A DC Orderno.: 4061180000

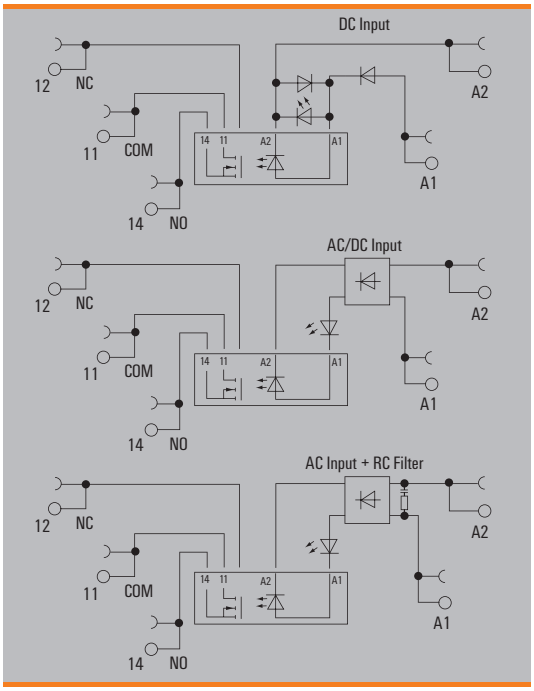
Solid-state relay, 3...33 V DC / 2 A

Output versions

- Space saving, just 6.4 mm modular width
- 5 cross-connection levels
- Screw and tension clamp connection







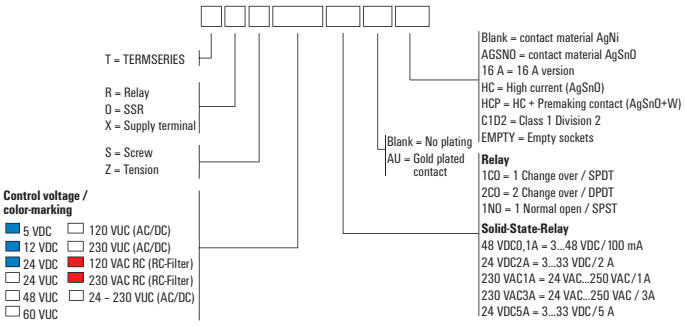
Technical data

Load side	
Rated switching voltage	3...33 V DC
Continuous current	2 A
Inrush current	
Solid-state type	MOS-FET
Voltage drop at max. load	≤ 120 mV
Leakage current	< 10 µA
Protective circuit, load side	Integrated free-wheel diode
Short-circuit-proof / Protective circuit, load side	No / Integrated free-wheel diode
General data	
Ambient temperature (operational)	-20 °C...60 °C
Storage temperature	-40 °C...70 °C
Humidity	5–95% rel. humidity, T_u = 40°C, no condensation
Approvals	CE; cULus; EAC; GL
Insulation coordination (EN 50178)	
Rated voltage	300 V
Impulse withstand voltage	6 kV (1.2/50 µs)
Dielectric strength for control side - load side	2.5 kV_{eff}
Dielectric strength to mounting rail	4 kV_{eff} / 1 min.
Clearance and creepage distances for control side - load side	≥ 5.5 mm
Overvoltage category	III
Pollution degree	2

Dimensions		**Screw connection**	**Tension clamp conn.**
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.14 / 2.5	1.5 / 0.14 / 2.5
Depth x width x height	mm	88 / 6.4 / 90	88 / 6.4 / 90
Note		Accessories and dimensional drawings: refer to the TERMSERIES Accessories page.	

Solid-state relay, 3...33 V DC / 2 A

Output versions



Ordering data	5 V DC	12 V DC	24 V DC	24 V UC	48 V UC
Control side					
Rated control voltage	5 V DC ±20 %	12 V DC ±20 %	24 V DC ±20 %	24 V UC ±10 %	48 V UC ±10 %
Nominal control current	10 mA DC ±20 %	9.6 mA DC (±20 %)	10 mA DC ±20 %	10 mA AC ±20 %, 6 mA DC (±20 %)	8 mA AC (±20 %), 7 mA DC (±20 %)
Power rating	50 mW	112 mW	240 mW	154 mW	290 mVA / 192 mW
Cut-in / dropout voltage	3.4 V / 1.5 V DC	4.7 V / 4.6 V DC	17 V / 10 V DC	18 V / 12 V AC 14 V / 13 V DC	36 V / 19 V AC 36 V / 19 V DC
Input frequency	300 Hz	300 Hz	300 Hz	DC: 10 Hz / AC: 3 Hz	DC: 10 Hz / AC: 3 Hz
Status indicator	Green LED	Green LED	Green LED	Green LED	Green LED
Protective circuit	Reverse polarity protection, Integrated free-wheel diode	Reverse polarity protection, Integrated free-wheel diode	Reverse polarity protection, Integrated free-wheel diode	Rectifier	Rectifier
Load side					
Switch-on delay	< 55 µs	< 55 µs	< 55 µs	< 6.5 ms	< 6.5 ms
Switch-off delay	< 1 ms	< 1.2 ms	< 1.2 ms	< 10 ms	< 10 ms

Ordering data						
Screw connection	Type	TOS 5VDC 24VDC2A	TOS 12VDC 24VDC2A	TOS 24VDC 24VDC2A	TOS 24VUC 24VDC2A	TOS 48VUC 24VDC2A
	Order No.	**1127140000**	**1127150000**	**1127170000**	**1127180000**	**1127190000**
Tension clamp conn.	Type	TOZ 5VDC 24VDC2A	TOZ 12VDC 24VDC2A	TOZ 24VDC 24VDC2A	TOZ 24VUC 24VDC2A	TOZ 48VUC 24VDC2A
	Order No.	**1127270000**	**1127280000**	**1127290000**	**1127300000**	**1127310000**
Note		Spare solid-state relay Type: SSS 5 V/24 V 2 A DC Orderno.: 4064310000	Spare solid-state relay Type: SSS 5 V/24 V 2A DC Order no.: 4064310000	Spare solid-state relay Type: SSS 24 V/24 V 2 A DC Orderno.: 4061190000	Spare solid-state relay Type: SSS 24 V/24 V 2 A DC Orderno.: 4061190000	Spare solid-state relay Type: SSS 24 V/24 V 2 A DC Orderno.: 4061190000

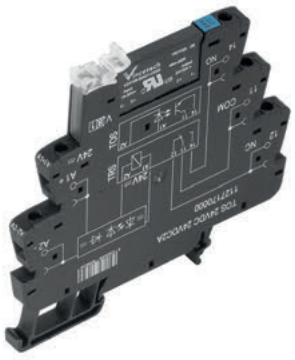
Ordering data	60 V UC	120 V UC	230 V UC	120 V AC RC	230 V AC RC
Control side					
Rated control voltage	60 V UC ±10 %	120 V UC ±10 %	230 V UC ±10%	120 V AC ±10 %	230 V AC ±10 %
Nominal control current	5 mA AC (±20 %), 3 mA DC (±20 %)	5 mA AC (±30 %), 3 mA DC (±30 %)	3.5 mA AC (±30 %), 3 mA DC (±30 %)	7 mA AC (±20 %)	9 mA AC
Power rating	< 300 mW	0.48 VA	0.8 VA / 660 mW	0.84 VA	2.1 VA
Cut-in / dropout voltage	37 V / 20 V AC 35 V / 26 V DC	82 V / 65 V AC 86 V / 74 V DC	159 V / 99 V AC 145 V / 128 V DC	79 V / 60 V AC	129 V / 90 V AC
Input frequency	DC: 10 Hz / AC: 3 Hz	3 Hz	3 Hz	3 Hz	3 Hz
Status indicator	Green LED	Green LED	Green LED	Green LED	Green LED
Protective circuit	Rectifier	Rectifier	Rectifier	RC element	RC element
Load side					
Switch-on delay	< 6.5 ms	< 6.5 ms	< 7 ms	< 6.5 ms	< 7 ms
Switch-off delay	< 10 ms	< 10 ms	< 10 ms	< 10 ms	< 10 ms

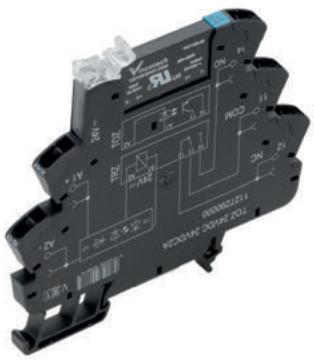
Ordering data						
Screw connection	Type	TOS 60VUC 24VDC2A	TOS 120VUC 24VDC2A	TOS 230VUC 24VDC2A	TOS 120VAC RC 24VDC2A	TOS 230VAC RC 24VDC2A
	Order No.	**1127200000**	**1127210000**	**1127220000**	**1127230000**	**1127240000**
Tension clamp conn.	Type	TOZ 60VUC 24VDC2A	TOZ 120VUC 24VDC2A	TOZ 230VUC 24VDC2A	TOZ 120VAC RC 24VDC2A	TOZ 230VAC RC 24VDC2A
	Order No.	**1127320000**	**1127330000**	**1127340000**	**1127350000**	**1127370000**
Note		Spare solid-state relay Type: SSS 60 V/24 V 2 A DC Orderno.: 4061200000	Spare solid-state relay Type: SSS 60 V/24 V 2 A DC Orderno.: 4061200000	Spare solid-state relay Type: SSS 60 V/24 V 2 A DC Orderno.: 4061200000	Spare solid-state relay Type: SSS 60 V/24 V 2 A DC Orderno.: 4061200000	Spare solid-state relay Type: SSS 60 V/24 V 2 A DC Orderno.: 4061200000

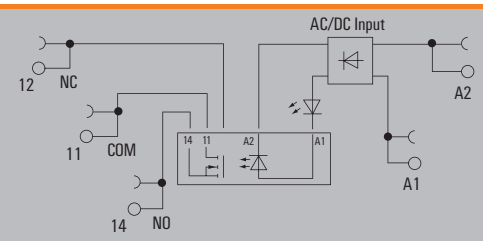
Solid-state relay, 3...33 V DC / 2 A

Output versions, multi-voltage input

- Space saving, just 6.4 mm modular width
- 5 cross-connection levels
- Screw and tension clamp connection
- Multi-voltage input: 24 to 230 V UC in one module







Technical data

Load side	
Rated switching voltage	3...33 V DC
Continuous current	2 A
Inrush current	
Solid-state type	MOS-FET
Voltage drop at max. load	≤ 120 mV
Leakage current	< 10 µA
Protective circuit, load side	Integrated free-wheel diode
Short-circuit-proof / Protective circuit, load side	No / Integrated free-wheel diode
General data	
Ambient temperature (operational)	-20 °C...60 °C
Storage temperature	-40 °C...70 °C
Humidity	5–95% rel. humidity, T_u = 40°C, no condensation
Approvals	CE; cULus; EAC; GL
Insulation coordination (EN 50178)	
Rated voltage	300 V
Impulse withstand voltage	6 kV (1.2/50 µs)
Dielectric strength for control side - load side	2.5 kV_{eff}
Dielectric strength to mounting rail	4 kV_{eff} / 1 min.
Clearance and creepage distances for control side - load side	≥ 5.5 mm
Overvoltage category	III
Pollution degree	2

Dimensions		**Screw connection**	**Tension clamp conn.**
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.14 / 2.5	1.5 / 0.14 / 2.5
Depth x width x height	mm	88 / 6.4 / 90	88 / 6.4 / 90
Note		Accessories and dimensional drawings: refer to the TERMSERIES Accessories page.	

Ordering data

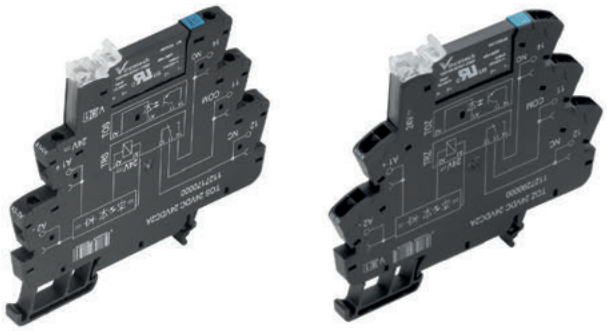
	24 V - 230 V UC
Control side	
Rated control voltage	24...230 V UC ±10 %
Nominal control current	22 mA @ 24 V DC, 4 mA @ 230 V AC
Power rating	530 mW @ 24 V DC, 930 mVA @ 230 V AC
Cut-in / dropout voltage	11.5 V / 6 V AC 11.5 V / 5 V DC
Input frequency	3 Hz
Status indicator	Green LED
Protective circuit	Rectifier
Load side	
Switch-on delay	< 20 ms
Switch-off delay	< 100 ms

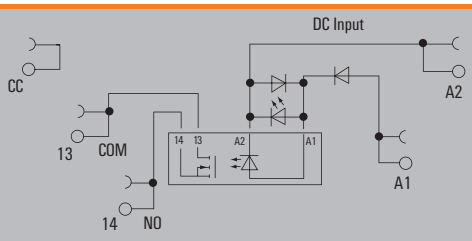
Ordering data		
Screw connection	Type	TOS 24-230VUC 24VDC2A
	Order No.	**1127250000**
Tension clamp conn.	Type	TOZ 24-230VUC 24VDC2A
	Order No.	**1127380000**
Note		Spare solid-state relay Type: SSS 24 V/24 V 2 A DC Orderno.: 4061190000

Solid-state relay, 3...33 V DC / 2 A actuator versions

- Space-saving, only 6.4 mm wide
- AgNi contact
- Screw and tension clamp connection
- 24 V DC actuator version:

Bridgeable, potential-free connection in the output (CC)





Technical data

Load side	
Rated switching voltage	3...33 V DC
Continuous current	2 A
Inrush current	
Solid-state type	MOS-FET
Voltage drop at max. load	≤ 120 mV
Leakage current	< 10 µA
Protective circuit, load side	Integrated free-wheel diode
Short-circuit-proof / Protective circuit, load side	No / Integrated free-wheel diode
General data	
Ambient temperature (operational)	-20 °C...60 °C
Storage temperature	-40 °C...70 °C
Humidity	5–95% rel. humidity, T_u = 40°C, no condensation
Approvals	CE; EAC
Insulation coordination (EN 50178)	
Rated voltage	300 V
Impulse withstand voltage	6 kV (1.2/50 µs)
Dielectric strength for control side - load side	2.5 kV_{eff}
Dielectric strength to mounting rail	4 kV_{eff} / 1 min.
Clearance and creepage distances for control side - load side	≥ 5.5 mm
Overvoltage category	III
Pollution degree	2

Dimensions		**Screw connection**	**Tension clamp conn.**
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.14 / 2.5	1.5 / 0.14 / 2.5
Depth x width x height	mm	88 / 6.4 / 90	88 / 6.4 / 90
Note		Accessories and dimensional drawings: refer to the TERMSERIES Accessories page.	

Ordering data

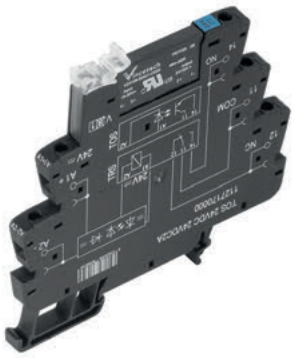
	24 V DC
Control side	
Rated control voltage	24 V DC ±20 %
Nominal control current	10 mA DC ±20 %
Power rating	240 mW
Cut-in / dropout voltage	17 V / 10 V DC
Input frequency	300 Hz
Status indicator	Green LED
Protective circuit	Reverse polarity protection, Integrated free-wheel diode
Load side	
Switch-on delay	< 55 µs
Switch-off delay	< 1.2 ms

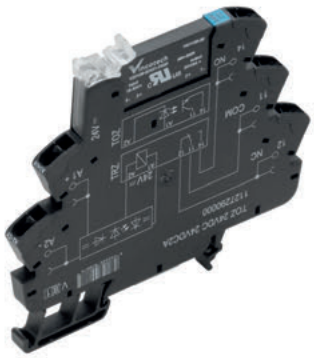
Ordering data		
Screw connection	Type	TOS 24VDC ACT
	Order No.	**1391680000**
Tension clamp conn.	Type	TOZ 24VDC ACT
	Order No.	**1391690000**
Note		

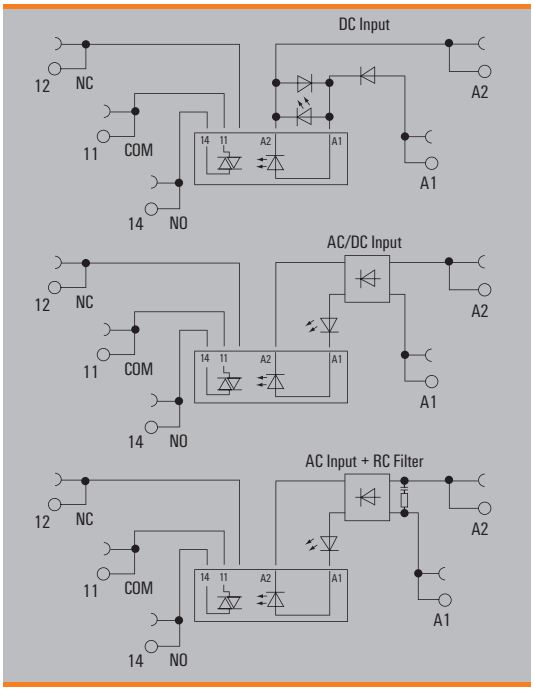
Solid-state relay, 24...230 V AC / 1 A

Output versions

- Space saving, just 6.4 mm modular width
- 5 cross-connection levels
- Screw and tension clamp connection







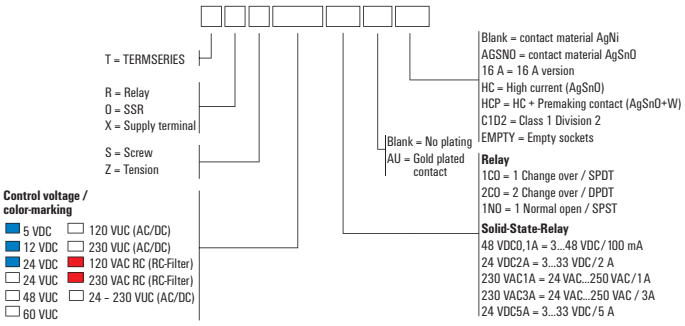
Technical data

Load side	
Rated switching voltage	24...240 V AC
Continuous current	1 A
Inrush current	
Solid-state type	Triac (zero-cross switch)
Voltage drop at max. load	≤ 1.6 V
Leakage current	< 10 µA
Protective circuit, load side	No
Short-circuit-proof / Protective circuit, load side	No / No
General data	
Ambient temperature (operational)	-20 °C...60 °C
Storage temperature	-40 °C...70 °C
Humidity	5–95% rel. humidity, T_u = 40°C, no condensation
Approvals	CE; cULus; EAC; GL
Insulation coordination (EN 50178)	
Rated voltage	300 V
Impulse withstand voltage	6 kV (1.2/50 µs)
Dielectric strength for control side - load side	2.5 kV_{eff}
Dielectric strength to mounting rail	4 kV_{eff} / 1 min.
Clearance and creepage distances for control side - load side	≥ 5.5 mm
Overvoltage category	III
Pollution degree	2

Dimensions		**Screw connection**	**Tension clamp conn.**
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.14 / 2.5	1.5 / 0.14 / 2.5
Depth x width x height	mm	88 / 6.4 / 90	88 / 6.4 / 90
Note		Accessories and dimensional drawings: refer to the TERMSERIES Accessories page.	

Solid-state relay, 24...230 V AC / 1 A

Output versions



Ordering data	5 V DC	12 V DC	24 V DC	24 V UC	48 V UC
Control side					
Rated control voltage	5 V DC ±20 %	12 V DC ±20 %	24 V DC ±20 %	24 V UC ±10 %	48 V UC ±10 %
Nominal control current	15 mA DC (±20 %)	9.6 mA DC (±20 %)	10 mA DC ±20 %	10 mA AC ±20 %, 6 mA DC (±20 %)	6 mA AC (±20 %), 4 mA DC (±20 %)
Power rating	75 mW	112 mW	< 280 mW	154 mW	290 mVA / 192 mW
Cut-in / dropout voltage	3.4 V / 1.5 V DC	4.7 V / 4.6 V DC	17 V / 10 V DC	18 V / 12 V AC 14 V / 13 V DC	36 V / 19 V AC 36 V / 19 V DC
Input frequency	3 Hz	3 Hz	3 Hz	3 Hz	3 Hz
Status indicator	Green LED	Green LED	Green LED	Green LED	Green LED
Protective circuit	Reverse polarity protection, Integrated free-wheel diode	Reverse polarity protection, Integrated free-wheel diode	Reverse polarity protection, Integrated free-wheel diode	Rectifier	Rectifier
Load side					
Switch-on delay	< 12 ms	< 12 ms	< 12 ms	< 11 ms	< 11 ms
Switch-off delay	< 12 ms	< 12 ms	< 12 ms	< 11 ms	< 11 ms

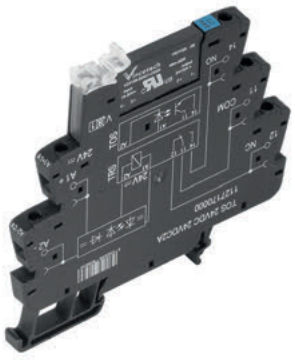
Ordering data						
Screw connection	Type	TOS 5VDC 230VAC1A	TOS 12VDC 230VAC1A	TOS 24VDC 230VAC1A	TOS 24VUC 230VAC1A	TOS 48VUC 230VAC1A
	Order No.	**1127390000**	**1127400000**	**1127410000**	**1127420000**	**1127430000**
Tension clamp conn.	Type	TOZ 5VDC 230VAC1A	TOZ 12VDC 230VAC1A	TOZ 24VDC 230VAC1A	TOZ 24VUC 230VAC1A	TOZ 48VUC 230VAC1A
	Order No.	**1127510000**	**1127520000**	**1127530000**	**1127540000**	**1127550000**
Note		Spare solid-state relay Type: SSS 5 V/ 230 V 1 A AC Orderno.: 1132260000	Spare solid-state relay Type: SSS 5 V/230 V 1A AC Orderno.: 1132260000	Spare solid-state relay Type: SSS 24 V/230 V 1 A AC Orderno.: 4061210000	Spare solid-state relay Type: SSS 24 V/230 V 1 A AC Orderno.: 4061210000	Spare solid-state relay Type: SSS 24 V/230 V 1 A AC Orderno.: 4061210000

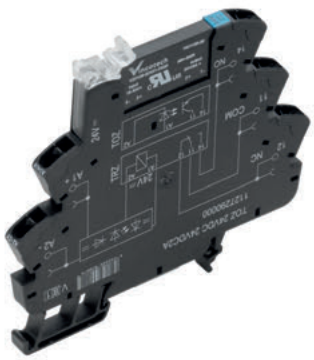
Ordering data	60 V UC	120 V UC	230 V UC	120 V AC RC	230 V AC RC
Control side					
Rated control voltage	60 V UC ±10 %	120 V UC ±10 %	230 V UC +5 %/ -10 %	120 V AC ±10 %	230 V AC +5 % / -10 %
Nominal control current	5 mA AC (±20 %), 3 mA DC (±20 %)	5 mA AC (±30 %), 3 mA DC (±30 %)	3.5 mA AC (±30 %), 3 mA DC (±30 %)	7 mA AC (±20 %)	9 mA AC
Power rating	< 300 mW	0.48 VA	0.8 VA / 660 mW	0.84 VA	2.1 VA
Cut-in / dropout voltage	35 V / 20 V AC 35 V / 26 V DC	82 V / 65 V AC 86 V / 74 V DC	159 V / 99 V AC 145 V / 128 V DC	79 V / 60 V AC	142 V / 90 V AC
Input frequency	3 Hz	3 Hz	3 Hz	3 Hz	3 Hz
Status indicator	Green LED	Green LED	Green LED	Green LED	Green LED
Protective circuit	Rectifier	Rectifier	Rectifier	RC element	RC element
Load side					
Switch-on delay	< 11 ms	< 11 ms	< 20 ms	< 11 ms	< 20 ms
Switch-off delay	< 11 ms	< 11 ms	< 20 ms	< 11 ms	< 20 ms

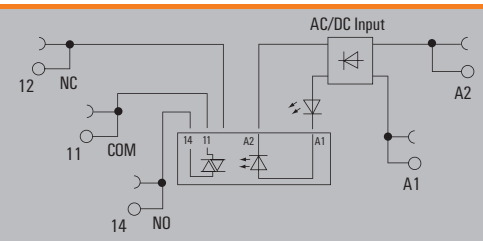
Ordering data						
Screw connection	Type	TOS 60VUC 230VAC1A	TOS 120VUC 230VAC1A	TOS 230VUC 230VAC1A	TOS 120VAC RC 230VAC1A	TOS 230VAC RC 230VAC1A
	Order No.	**1127440000**	**1127450000**	**1127470000**	**1127480000**	**1127490000**
Tension clamp conn.	Type	TOZ 60VUC 230VAC1A	TOZ 120VUC 230VAC1A	TOZ 230VUC 230VAC1A	TOZ 120VAC RC 230VAC1A	TOZ 230VAC RC 230VAC1A
	Order No.	**1127570000**	**1127580000**	**1127590000**	**1127600000**	**1127610000**
Note		Spare solid-state relay Type: SSS 60 V/230 V 1 A AC Orderno.: 4061220000	Spare solid-state relay Type: SSS 60 V/230 V 1 A AC Orderno.: 4061220000	Spare solid-state relay Type: SSS 60 V/230 V 1 A AC Orderno.: 4061220000	Spare solid-state relay Type: SSS 60 V/230 V 1 A AC Orderno.: 4061220000	Spare solid-state relay Type: SSS 60 V/230 V 1 A AC Orderno.: 4061220000

Solid-state relay, 24...230 V AC / 1 A output versions, multi-voltage input

- Space saving, just 6.4 mm modular width
- 5 cross-connection levels
- Screw and tension clamp connection
- Multi-voltage input: 24 to 230 V UC in one module







Technical data

Load side	
Rated switching voltage	24...240 V AC
Continuous current	1 A
Inrush current	
Solid-state type	Triac (zero-cross switch)
Voltage drop at max. load	≤ 1 V
Leakage current	< 10 µA
Protective circuit, load side	No
Short-circuit-proof / Protective circuit, load side	No / No
General data	
Ambient temperature (operational)	-20 °C...60 °C
Storage temperature	-40 °C...70 °C
Humidity	5–95% rel. humidity, T_u = 40°C, no condensation
Approvals	CE; cULus; EAC; GL
Insulation coordination (EN 50178)	
Rated voltage	300 V
Impulse withstand voltage	6 kV (1.2/50 µs)
Dielectric strength for control side - load side	2.5 kV_{eff}
Dielectric strength to mounting rail	4 kV_{eff} / 1 min.
Clearance and creepage distances for control side - load side	≥ 5.5 mm
Overvoltage category	III
Pollution degree	2

Dimensions		**Screw connection**	**Tension clamp conn.**
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.14 / 2.5	1.5 / 0.14 / 2.5
Depth x width x height	mm	88 / 6.4 / 90	88 / 6.4 / 90
Note		Accessories and dimensional drawings: refer to the TERMSERIES Accessories page.	

Ordering data

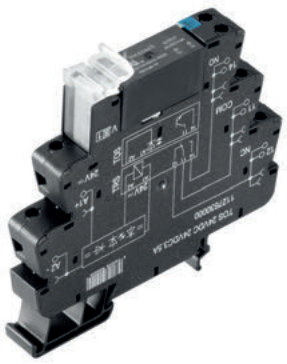
	24 V - 230 V UC
Control side	
Rated control voltage	24...230 V UC ±10 %
Nominal control current	22 mA @ 24 V DC, 4 mA @ 230 V AC
Power rating	530 mW @ 24 V DC, 930 mVA @ 230 V AC
Cut-in / dropout voltage	11.5 V / 6 V AC 11.5 V / 5 V DC
Input frequency	3 Hz
Status indicator	Green LED
Protective circuit	Rectifier
Load side	
Switch-on delay	< 20 ms
Switch-off delay	< 100 ms

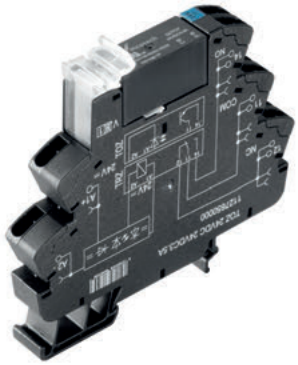
Ordering data		
Screw connection	Type	TOS 24-230VUC 230VAC1A
	Order No.	**1127500000**
Tension clamp conn.	Type	TOZ 24-230VUC 230VAC1A
	Order No.	**1127620000**
Note		Spare solid-state relay Type: SSS 24 V/230 V 1 A AC Orderno.: 4061210000

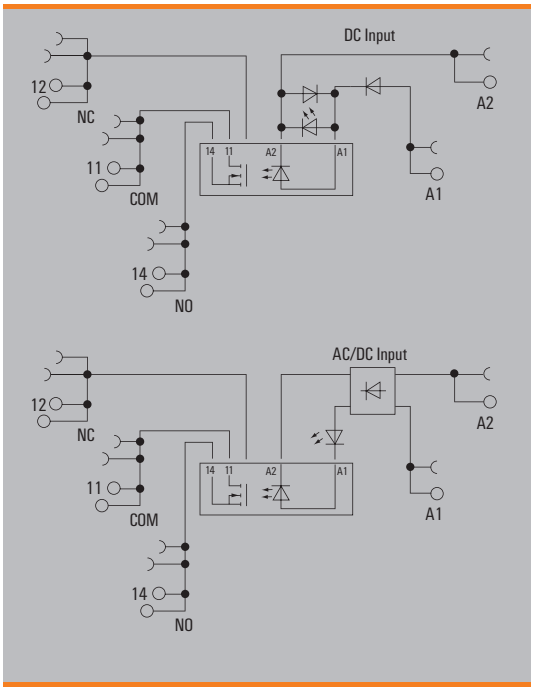
Solid-state relay, 0...33 V DC / 3.5 A

Output versions

- Space saving, just 12.8 mm modular width
- 5 cross-connection levels
- Screw and tension clamp connection







Technical data

Load side	
Rated switching voltage	3...33 V DC
Continuous current	3.5 A
Inrush current	
Solid-state type	MOS-FET
Voltage drop at max. load	≤ 0.3 V
Leakage current	< 10 µA
Protective circuit, load side	Integrated free-wheel diode
Short-circuit-proof / Protective circuit, load side	No / Integrated free-wheel diode
General data	
Ambient temperature (operational)	-20 °C...60 °C
Storage temperature	-40 °C...85 °C
Humidity	5–95% rel. humidity, T_u = 40°C, no condensation
Approvals	CE; cULus; EAC; GL
Insulation coordination (EN 50178)	
Rated voltage	300 V
Impulse withstand voltage	6 kV (1.2/50 µs)
Dielectric strength for control side - load side	2.5 kV_{eff}
Dielectric strength to mounting rail	4 kV_{eff} / 1 min.
Clearance and creepage distances for control side - load side	≥ 5.5 mm
Overvoltage category	III
Pollution degree	2

Dimensions		**Screw connection**
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.14 / 2.5
Depth x width x height	mm	88 / 12.8 / 90
Note		Accessories and dimensional drawings: refer to the TERMSERIES Accessories page.

Ordering data

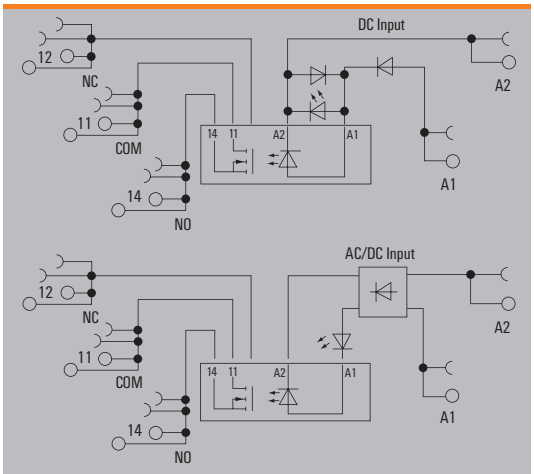
	24 V DC	24 V - 230 V UC
Control side		
Rated control voltage	24 V DC ±20 %	24...230 V UC ±10 %
Nominal control current	10 mA DC ±20 %	28 mA @ 24 V UC, 4 mA @ 230 V UC
Power rating	240 mW	672 mW @ 24 V UC, 920 mW @ 230 V UC
Cut-in / dropout voltage	15 V / 5 V DC	12 V / 6 V AC 12 V / 5 V DC
Input frequency	300 Hz	3 Hz
Status indicator	Green LED	Green LED
Protective circuit	Reverse polarity protection, Integrated free-wheel diode	Rectifier
Load side		
Switch-on delay	< 55 µs	≤ 10 ms
Switch-off delay	< 600 µs	< 100 ms

Ordering data			
Screw connection	Type	TOS 24VDC 24VDC3,5A	TOS 24-230VUC 24VDC3,5A
	Order No.	**1127630000**	**1127640000**
Tension clamp conn.	Type	TOZ 24VDC 24VDC3,5A	TOZ 24-230VUC 24VDC3,5A
	Order No.	**1127650000**	**1127670000**
Note		Spare solid-state relay Type: SSR 10-32 V DC/0-35 V DC 5 A Orderno.: 1132310000	Spare solid-state relay Type: SSR 10-32 V DC/0-35 V DC 5 A Orderno.: 1132310000

Solid-state relay, 0...33 VDC / 5 A

Output versions

- Space-saving, 12.8 mm wide
- 5 A DC output current
- Internal cross-connection of the output terminals
- Screw and tension clamp connection
- Multi-voltage input: 24...230 V UC in one module



Technical data

Load side			
Rated switching voltage		3...33 V DC	
Continuous current		5 A	
Inrush current			
Solid-state type		MOS-FET	
Voltage drop at max. load		≤ 0.3 V	
Leakage current		< 10 µA	
Protective circuit, load side		Integrated free-wheel diode	
Short-circuit-proof / Protective circuit, load side		/ Integrated free-wheel diode	
General data			
Ambient temperature (operational)		-20 °C...60 °C	
Storage temperature		-40 °C...70 °C	
Humidity		5–95% rel. humidity, T_u = 40°C, no condensation	
Approvals		CE	
Insulation coordination (EN 50178)			
Rated voltage		300 V	
Impulse withstand voltage		6 kV (1.2/50 µs)	
Dielectric strength for control side - load side		2.5 kV_{eff}	
Dielectric strength to mounting rail		4 kV_{eff} / 1 min.	
Clearance and creepage distances for control side - load side		≥ 5.5 mm	
Overvoltage category		III	
Pollution degree		2	
Dimensions			
Clamping range (nominal / min. / max.)		/ 0.14 / 2.5	/ 0.14 / 2.5
Depth x width x height	mm	88 / 12.8 / 90	88 / 12.8 / 90
Note			

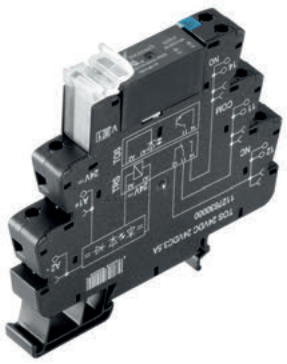
Ordering data

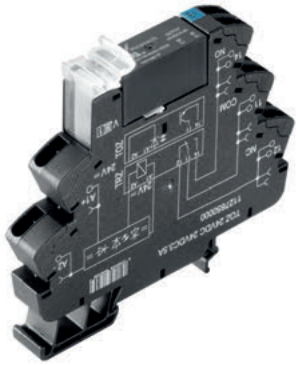
		24 V DC	24 V - 230 V UC
Control side			
Rated control voltage		24 V DC ±20 %	24...230 V UC ±10 %
Nominal control current		10 mA DC ±20 %	28 mA @ 24 V UC, 4 mA @ 230 V UC
Power rating		240 mW	672 mW @ 24 V UC, 920 mW @ 230 V UC
Cut-in / dropout voltage		15 V / 5 V DC	12 V / 6 V AC 12 V / 5 V DC
Input frequency		300 Hz	3 Hz
Status indicator		Green LED	Green LED
Protective circuit		Reverse polarity protection, Integrated free-wheel diode	Rectifier
Load side			
Switch-on delay		< 55 µs	≤ 10 ms
Switch-off delay		< 600 µs	< 100 ms
Ordering data			
Screw connection	Type	TOS 24VDC 24VDC5A	TOS 24-230VUC 24VDC5A
	Order No.	**1990960000**	**1990970000**
Tension clamp conn.	Type	TOZ 24VDC 24VDC5A	TOZ 24-230VUC 24VDC5A
	Order No.	**1990980000**	**1990990000**
Note			

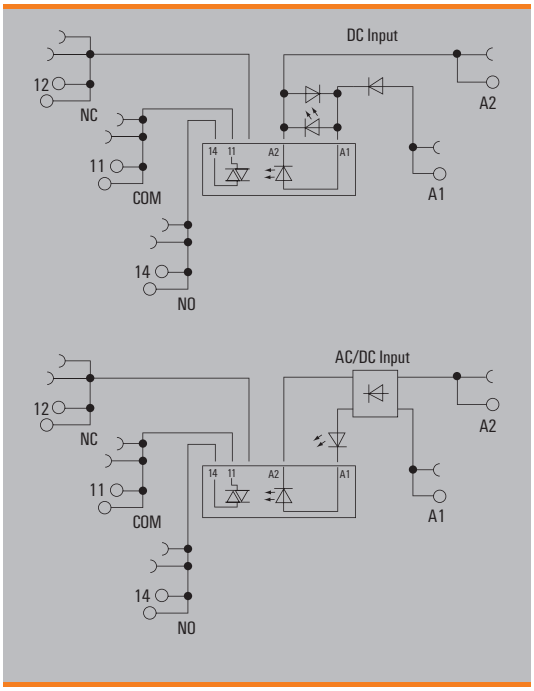
Solid-state relay, 12...275 V AC / 1 A

Output versions

- Space saving, just 12.8 mm modular width
- 5 cross-connection levels
- Screw and tension clamp connection







Technical data

Load side	
Rated switching voltage	12...275 V AC
Continuous current	1 A
Inrush current	
Solid-state type	Triac (zero-cross switch)
Voltage drop at max. load	≤ 1.1 V
Leakage current	< 10 µA
Protective circuit, load side	No
Short-circuit-proof / Protective circuit, load side	No / No
General data	
Ambient temperature (operational)	-20 °C...60 °C
Storage temperature	-40 °C...70 °C
Humidity	5–95% rel. humidity, T_u = 40°C, no condensation
Approvals	CE; EAC; GL
Insulation coordination (EN 50178)	
Rated voltage	300 V
Impulse withstand voltage	6 kV (1.2/50 µs)
Dielectric strength for control side - load side	2.5 kV_{eff}
Dielectric strength to mounting rail	4 kV_{eff} / 1 min.
Clearance and creepage distances for control side - load side	≥ 5.5 mm
Overvoltage category	III
Pollution degree	2

Dimensions		**Screw connection**
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.14 / 2.5
Depth x width x height	mm	88 / 12.8 / 90
Note		Accessories and dimensional drawings: refer to the TERMSERIES Accessories page.

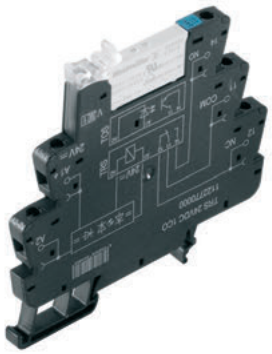
Ordering data

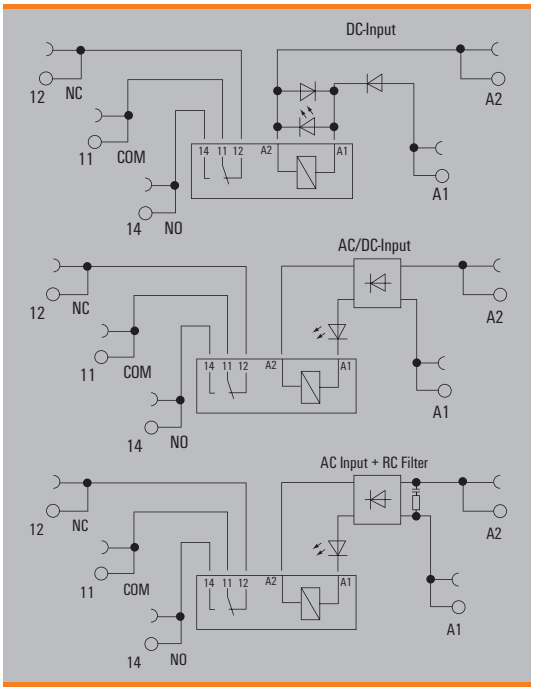
	24 V DC	24 V - 230 V UC
Control side		
Rated control voltage	24 V DC ±20 %	24...230 V UC ±10 %
Nominal control current	10 mA DC ±20 %	28 mA @ 24 V UC, 4 mA @ 230 V UC
Power rating	240 mW	672 mW @ 24 V UC, 920 mW @ 230 V UC
Cut-in / dropout voltage	15 V / 5 V DC	12 V / 6 V AC 12 V / 5 V DC
Input frequency	3 Hz	3 Hz
Status indicator	Green LED	Green LED
Protective circuit	Reverse polarity protection, Integrated free-wheel diode	Rectifier
Load side		
Switch-on delay	< 1 ms	≤ 12 ms
Switch-off delay	< 4 ms	< 125 ms

Ordering data			
Screw connection	Type	TOS 24VDC 230VAC1A	TOS 24-230VUC 230VAC1A
	Order No.	**1127680000**	**1127690000**
Tension clamp conn.	Type	TOZ 24VDC 230VAC1A	TOZ 24-230VUC 230VAC1A
	Order No.	**1127700000**	**1127710000**
Note		Spare solid-state relay Type: SSR 10 - 32 VDC/ 12 - 275 VAC 3A Orderno.: 1132290000	Spare solid-state relay Type: SSR 10 - 32 VDC/ 12 - 275 VAC 3A Orderno.: 1132290000

1 CO contact, cl. 1, div. 2
AC / DC / UC coil

- Space-saving, 6.4 mm wide
- AgNi contact





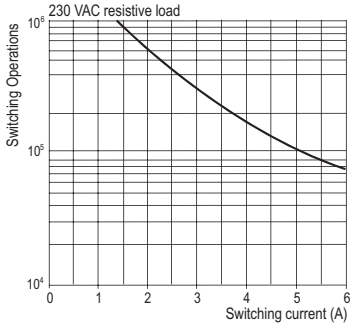
Technical data

Output		
Rated switching voltage / Continuous current		250 V AC / 6 A
Max. switching voltage, AC		250 V
Inrush current		20 A / 20 ms
Min. switching power		100 mA / 5 V, 12 V / 10 mA, 24 V / 1 mA
DC / AC Switching capacity (resistive), max.		144 W @ 24 V / 1500 VA
Contact material		AgNi
Mechanical service life		5 x 10^6 switching cycles
Max. switching frequency at rated load		0.1 Hz
Rated data		
Ambient temperature (operational)		-40 °C...60 °C
Storage temperature		-40 °C...85 °C
Humidity		5–95% rel. humidity, T_u = 40°C, no condensation
Approvals		CE; cULusEX
Insulation coordination (EN 50178)		
Rated voltage		300 V
Impulse withstand voltage		6 kV (1.2/50 µs)
Dielectric strength input – output		4 kV_{eff} / 1 min.
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		4 kV_{eff} / 1 min.
Creepage and clearance distance input – output		≥ 5.5 mm
Overvoltage category		III
Pollution degree		2

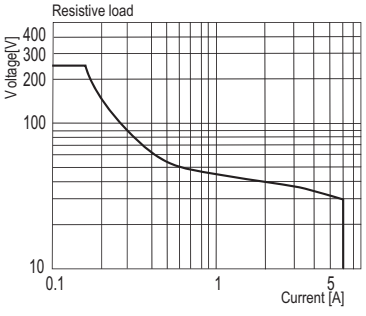
Dimensions		**Screw connection**
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.14 / 2.5
Depth x width x height	mm	88 / 6.4 / 90
Note		

Applications

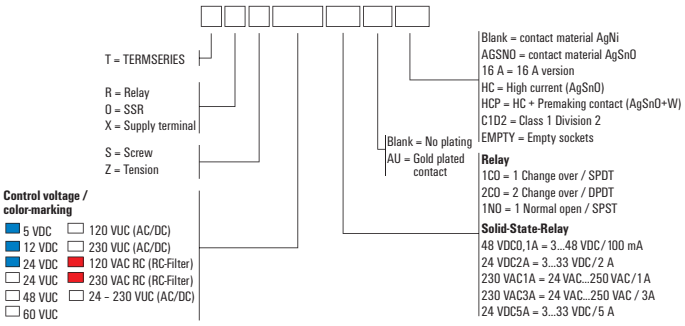
Electrical endurance
230 VAC resistive load



DC load breaking capacity
Resistive load



1 CO contact, cl. 1, div. 2
AC / DC / UC coil

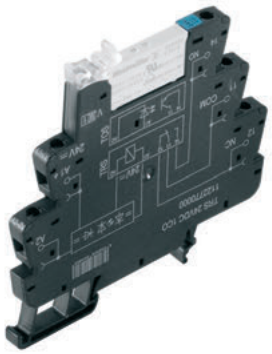


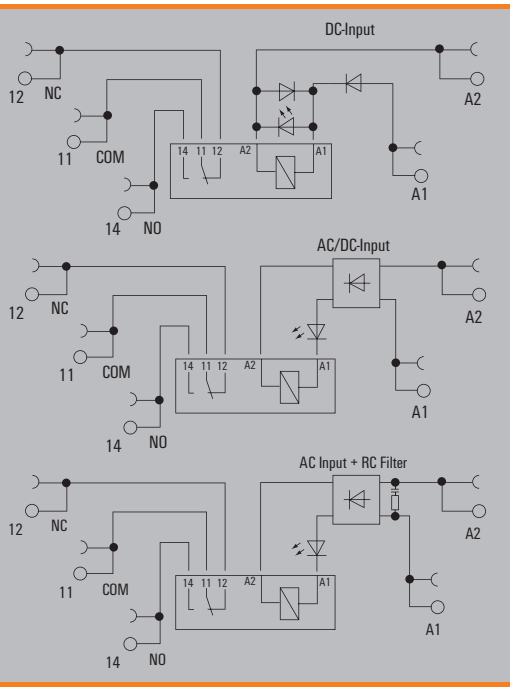
Ordering data	12 V DC	24 V DC	24 V UC	120 V AC RC	230 V AC RC
Input					
Rated control voltage	12 V DC ±20 %	24 V DC ±20 %	24 V UC ±10 %	120 V AC ±10 %	230 V AC ±10 %
Rated current AC / DC	/ 18 mA	/ 10 mA	11.7 mA / 6.4 mA	7 mA /	10.1 mA /
Power rating	210 mW	240 mW	270 mVA / 154 mW	0.84 VA	2.3 VA
Pull-in/drop-out voltage, typ.	8 V / 2 V DC	16 V / 4 V DC	16.5 V / 5.5 V AC 16.5 V / 5.5 V DC	79 V / 60 V AC	145 V / 85 V AC
Pull-in/drop-out current, typ.	9 mA / 3 mA DC	7 mA / 2 mA DC	4 mA / 1.2 mA AC 4 mA / 1.2 mA DC	4 mA / 2.5 mA AC	9.13 mA / 4.78 mA AC
Status indicator	Green LED	Green LED	Green LED	Green LED	Green LED
Protective circuit	Integrated free-wheel diode, Reverse polarity protection	Integrated free-wheel diode, Reverse polarity protection	Rectifier	Rectifier	Rectifier
Output					
Switch-on delay	< 7 ms	< 6 ms	< 4 ms	< 5.3 ms	< 22 ms
Switch-off delay	< 8 ms	< 7 ms	< 1.2 ms	< 4 ms	< 30 ms
Ordering data					
Screw connection Type	TRS 12VDC 1CO C1D2	TRS 24VDC 1CO C1D2	TRS 24VUC 1CO C1D2	TRS 120VACRC 1CO C1D2	TRS 230VACRC 1CO C1D2
Order No.	**1984560000**	**1984570000**	**1984580000**	**1984590000**	**1984600000**
Type					
Order No.					
Note					

Ordering data	24...230 V UC
Input	
Rated control voltage	24...230 V UC ±10 %
Rated current AC / DC	4 mA @ 230 V AC ±10 %, 28 mA @ 24 V AC ±10 % / 22 mA @ 24 V DC ±10 %
Power rating	530 mW @ 24 V DC, 930 mVA @ 230 V AC
Pull-in/drop-out voltage, typ.	11.5 V / 6 V AC 11.5 V / 5 V DC
Pull-in/drop-out current, typ.	
Status indicator	Green LED
Protective circuit	Rectifier
Output	
Switch-on delay	< 22 ms
Switch-off delay	< 100 ms
Ordering data	
Screw connection Type	TRS 24-230VUC 1CO C1D2
Order No.	**1984610000**
Type	
Order No.	
Note	

1 CO contact, cl. 1, div. 2
With hard gold-plated contacts
AC / DC / UC coil

- Space-saving, 6.4 mm wide
- AgNi contact





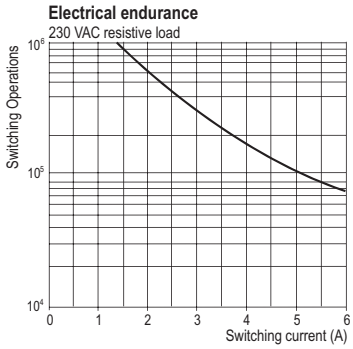
Technical data

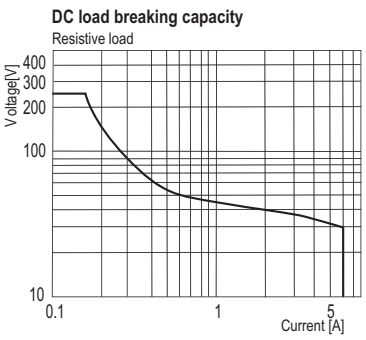
Output		
Rated switching voltage / Continuous current		250 V AC / 6 A
Max. switching voltage, AC		250 V
Inrush current		20 A / 20 ms
Min. switching power		100 mA / 5 V, 12 V / 10 mA, 24 V / 1 mA
DC / AC Switching capacity (resistive), max.		144 W @ 24 V / 1500 VA
Contact material		AgNi
Mechanical service life		5 x 10^6 switching cycles
Max. switching frequency at rated load		0.1 Hz
Rated data		
Ambient temperature (operational)		-40 °C...60 °C
Storage temperature		-40 °C...85 °C
Humidity		5–95% rel. humidity, T_u = 40°C, no condensation
Approvals		CE; cULusEX
Insulation coordination (EN 50178)		
Rated voltage		300 V
Impulse withstand voltage		6 kV (1.2/50 µs)
Dielectric strength input – output		4 kV_{eff} / 1 min.
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		4 kV_{eff} / 1 min.
Creepage and clearance distance input – output		≥ 5.5 mm
Overvoltage category		III
Pollution degree		2

Dimensions		**Screw connection**
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.14 / 2.5
Depth x width x height	mm	88 / 6.4 / 90

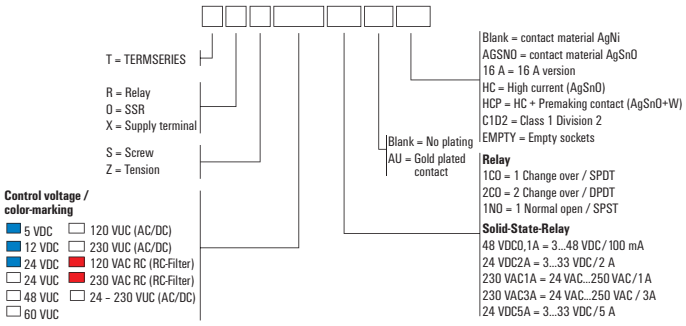
Note

Applications





1 CO contact, cl. 1, div. 2
With hard gold-plated contacts
AC / DC / UC coil



Ordering data

		12 V DC	24 V DC	120 V AC RC	24-230 V UC
Input					
Rated control voltage		12 V DC ±20 %	24 V DC ±20 %	120 V AC ±10 %	24...230 V UC ±10 %
Rated current AC / DC		/ 18 mA	/ 10 mA	7 mA /	4 mA @ 230 V AC ±10 %, 28 mA @ 24 V AC ±10 % / 22 mA @ 24 V DC ±10 %
Power rating		210 mW	240 mW	0.84 VA	530 mW @ 24 V DC, 930 mVA @ 230 V AC
Pull-in/drop-out voltage, typ.		8 V / 2 V DC	16 V / 4 V DC	79 V / 60 V AC	11.5 V / 6 V AC 11.5 V / 5 V DC
Pull-in/drop-out current, typ.		9 mA / 3 mA DC	7 mA / 2 mA DC	4 mA / 2.5 mA AC	
Status indicator		Green LED	Green LED	Green LED	Green LED
Protective circuit		Integrated free-wheel diode, Reverse polarity protection	Integrated free-wheel diode, Reverse polarity protection	Rectifier	Rectifier
Output					
Switch-on delay		< 7 ms	< 6 ms	< 5.3 ms	< 22 ms
Switch-off delay		< 8 ms	< 7 ms	< 4 ms	< 100 ms
Ordering data					
Screw connection	Type	TRS 12VDC 1COAU C1D2	TRS 24VDC 1COAU C1D2	TRS 120VACRC 1COAU C1D2	TRS 24-230VUC 1COAUC1D2
	Order No.	**1984620000**	**1984630000**	**1984640000**	**1984650000**
	Type				
	Order No.				
Note					

RSS relay module

Technical data	RSS113...	RSS112...
Type of contact / Number of contacts	1 CO contact	1 CO contact
Contact material	AgNi	AgNi 5uAu [3]
Max. switching voltage / current	250 V / 6 A [1]	250 V / 6 A [1]
Min. switching voltage / current	5 V / 100 mA [2]	1 V / 1 mA
Min. mechanical lifetime	5×10^6 [1]	5×10^6 [1]
Min. electrical lifetime	NO: 5×10^4; NC: 3×10^4 [1]	NO: 5×10^4; NC: 3×10^4 [1]
Max. switch-on / switch-off delay	8 / 4 ms	8 / 4 ms
Ambient temperature (operational)	-40 °C ...+85 °C	-40 °C ...+85 °C
Making / Dropout voltage coil	typ. 70 % / 5 % U_{NOM}	typ. 70 % / 5 % U_{NOM}

Note

1) At resistive load
2) 10 V / 10 mA; 24 V / 1 mA
3) Au- plate operate up to 0.25 W

Coil data	Nominal voltage / current		Order No.	Order No.
RSS...005	5 V DC / 34 mA		**4061580000**	**1174540000**
RSS...012	12 V DC / 14 mA		**4061610000**	**1220670000**
RSS...024	24 V DC / 7 mA		**4060120000**	**4061590000**
RSS...060	60 V DC / 3 mA		**4061630000**	**4061600000**

RCL relay module

Technical data	RCL424...	RCL425...
Type of contact / Number of contacts	2 CO contacts	2 CO contacts
Contact material	AgNi	AgNi 5uAu [3]
Max. switching voltage / current	250 V / 8 A [1]	250 V / 8 A [1]
Min. switching voltage / current	5 V / 100 mA [2]	1 V / 1 mA
Min. mechanical lifetime	30×10^6 [1]	30×10^6 [1]
Min. electrical lifetime	10×10^3 [1]	10×10^3 [1]
Max. switch-on / switch-off delay	8 / 6 ms	8 / 6 ms
Ambient temperature (operational)	-40 °C ...+85 °C	-40 °C ...+85 °C
Making / Dropout voltage coil	typ. 70 % / 10 % U_{NOM}	typ. 70 % / 10 % U_{NOM}

Note

1) At resistive load
2) 10 V / 10 mA; 24 V / 1 mA
3) Au- plate operate up to 0.25 W

Coil data	Nominal voltage / current	Nominal current	Order No.	Order No.
RCL...005	5 V DC / 80 mA	80 mA	**8693790000**	**1174490000**
RCL...012	12 V DC / 33 mA	33 mA	**4058560000**	**4074580000**
RCL...024	24 V DC / 16 mA	16 mA	**4058570000**	**4058580000**
RCL...048	48 V DC / 8 mA	8 mA	**4058750000**	**1201230000**
RCL...060	60 V DC / 6 mA	6 mA	**4058760000**	**1201260000**
RCL...110	110 V DC / 3 mA	3 mA	**4058590000**	**8828370000**

Small solid-state relay

Similar to illustration

Technical data	SSS...24 V 0.1 A DC	SSS...24 V 2 A DC	SSS...230 V 1 A AC
Output	Bipolar transistor	MOS-FET	TRIAC, zero cross switch
Switching voltage	0...48 V DC	0...24 V DC	24...240 V AC
Continuous current	100 mA	2 A	1 A
Peak reverse voltage	54 V	33 V	600 V
Forward voltage	< 1 V DC	< 120 mV	< 1 V
Test voltage input /output	2.5 kV	2.5 kV	3.75 kV
Ambient temperature (operational)	-20 °C ...+60 °C	-20 °C ...+60 °C	-20 °C ...+60 °C
Storage temperature	-40 °C ...+70 °C	-40 °C ...+70 °C	-40 °C ...+70 °C
Note			

Input	Nominal voltage / current	Order No.	Order No.	Order No.
SSS 5 V...	2.5...6 V DC / 4 mA	**4064320000**	–	–
SSS 24 V...	16...30 V DC / 7 mA	**4061180000**	–	–
SSS 60 V...	52...72 V DC / 3 mA	**4061230000**	–	–
SSS 5 V...	2.5...6 V DC / 9 mA	–	**4064310000**	–
SSS 24 V...	18...30 V DC / 7 mA	–	**4061190000**	–
SSS 60 V...	40...72 V DC / 3 mA	–	**4061200000**	–
SSS 5 V...	2.5...6 V DC / 15 mA	–	–	**1132260000**
SSS 24 V...	18...30 V DC / 7 mA	–	–	**4061210000**
SSS 60 V...	40...72 V DC / 3 mA	–	–	**4061220000**

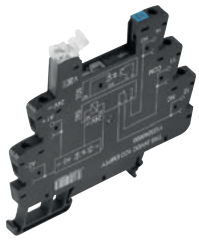
Solid-state relay

Similar to illustration

Technical data		SSR.../0-35 V DC 3,5 A	SSR.../12-275 V AC 1 A
Output		MOS-FET	TRIAC, zero cross switch
Switching voltage		0...33 V DC	12...275 V AC
Continuous current		1 mA...3,5 A	50 mA...1 A
Peak reverse voltage		35 V	600 V
Forward voltage		< 300 mV	< 1.1 V
Test voltage input /output		2.5 kV	
Ambient temperature (operational)		-20 °C ...+80 °C	
Storage temperature		-40 °C ...+100 °C	
Note			

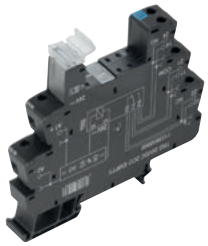
Coil data	Nominal voltage / current		Order No.	Order No.
SSR10...32 V DC/...	10...32 V/3...13 mA		**1132310000**	**1132290000**

Empty socket 6.4 mm



Input voltage	Qty.	Type / 1 CO, Screw connection	Order No.	Type / 1 CO, Tension clamp connection	Order No.
5 V DC [1]	10	TRS 5VDC 1CO empty	**1123220000**	TRZ 5VDC 1CO empty	**1123340000**
12 V DC [2]	10	TRS 12VDC 1CO empty	**1123230000**	TRZ 12VDC 1CO empty	**1123350000**
24 V DC [3]	10	TRS 24VDC 1CO empty	**1123240000**	TRZ 24VDC 1CO empty	**1123370000**
24 V UC [3]	10	TRS 24VUC 1CO empty	**1123250000**	TRZ 24VUC 1CO empty	**1123380000**
48 V UC [3]	10	TRS 48VUC 1CO empty	**1123270000**	TRZ 48VUC 1CO empty	**1123390000**
60 V UC [4]	10	TRS 60VUC 1CO empty	**1123280000**	TRZ 60VUC 1CO empty	**1123400000**
120 V UC [4]	10	TRS 120VUC 1CO empty	**1123290000**	TRZ 120VUC 1CO empty	**1123410000**
230 V UC [4]	10	TRS 230VUC 1CO empty	**1123300000**	TRZ 230VUC 1CO empty	**1123420000**
120 V AC [4]	10	TRS 120VAC RC 1CO empty	**1123310000**	TRZ 120VAC RC 1CO empty	**1123430000**
230 V AC [4]	10	TRS 230VAC RC 1CO empty	**1123320000**	TRZ 230VAC RC 1CO empty	**1123440000**
24...230 V AC / DC [3]	10	TRS 24-230VUC 1CO empty	**1123330000**	TRZ 24-230VUC 1CO empty	**1123450000**
Useable with [1] RSS...005; SSS 5V...		[2] RSS...012 [3] RSS...024; SSS 24V...		[4] RSS...60V; SSS 60V...	

Empty socket 12.8 mm



Input voltage	Qty.	Type / 1 CO, Screw connection	Order No.	Type / 1 CO, Tension clamp connection	Order No.
24 V DC	10	TOS 24VDC empty	**1127720000**	TOZ 24VDC empty	**1127740000**
24...230 V UC	10	TOS 24-230VUC empty	**1127730000**	TOZ 24-230VUC empty	**1127750000**
Input voltage	**Qty.**	**Type / 2 CO, Screw connection**	**Order No.**	**Type / 2 CO, Tension clamp connection**	**Order No.**
5 V DC [2]	10	TRS 5VDC 2CO empty	**1123950000**	TRZ 5VDC 2CO empty	**1124080000**
12 V DC [3]	10	TRS 12VDC 2CO empty	**1123970000**	TRZ 12VDC 2CO empty	**1124090000**
24 V DC [4]	10	TRS 24VDC 2CO empty	**1123980000**	TRZ 24VDC 2CO empty	**1124100000**
24 V UC [4]	10	TRS 24VUC 2CO empty	**1123990000**	TRZ 24VUC 2CO empty	**1124110000**
48 V UC [5]	10	TRS 48VUC 2CO empty	**1124000000**	TRZ 48VUC 2CO empty	**1124120000**
60 V UC [6]	10	TRS 60VUC 2CO empty	**1124010000**	TRZ 60VUC 2CO empty	**1124130000**
120 V UC [7]	10	TRS 120VUC 2CO empty	**1124020000**	TRZ 120VUC 2CO empty	**1124140000**
230 V UC [7]	10	TRS 230VUC 2CO empty	**1124030000**	TRZ 230VUC 2CO empty	**1124150000**
120 V AC [7]	10	TRS 120VAC RC 2CO empty	**1124040000**	TRZ 120VAC RC 2CO empty	**1124170000**
230 V AC [7]	10	TRS 230VAC RC 2CO empty	**1124050000**	TRZ 230VAC RC 2CO empty	**1124180000**
24...230 V AC / DC [7]	10	TRS 24-230VUC 2CO empty	**1124070000**	TRZ 24-230VUC 2CO empty	**1124190000**
Useable with [1] RCL31024;SSR 10...32VDC/...		[2] RCL42005, [3] RCL42012	[4] RCL42024	[5] RCL42048, [6] RCL42060,	[7] RCL42110

Technical data

Conductor		Screw connection	Tension clamp connection
Plug gauge to IEC 60947-1	Size	A1 / B1	A1 / B1
1 conductor			
Solid H07V-U	mm²	0.14...2.5	0.14...1.5
Stranded H07V-K	mm²	0.14...1.5	0.14...1.5
... with wire end ferrule	mm²	0.25...1.5	0.14...1.5
... with wire end ferrule with plastic collar	mm²	0.25...1.5	0.14...1.5
Clamping range AWG.../1	AWG	26...14	26...16
Clamping range AWG.../7	AWG	26...16	26...16
Clamping range AWG.../19	AWG	26...16	26...16
2 conductor with same size			
Solid H07V-U	mm²	0.5...1.0	
Stranded H07V-K	mm²	0.5...1.0	
... with twin wire end ferrule H...D ZH	mm²	0.5...1.0	0.5...1.0

General data			
Nominal torque	Nm	0.4	
Stripping length	mm	8	8
Continuous current ZQV 1.5N/R6.4	A	17.5; UL: 10	17.5; UL: 10
No. Contact durability relay / ZQV		10	10

Note		

Pluggable cross connection

Type	No. of poles / Pitch	Colour	Qty.	Order No.
ZQV 1.5N/R6.4/2 GE	2 / 6.4 mm	yellow	10	1193670000
ZQV 1.5N/R6.4/10 GE	10 / 6.4 mm	yellow	10	1193680000
ZQV 1.5N/R6.4/19 GE	19 / 6.4 mm	yellow	10	1193690000
ZQV 1.5N/R12.8/10 GE	10 / 12.8 mm	yellow	10	1193700000
ZQV 1.5N/R6.4/10 SW	10 / 6.4 mm	black	10	1391630000
ZQV 1.5N/R6.4/19 SW	19 / 6.4 mm	black	10	1391600000
ZQV 1.5N/R6.4/10 RT	10 / 6.4 mm	red	10	1391640000
ZQV 1.5N/R6.4/19 RT	19 / 6.4 mm	red	10	1391610000
ZQV 1.5N/R6.4/10 BL	10 / 6.4 mm	blue	10	1390350000
ZQV 1.5N/R6.4/19 BL	19 / 6.4 mm	blue	10	1391620000

Supply terminal

Type	Connection technology	Qty.	Order No.
TXS SUPPLY	Screw connection	10	1240780000
TXZ SUPPLY	Tension clamp connection	10	1240790000

Other accessories

Isolation plate	Note	Qty.	Order No.
TW TXS/TXZ R3.2	Isolation plate 3.2 mm pitch	10	1240800000

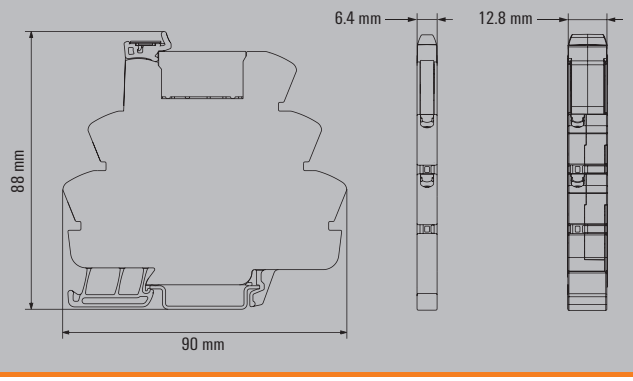
Markers	Note		
WS 10/6 MC Middle	10 * 6 mm	600	1818400000

Screwdriver	Note		
SDK PH0	only screw connection	1	9008470000
SD 0.6 x 3.5 x 100		1	9008330000
SD TO 0.6 x 3.0	only tension clamp connection (angled)	1	1323880000

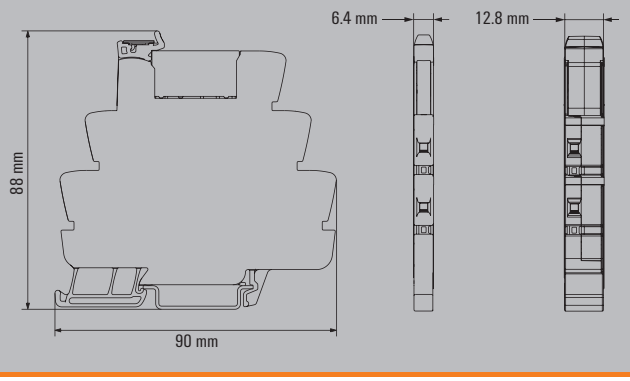
End bracket			
WEW35/2 SW		100	1061210000

Dimensions

Tension clamp connection



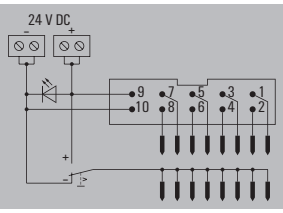
Screw connection



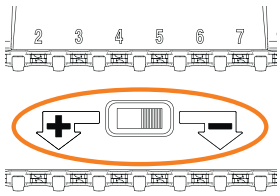
TERMSERIES adapters

- Suitable for input and output logic
- Version for 6.4 mm TERMSERIES base
- Supply connections (PUSH IN) in double execution for simple supply voltage bridging
- User-friendly and unique marking
- 10-pin connecting plug according to DIN EN 60603-13

TIA F10



Potential change-over switch



The potential change-over switch is located between contact rows of the TERMSERIES adaptor. It is used to switch the potential of the lower contact row to "+" or "-" potential of the supply voltage.

Installation input

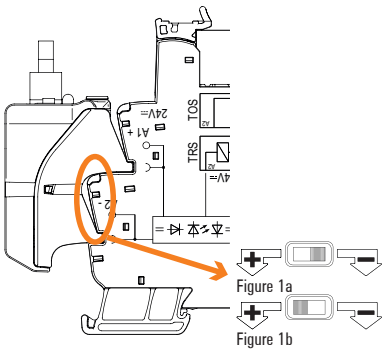


Figure 1a: **Positive-switching logic:** Potential change-over switch to "-", installation on **24 V DC input** (A1/A2).

Figure 1b: **Negative-switching logic:** Potential change-over switch to "+", installation on **24 V UC input** (A1/A2).

Installation output

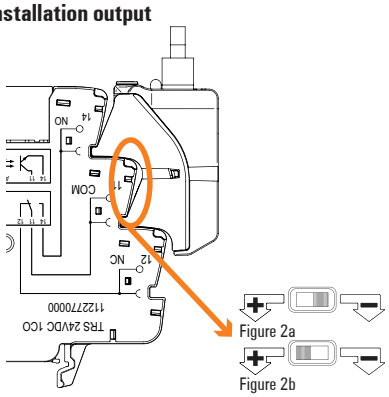


Figure 2a: **Positive-switching logic:** Potential change-over switch to "+", installation on output (11/14).

Figure 2b: **Negative-switching logic:** Potential change-over switch to "-", installation on output (11/14).

Technical data

Supply		
Supply voltage		24 V DC ± 20 %
Status display		Green LED
Signals		
Rated voltage		24 V DC
Voltage, max.		30 V DC
Rated current (per signal path)		125 mA
Current (per signal path), max.		1 A
Total current of all signals, max.		1 A
Number of signal paths		8
Connection data (supply)		
Wire connection method		PUSH IN
Clamping range, rated connection, min.		0.13 mm²
Clamping range, rated connection, max.		1.5 mm²
Number of terminals		4 (+,+,–,–)
Connection data (signal)		
Plug type		10-pole plug according to DIN EN 60603-13, long locking lever
General data		
Ambient temperature (operational)		-40 °C...60 °C
Storage temperature		-40 °C...85 °C
Humidity		5...95% (indoor), T_u = 40°C, no condensation
UL 94 flammability rating		V-0
Approvals		CE; cULus; GL
Insulation coordination		
Pollution degree		2
Overvoltage category		III
Impulse withstand voltage		1.5 kV
Rated voltage		32 V
Protection degree		IP 20 in installed condition
Dimensions		
Depth x width x height	mm	62 / 51 / 43
Note		

Ordering data

Type	Qty.	Order No.
TIA F10	1	**1463520000**

Note	Suitable for 6.4 mm wide TERMSERIES base

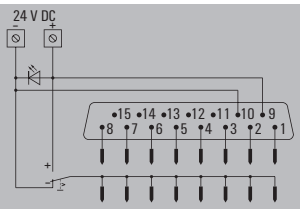
Accessories

Note	

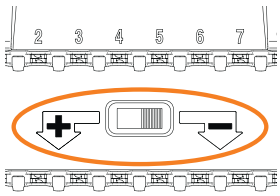
TERMSERIES adapters

- Suitable for input and output logic
- Version for 6.4 mm TERMSERIES base
- User-friendly and unique marking
- 15-pin sub-D plug according to DIN 41652 / IEC 60807

TIA SUBD 15S



Potential change-over switch



The potential change-over switch is located between contact rows of the TERMSERIES adaptor. It is used to switch the potential of the lower contact row to "+" or "-" potential of the supply voltage.

Installation input

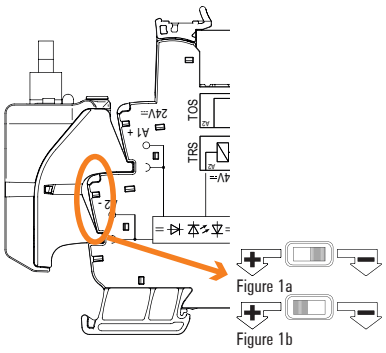


Figure 1a: **Positive-switching logic:** Potential change-over switch to "-", installation on **24 V DC input** (A1/A2).

Figure 1b: **Negative-switching logic:** Potential change-over switch to "+", installation on **24 V UC input** (A1/A2).

Installation output

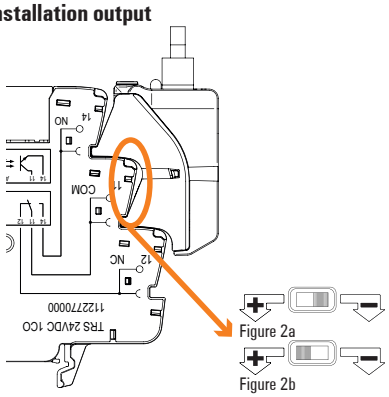


Figure 2a: **Positive-switching logic:** Potential change-over switch to "+", installation on output (11/14).

Figure 2b: **Negative-switching logic:** Potential change-over switch to "-", installation on output (11/14).

Technical data

Supply		
Supply voltage		24 V DC ± 20 %
Status display		Green LED
Signals		
Rated voltage		24 V DC
Voltage, max.		30 V DC
Rated current (per signal path)		125 mA
Current (per signal path), max.		1 A
Total current of all signals, max.		1 A
Number of signal paths		8
Connection data (supply)		
Wire connection method		PUSH IN
Clamping range, rated connection, min.		0.13 mm²
Clamping range, rated connection, max.		1.5 mm²
Number of terminals		2 (+,–)
Connection data (signal)		
Plug type		Sub-D, 15-pole, DIN 41652 / IEC 60807
General data		
Ambient temperature (operational)		-40 °C...60 °C
Storage temperature		-40 °C...85 °C
Humidity		5...95% (indoor), T_u = 40°C, no condensation
UL 94 flammability rating		V-0
Approvals		CE; cULus; GL
Insulation coordination		
Pollution degree		2
Overvoltage category		III
Impulse withstand voltage		1.5 kV
Rated voltage		32 V
Protection degree		IP 20 in installed condition
Dimensions		
Depth x width x height	mm	52 / 51 / 43
Note		

Ordering data

Type	Qty.	Order No.
TIA SUBD 15S	1	1463530000

Note	Suitable for 6.4 mm wide TERMSERIES base

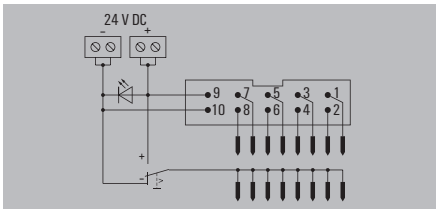
Accessories

Note	

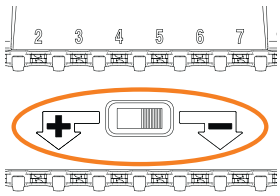
TERMSERIES adapters

- Suitable for input and output logic
- Version for 12.8 mm TERMSERIES base
- Supply connections (PUSH IN) in double execution for simple supply voltage bridging
- User-friendly and unique marking
- 10-pin connecting plug according to DIN EN 60603-13

TIAL F10



Potential change-over switch



The potential change-over switch is located between contact rows of the TERMSERIES adaptor. It is used to switch the potential of the lower contact row to "+" or "-" potential of the supply voltage.

Installation input

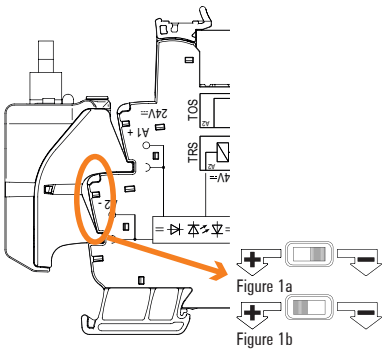


Figure 1a: **Positive-switching logic:** Potential change-over switch to "-", installation on **24 V DC input** (A1/A2).

Figure 1b: **Negative-switching logic:** Potential change-over switch to "+", installation on **24 V UC input** (A1/A2).

Installation output

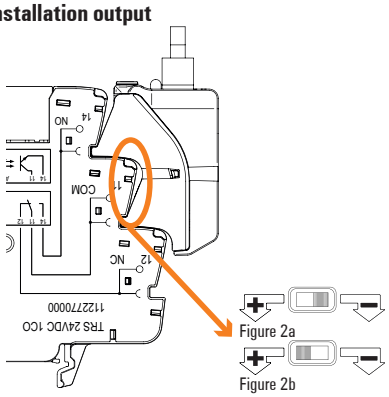


Figure 2a: **Positive-switching logic:** Potential change-over switch to "+", installation on output (11/14).

Figure 2b: **Negative-switching logic:** Potential change-over switch to "-", installation on output (11/14).

Technical data

Supply		
Supply voltage		24 V DC ± 20 %
Status display		Green LED
Signals		
Rated voltage		24 V DC
Voltage, max.		30 V DC
Rated current (per signal path)		125 mA
Current (per signal path), max.		1 A
Total current of all signals, max.		1 A
Number of signal paths		8
Connection data (supply)		
Wire connection method		PUSH IN
Clamping range, rated connection, min.		0.13 mm²
Clamping range, rated connection, max.		1.5 mm²
Number of terminals		4 (+,+,–,–)
Connection data (signal)		
Plug type		10-pole plug according to DIN EN 60603-13, long locking lever
General data		
Ambient temperature (operational)		-40 °C...60 °C
Storage temperature		-40 °C...85 °C
Humidity		5...95% (indoor), T_u = 40°C, no condensation
UL 94 flammability rating		V-0
Approvals		CE; cULus; GL
Insulation coordination		
Pollution degree		2
Overvoltage category		III
Impulse withstand voltage		1.5 kV
Rated voltage		32 V
Protection degree		IP 20 in installed condition
Dimensions		
Depth x width x height	mm	62 / 102 / 43
Note		

Ordering data

Type	Qty.	Order No.
TIAL F10	1	**1463540000**

Note	Suitable for 12.8 mm wide TERMSERIES base

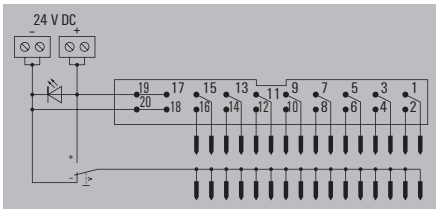
Accessories

Note	

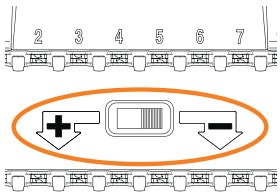
TERMSERIES adapters

- Suitable for input and output logic
- Version for 6.4 mm TERMSERIES base
- Supply connections (PUSH IN) in double execution for simple supply voltage bridging
- User-friendly and unique marking
- 20-pin connecting plug according to DIN EN 60603-13

TIAL F20



Potential change-over switch



The potential change-over switch is located between contact rows of the TERMSERIES adaptor. It is used to switch the potential of the lower contact row to "+" or "-" potential of the supply voltage.

Installation input

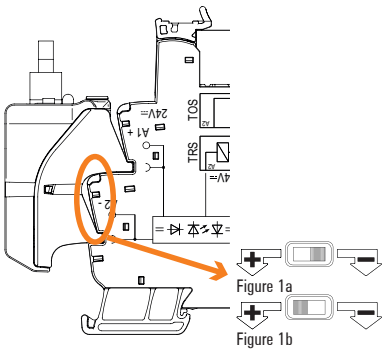


Figure 1a
Figure 1b

Figure 1a: **Positive-switching logic:** Potential change-over switch to "-", installation on **24 V DC input** (A1/A2).

Figure 1b: **Negative-switching logic:** Potential change-over switch to "+", installation on **24 V UC input** (A1/A2).

Installation output

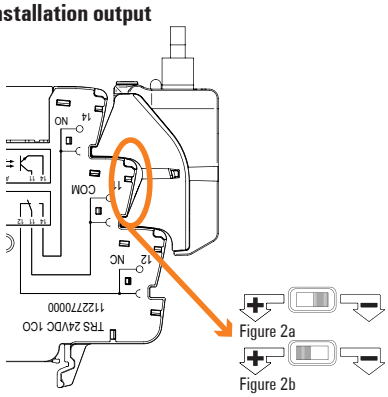


Figure 2a
Figure 2b

Figure 2a: **Positive-switching logic:** Potential change-over switch to "+", installation on output (11/14).

Figure 2b: **Negative-switching logic:** Potential change-over switch to "-", installation on output (11/14).

Technical data

Supply		
Supply voltage		24 V DC ± 20 %
Status display		Green LED
Signals		
Rated voltage		24 V DC
Voltage, max.		30 V DC
Rated current (per signal path)		60 mA
Current (per signal path), max.		1 A
Total current of all signals, max.		1 A
Number of signal paths		16
Connection data (supply)		
Wire connection method		PUSH IN
Clamping range, rated connection, min.		0.13 mm²
Clamping range, rated connection, max.		1.5 mm²
Number of terminals		4 (+,+,–,–)
Connection data (signal)		
Plug type		20-pole plug according to DIN EN 60603-13, long locking lever
General data		
Ambient temperature (operational)		-40 °C...60 °C
Storage temperature		-40 °C...85 °C
Humidity		5...95% (indoor), T_u = 40°C, no condensation
UL 94 flammability rating		V-0
Approvals		CE; cULus; GL
Insulation coordination		
Pollution degree		2
Overvoltage category		III
Impulse withstand voltage		1.5 kV
Rated voltage		32 V
Protection degree		IP 20 in installed condition
Dimensions		
Depth x width x height	mm	62 / 102 / 43
Note		

Ordering data

Type	Qty.	Order No.
TIAL F20	1	1463550000

Note	Suitable for 6.4 mm wide TERMSERIES base

Accessories

Note	

No-wear isolation of potentials in terminal block design

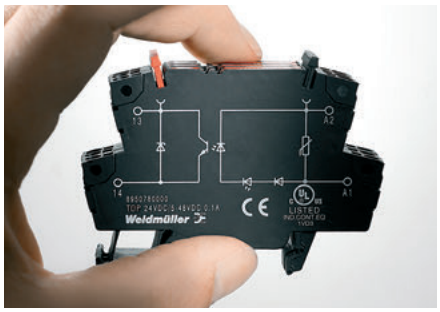
PUSH IN

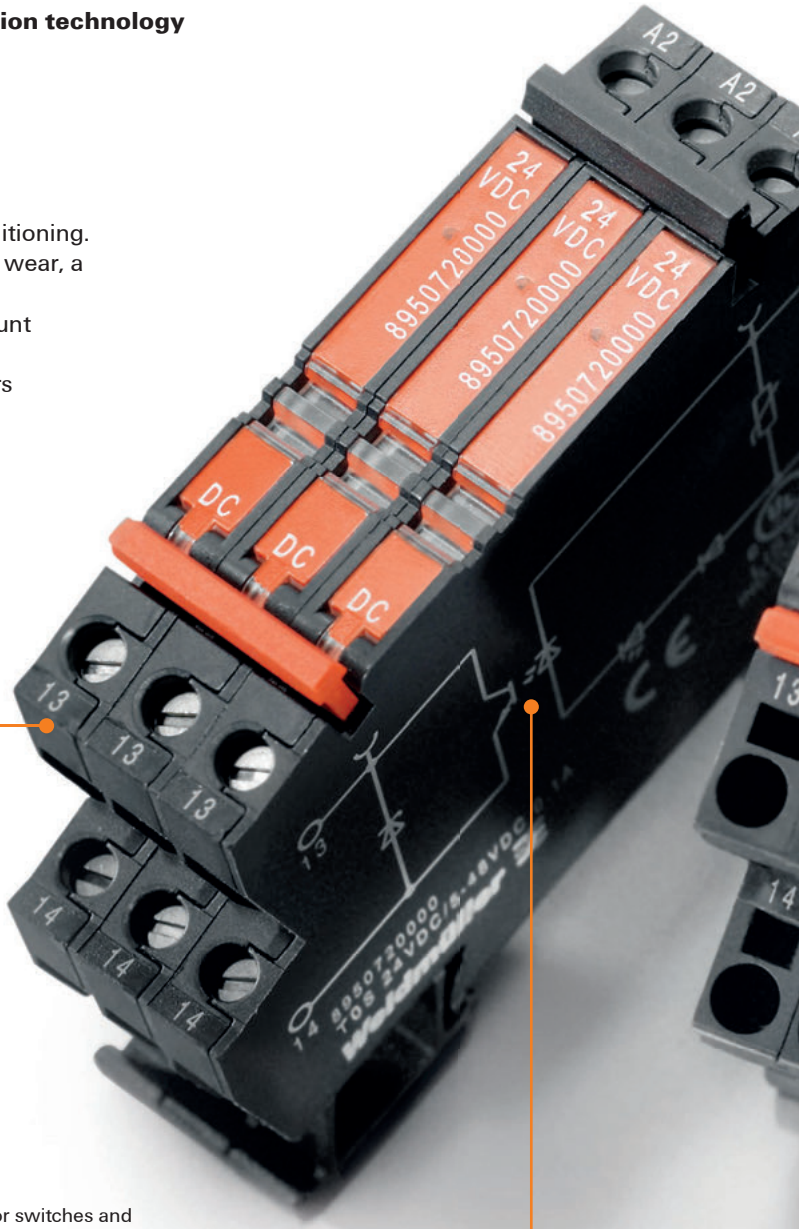
Space saving solid-state relay with “PUSH IN” connection technology

The TERMOPTO opto modules are characterised by a particularly compact design, pluggable cross-connections and an optimal price-performance ratio.

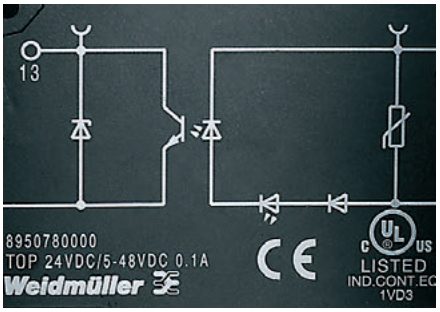
TERMOPTO offers a compact, electronic alternative to the electromechanical relay for electrical isolation and signal conditioning. Instead of an electromechanical solution that is susceptible to wear, a maintenance-free and compact terminal block with integrated electrical isolation is used. This saves space, reduces the amount of servicing and increases system availability. In addition, the overall accessory needs are reduced, because cross-connectors and markers from the terminal portfolio can be used.

Compact
Compact design reduces space requirements in the switching cabinet by > 80 % compared to conventional relay solutions.

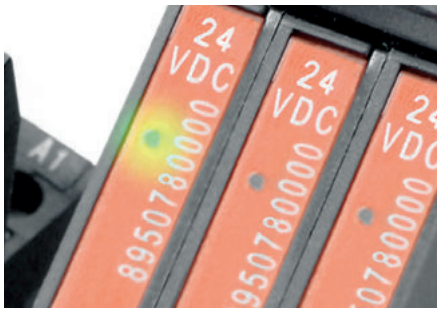


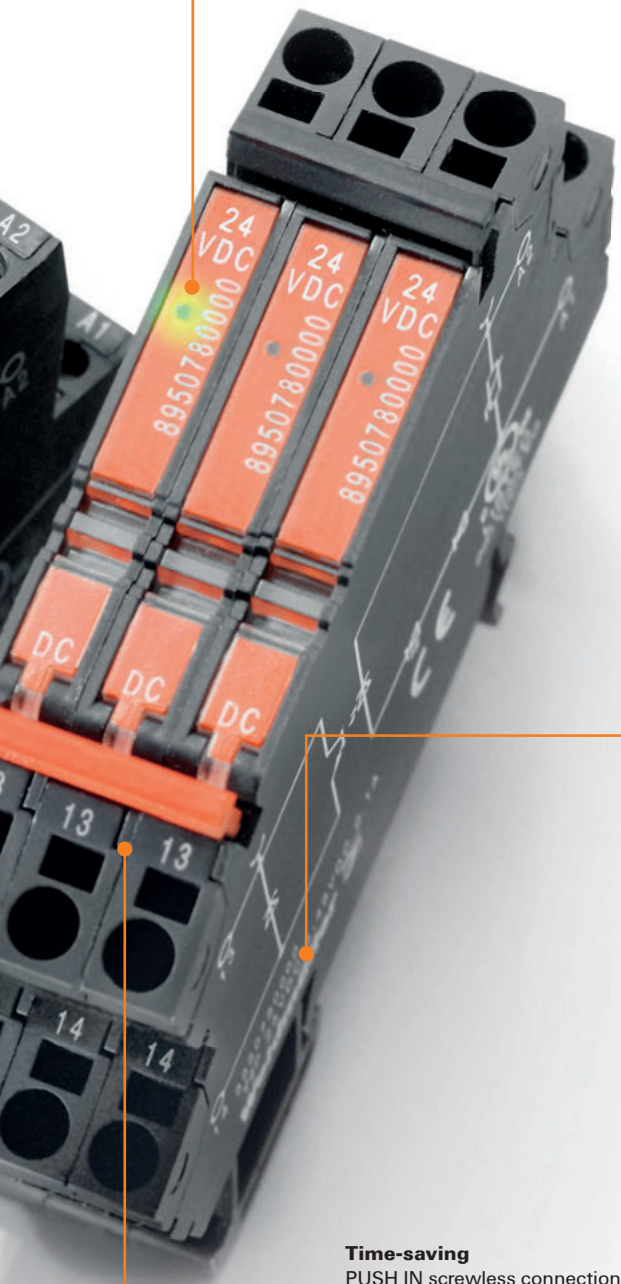


Long lifetime
Wear-free semiconductor switches and extensive protective circuits ensure long service life and reliable switching cycles.



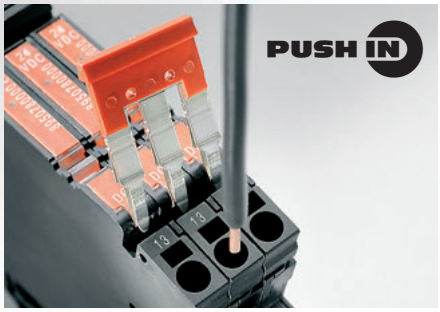
Status indicator
LED status indicator provides information on the switching state.





Closed design
Closed design for space-saving, side-by-side arrangement. No end plate necessary; the electronics are mechanically protected.

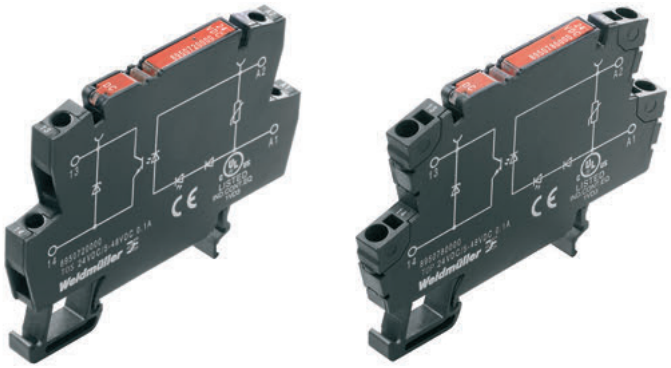
Time-saving
PUSH IN screwless connection system and the pluggable cross-connection reduce wiring time by > 50 %.



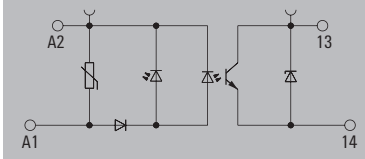
Solid-state relays 5...48 V DC / 100 mA

Output versions

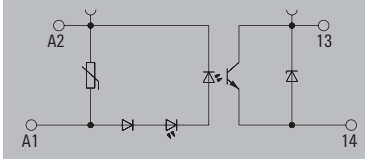
- Space-saving 6.1 mm width
- Plug-in cross-connections
- Screw and PUSH IN wire connection
- Enclosed design



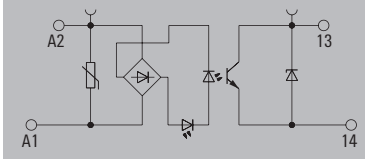
5 V DC



12...220 DC



24...230 V AC



Technical data

Load side		
Rated switching voltage		5...48 V DC
Continuous current		100 mA
Inrush current		
Solid-state type		Transistor
Voltage drop at max. load		< 1 V
Leakage current		< 10 µA
Protective circuit, load side		Integrated free-wheel diode
Short-circuit-proof / Protective circuit, load side		No / Integrated free-wheel diode
General data		
Ambient temperature (operational)		-20 °C...60 °C
Storage temperature		-40 °C...80 °C
Humidity		5–95% rel. humidity, T_u = 40°C, no condensation
Approvals		CE; cULus; EAC
Insulation coordination (EN 50178)		
Rated voltage		300 V
Impulse withstand voltage		4 kV (1.2/50 µs)
Dielectric strength for control side - load side		1.2 kV_{eff} / 1 min.
Dielectric strength to mounting rail		
Clearance and creepage distances for control side - load side		> 3 mm
Overvoltage category		III
Pollution degree		2

Dimensions		**Screw connection**	**PUSH IN connection**
Clamping range (nominal / min. / max.)	mm^2	2.5 / 0.5 / 2.5	1.5 / 0.5 / 2.5
Depth x width x height	mm	55 / 6.1 / 74.5	55 / 6.1 / 79.5
Note		Accessories and dimensioned drawings: refer to the TERMOPTO Accessories page.	

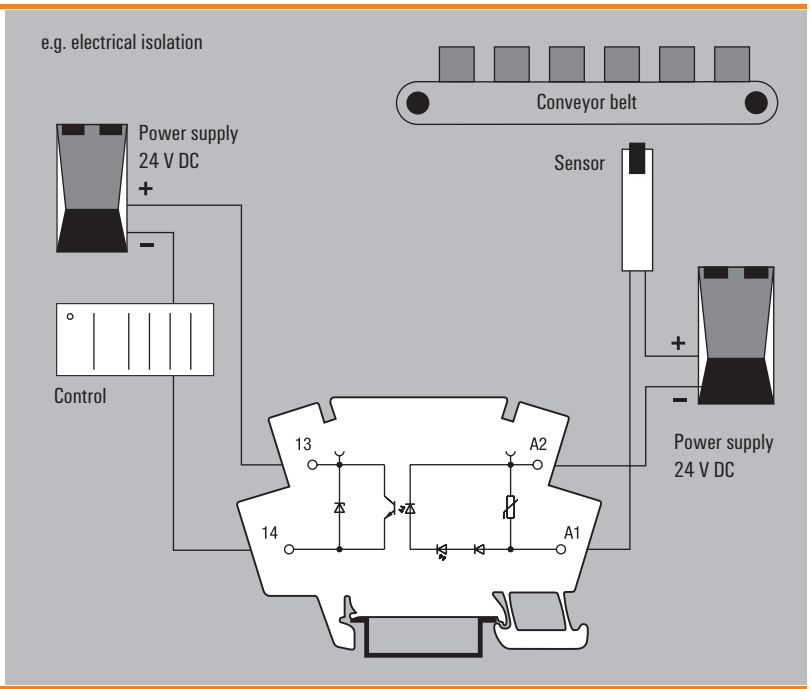
Applications

The **TERMOPTO** opto module is used in industrial applications in which electrical isolation and signal conditioning without switching amplification is sufficient.

The compact design in terminal-block format saves space on the rail and offers the option of a pluggable cross connection.

The choice between 10 input voltages and 3 output voltages,as well as screw or PUSH IN connection technology,gives 60 variations for different applications.

The integrated protective circuit ensures sufficient protection in applications with resistive,as well as slightly inductive and capacitive loads. For purely inductive, capacitive or comparable loads with high switch-on and switch-off peaks, such as solenoid valves or filament lamps, ensure that the module is dimensioned appropriately or an additional safeguard is used.



Solid-state relays 5...48 V DC / 100 mA

Output versions

Ordering data	5 V DC	12 V DC	24 V DC	48...60 V DC	110 V DC
Control side					
Rated control voltage	5 V DC ±20 %	12 V DC ±20 %	24 V DC ±20 %	48...60 V DC ±20 %	110 V DC ±20 %
Nominal control current	7.7 mA DC	7.8 mA DC	7 mA DC	4.3 mA DC	2.6 mA DC
Power rating	< 40 mW	< 95 mW	≤ 170 mW	< 200 mW	< 280 mW
Cut-in / dropout voltage	4 V / 1.25 V DC	9.6 V / 3 V DC	19.2 V / 6 V DC	38.4 V / 12 V DC	88 V / 27.5 V DC
Input frequency	3 kHz	3 kHz	3 kHz	500 Hz	500 Hz
Status indicator	Green LED	Green LED	Green LED	Green LED	Green LED
Protective circuit	Varistor, rev. polarity protection	Varistor, rev. polarity protection	Varistor, rev. polarity protection	Varistor, rev. polarity protection	Varistor, rev. polarity protection
Load side					
Switch-on delay	< 13 µs	< 13 µs	< 13 µs	< 170 µs	< 170 µs
Switch-off delay	< 42 µs	< 42 µs	< 42 µs	< 310 µs	< 310 µs

Ordering data						
Screw connection	Type	TOS 5VDC/48VDC 0,1A	TOS 12VDC/48VDC 0,1A	TOS 24VDC/48VDC 0,1A	TOS 48-60VDC/48VDC 0,1A	TOS 110VDC/48VDC 0,1A
	Order No.	**8950700000**	**8950710000**	**8950720000**	**8950730000**	**8950740000**
PUSH IN connection	Type	TOP 5VDC/48VDC 0,1A	TOP 12VDC/48VDC 0,1A	TOP 24VDC/48VDC 0,1A	TOP 48-60VDC/48VDC 0,1A	TOP 110VDC/48VDC 0,1A
	Order No.	**8950760000**	**8950770000**	**8950780000**	**8950790000**	**8950800000**
Note						

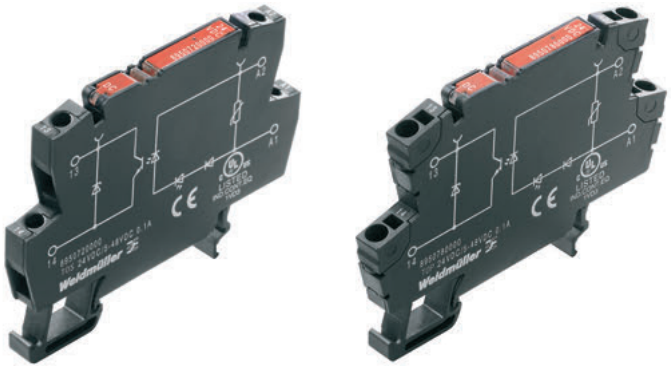
Ordering data	220 V DC	24 V AC	48...60 V AC	120 V AC	230 V AC
Control side					
Rated control voltage	220 V DC +10 % / -15 %	24 V AC ±20%	48...60 V AC ±20 %	120 V AC ±20 %	230 V AC +10 % / -20 %
Nominal control current	1.65 mA DC	7.4 mA AC	4.3 mA AC	2.9 mA AC	1.75 mA AC
Power rating	≤ 360 mW	< 0.18 VA	≤ 0.2 VA	≤ 0.3 VA	≤ 0.4 VA
Cut-in / dropout voltage	187 V / 55 V DC	21.6 V / 9.6 V AC	38.4 V / 19.2 V AC	102 V / 48 V AC	207 V / 92 V AC
Input frequency	500 Hz	10 Hz	10 Hz	10 Hz	10 Hz
Status indicator	Green LED	Green LED	Green LED	Green LED	Green LED
Protective circuit	Varistor, rev. polarity protection	Varistor	Varistor	Varistor	Varistor
Load side					
Switch-on delay	< 170 µs	< 12 ms	< 12 ms	< 12 ms	< 12 ms
Switch-off delay	< 310 µs	< 14 ms	< 14 ms	< 14 ms	< 14 ms

Ordering data						
Screw connection	Type	TOS 220VDC/48VDC 0,1A	TOS 24VAC/48VDC 0,1A	TOS 48-60VAC/48VDC 0,1A	TOS 120VAC/48VDC 0,1A	TOS 230VAC/48VDC 0,1A
	Order No.	**8950750000**	**8950820000**	**8950830000**	**8950840000**	**8950850000**
PUSH IN connection	Type	TOP 220VDC/48VDC 0,1A	TOP 24VAC/48VDC 0,1A	TOP 48-60VAC/48VDC 0,1A	TOP 120VAC/48VDC 0,1A	TOP 230VAC/48VDC 0,1A
	Order No.	**8950810000**	**8950860000**	**8950870000**	**8950880000**	**8950890000**
Note						

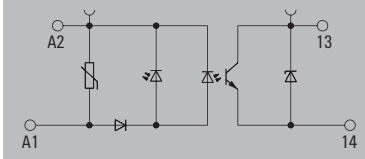
Solid-state relays, 5...48 V DC / 500 mA

Output versions

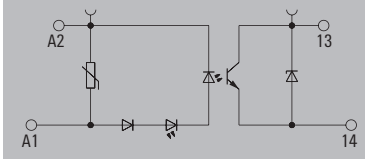
- Space-saving 6.1 mm width
- Plug-in cross-connections
- Screw and PUSH IN wire connection
- Enclosed design



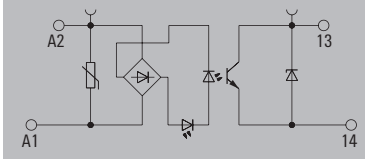
5 V DC



12...220 DC



24...230 V AC



Technical data

Load side	
Rated switching voltage	5...48 V DC
Continuous current	500 mA
Inrush current	
Solid-state type	Transistor
Voltage drop at max. load	< 1 V
Leakage current	< 10 µA
Protective circuit, load side	Integrated free-wheel diode
Short-circuit-proof / Protective circuit, load side	No / Integrated free-wheel diode
General data	
Ambient temperature (operational)	-20 °C...60 °C
Storage temperature	-40 °C...80 °C
Humidity	5–95% rel. humidity, T_u = 40°C, no condensation
Approvals	CE; cULus; EAC
Insulation coordination (EN 50178)	
Rated voltage	300 V
Impulse withstand voltage	4 kV (1.2/50 µs)
Dielectric strength for control side - load side	1.2 kV_{eff} / 1 min.
Dielectric strength to mounting rail	
Clearance and creepage distances for control side - load side	> 3 mm
Overvoltage category	III
Pollution degree	2

Dimensions		**Screw connection**	**PUSH IN connection**
Clamping range (nominal / min. / max.)	mm²	2.5 / 0.5 / 2.5	1.5 / 0.5 / 2.5
Depth x width x height	mm	55 / 6.1 / 74.5	55 / 6.1 / 79.5
Note		Accessories and dimensioned drawings: refer to the TERMOPTO Accessories page.	

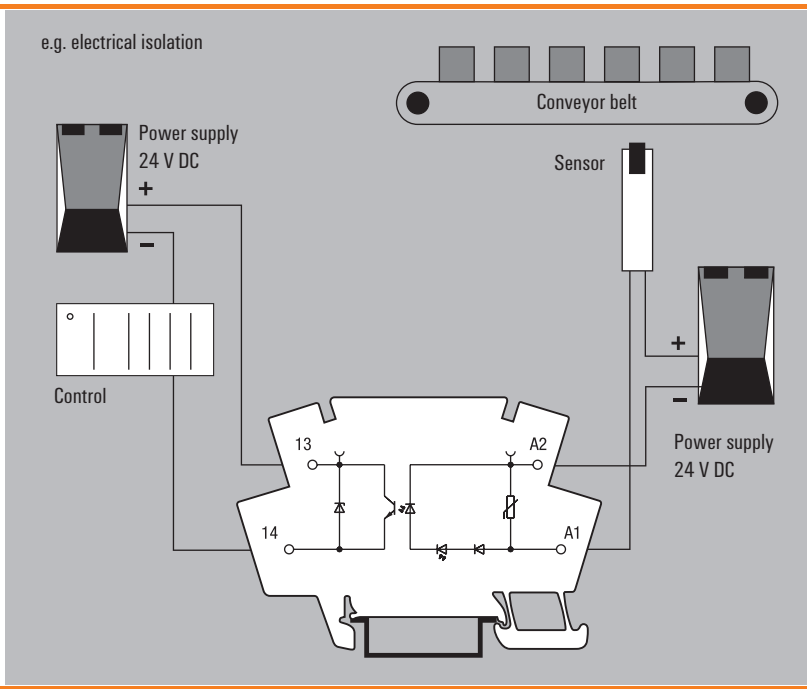
Applications

The **TERMOPTO** opto module is used in industrial applications in which electrical isolation and signal conditioning without switching amplification is sufficient.

The compact design in terminal-block format saves space on the rail and offers the option of a pluggable cross connection.

The choice between 10 input voltages and 3 output voltages,as well as screw or PUSH IN connection technology,gives 60 variations for different applications.

The integrated protective circuit ensures sufficient protection in applications with resistive,as well as slightly inductive and capacitive loads. For purely inductive, capacitive or comparable loads with high switch-on and switch-off peaks, such as solenoid valves or filament lamps, ensure that the module is dimensioned appropriately or an additional safeguard is used.



Solid-state relays, 5...48 V DC / 500 mA

Output versions

Ordering data	5 V DC	12 V DC	24 V DC	48...60 V DC	110 V DC
Control side					
Rated control voltage	5 V DC ±20 %	12 V DC ±20 %	24 V DC ±20 %	48...60 V DC ±20 %	110 V DC ±20 %
Nominal control current	7.7 mA DC	7.8 mA DC	7 mA DC	4.3 mA DC	2.6 mA DC
Power rating	< 40 mW	< 95 mW	≤ 170 mW	≤ 200 mW	≤ 280 mW
Cut-in / dropout voltage	4 V / 1.25 V DC	9.6 V / 3 V DC	19.2 V / 6 V DC	38.4 V / 12 V DC	88 V / 27.5 V DC
Input frequency	200 Hz	200 Hz	200 Hz	200 Hz	200 Hz
Status indicator	Green LED	Green LED	Green LED	Green LED	Green LED
Protective circuit	Varistor, rev. polarity protection	Varistor, rev. polarity protection	Varistor, rev. polarity protection	Varistor, rev. polarity protection	Varistor, rev. polarity protection
Load side					
Switch-on delay	< 20 µs	< 20 µs	< 20 µs	< 18 µs	< 18 µs
Switch-off delay	< 200 µs	< 200 µs	< 200 µs	< 340 µs	< 340 µs

Ordering data						
Screw connection	Type	TOS 5VDC/48VDC 0,5A	TOS 12VDC/48VDC 0,5A	TOS 24VDC/48VDC 0,5A	TOS 48-60VDC/48VDC 0,5A	TOS 110VDC/48VDC 0,5A
	Order No.	**8950900000**	**8950910000**	**8950920000**	**8950930000**	**8950940000**
PUSH IN connection	Type	TOP 5VDC/48VDC 0,5A	TOP 12VDC/48VDC 0,5A	TOP 24VDC/48VDC 0,5A	TOP 48-60VDC/48VDC 0,5A	TOP 110VDC/48VDC 0,5A
	Order No.	**8950960000**	**8950970000**	**8950980000**	**8950990000**	**8951000000**
Note						

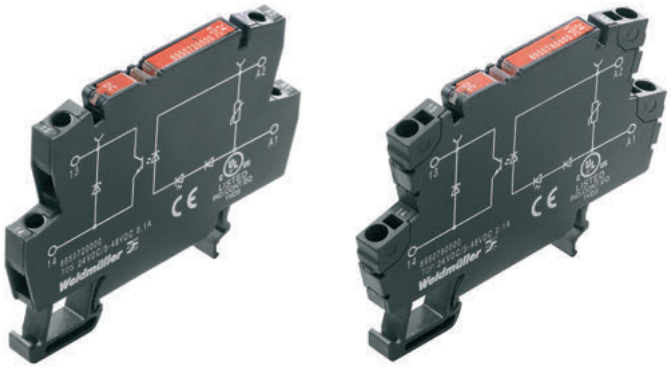
Ordering data	220 V DC	24 V AC	48...60 V AC	120 V AC	230 V AC
Control side					
Rated control voltage	220 V DC +10 % / -15 %	24 V AC ±20%	48...60 V AC ±20 %	120 V AC ±20 %	230 V AC +10 % / -20 %
Nominal control current	1.65 mA DC	7.4 mA AC	4.3 mA AC	2.9 mA AC	1.75 mA AC
Power rating	≤ 360 mW	< 0.18 VA	≤ 0.2 VA	≤ 0.3 VA	≤ 0.4 VA
Cut-in / dropout voltage	187 V / 55 V DC	21.6 V / 9.6 V AC	38.4 V / 19.2 V AC	102 V / 48 V AC	207 V / 92 V AC
Input frequency	200 Hz	10 Hz	10 Hz	10 Hz	10 Hz
Status indicator	Green LED	Green LED	Green LED	Green LED	Green LED
Protective circuit	Varistor, rev. polarity protection	Varistor	Varistor	Varistor	Varistor
Load side					
Switch-on delay	< 18 µs	< 12 ms	< 12 ms	< 12 ms	< 12 ms
Switch-off delay	< 340 µs	< 14 ms	< 14 ms	< 14 ms	< 14 ms

Ordering data						
Screw connection	Type	TOS 220VDC/48VDC 0,5A	TOS 24VAC/48VDC 0,5A	TOS 48-60VAC/48VDC 0,5A	TOS 120VAC/48VDC 0,5A	TOS 230VAC/48VDC 0,5A
	Order No.	**8950950000**	**8951020000**	**8951030000**	**8951040000**	**8951050000**
PUSH IN connection	Type	TOP 220VDC/48VDC 0,5A	TOP 24VAC/48VDC 0,5A	TOP 48-60VAC/48VDC 0,5A	TOP 120VAC/48VDC 0,5A	TOP 230VAC/48VDC 0,5A
	Order No.	**8951010000**	**8951060000**	**8951070000**	**8951080000**	**8951090000**
Note						

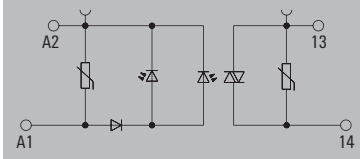
Solid-state relays 24...230 V AC / 100 mA

Output versions

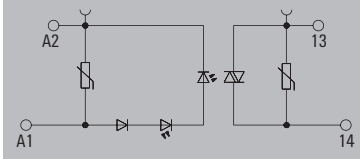
- Space-saving 6.1 mm width
- Plug-in cross-connections
- Screw and PUSH IN wire connection
- Enclosed design



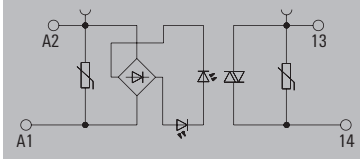
5 V DC



12...220 DC



24...230 V AC



Technical data

Load side	
Rated switching voltage	24...230 V AC
Continuous current	100 mA
Inrush current	
Solid-state type	Triac (zero-cross switch)
Voltage drop at max. load	< 1.8 V
Leakage current	< 10 µA
Protective circuit, load side	Varistor
Short-circuit-proof / Protective circuit, load side	No / Varistor
General data	
Ambient temperature (operational)	-20 °C...60 °C
Storage temperature	-40 °C...80 °C
Humidity	5–95% rel. humidity, T_u = 40°C, no condensation
Approvals	CE; cULus; EAC
Insulation coordination (EN 50178)	
Rated voltage	300 V
Impulse withstand voltage	4 kV (1.2/50 µs)
Dielectric strength for control side - load side	1.2 kV_{eff} / 1 min.
Dielectric strength to mounting rail	
Clearance and creepage distances for control side - load side	> 3 mm
Overvoltage category	III
Pollution degree	2

Dimensions		**Screw connection**	**PUSH IN connection**
Clamping range (nominal / min. / max.)	mm^2	2.5 / 0.5 / 2.5	1.5 / 0.5 / 2.5
Depth x width x height	mm	55 / 6.1 / 74.5	55 / 6.1 / 79.5
Note		Accessories and dimensioned drawings: refer to the TERMOPTO Accessories page.	

Applications

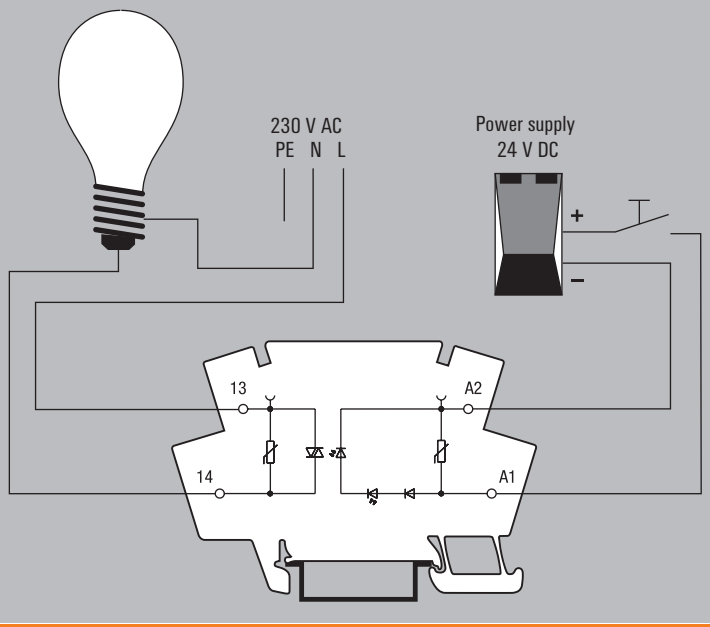
The **TERMOPTO** opto module is used in industrial applications in which electrical isolation and signal conditioning without switching amplification is sufficient.

The compact design in terminal-block format saves space on the rail and offers the option of a pluggable cross connection.

The choice between 10 input voltages and 3 output voltages as well as between screw or PUSH IN connection technology gives 60 variations for different applications.

The integrated protective circuit ensures sufficient protection in applications with resistive as well as slightly inductive and capacitive loads. For purely inductive, capacitive or comparable loads with high switch-on and switch-off peaks, such as solenoid valves or filament lamps, ensure that the module is dimensioned appropriately or an additional safeguard is used.

E.g. signal conditioning



Solid-state relays 24...230 V AC / 100 mA

Output versions

Ordering data	5 V DC	12 V DC	24 V DC	48...60 V DC	110 V DC
Control side					
Rated control voltage	5 V DC ±20 %	12 V DC ±20 %	24 V DC ±20 %	48...60 V DC ±20 %	110 V DC ±20 %
Nominal control current	7.8 mA DC	3.6 mA DC	3.6 mA DC	3.7 mA DC	3.6 mA DC
Power rating	< 40 mW	< 45 mW	≤ 80 mW	≤ 170 mW	≤ 360 mW
Cut-in / dropout voltage	4 V / 1.25 V DC	9.6 V / 3 V DC	19.2 V / 6 V DC	38.4 V / 12 V DC	88 V / 27.5 V DC
Input frequency	10 Hz	10 Hz	10 Hz	10 Hz	10 Hz
Status indicator	Green LED	Green LED	Green LED	Green LED	Green LED
Protective circuit	Varistor, rev. polarity protection	Varistor, rev. polarity protection	Varistor, rev. polarity protection	Varistor, rev. polarity protection	Varistor, rev. polarity protection
Load side					
Switch-on delay	≤ 10 ms	≤ 10 ms	≤ 10 ms	≤ 10 ms	≤ 10 ms
Switch-off delay	< 12 ms	< 12 ms	< 12 ms	< 12 ms	< 12 ms

Ordering data						
Screw connection	Type	TOS 5VDC/230VAC 0,1A	TOS 12VDC/230VAC 0,1A	TOS 24VDC/230VAC 0,1A	TOS 48-60VDC/230VAC 0,1A	TOS 110VDC/230VAC 0,1A
	Order No.	**8951100000**	**8951110000**	**8951120000**	**8951130000**	**8951140000**
PUSH IN connection	Type	TOP 5VDC/230VAC 0,1A	TOP 12VDC/230VAC 0,1A	TOP 24VDC/230VAC 0,1A	TOP 48-60VDC/230VAC 0,1A	TOP 110VDC/230VAC 0,1A
	Order No.	**8951160000**	**8951170000**	**8951180000**	**8951190000**	**8951200000**
Note						

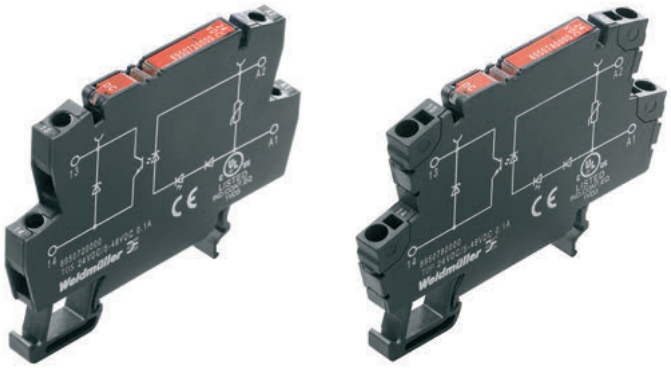
Ordering data	220 V DC	24 V AC	48...60 V AC	120 V AC	230 V AC
Control side					
Rated control voltage	220 V DC +10 % / -15 %	24 V AC ±20%	48...60 V AC ±20 %	120 V AC ±20 %	230 V AC +10 % / -20 %
Nominal control current	2.9 mA DC	8.8 mA AC	6.4 mA AC	8.5 mA AC	7.7 mA AC
Power rating	≤ 640 mW	≤ 0.2 VA	≤ 0.3 VA	≤ 1 VA	≤ 1.7 VA
Cut-in / dropout voltage	187 V / 55 V DC	19.2 V / 9.6 V AC	38.4 V / 19.2 V AC	96 V / 48 V AC	184 V / 92 V AC
Input frequency	10 Hz	10 Hz	10 Hz	10 Hz	10 Hz
Status indicator	Green LED	Green LED	Green LED	Green LED	Green LED
Protective circuit	Varistor, rev. polarity protection	Varistor	Varistor	Varistor	Varistor
Load side					
Switch-on delay	≤ 10 ms	< 14 ms	< 14 ms	< 22 ms	< 22 ms
Switch-off delay	< 12 ms	< 16 ms	< 16 ms	< 18 ms	< 18 ms

Ordering data						
Screw connection	Type	TOS 220VDC/230VAC 0,1A	TOS 24VAC/230VAC 0,1A	TOS 48-60VAC/230VAC 0,1A	TOS 120VAC/230VAC 0,1A	TOS 230VAC/230VAC 0,1A
	Order No.	**8951150000**	**8951220000**	**8951230000**	**8951240000**	**8951250000**
PUSH IN connection	Type	TOP 220VDC/230VAC 0,1A	TOP 24VAC/230VAC 0,1A	TOP 48-60VAC/230VAC 0,1A	TOP 120VAC/230VAC 0,1A	TOP 230VAC/230VAC 0,1A
	Order No.	**8951210000**	**8951260000**	**8951270000**	**8951280000**	**8951290000**
Note						

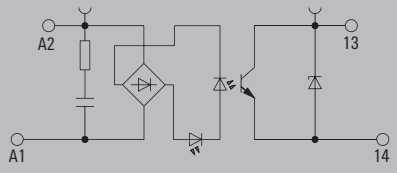
Solid-state relays, 5...48 V DC / 500 mA

Output versions with RC element

- Space-saving 6.1 mm width
- Plug-in cross-connections
- Screw and PUSH IN wire connection
- Enclosed design
- RC input circuitry for improved interference immunity



120 V...230 V AC



Technical data

Load side	
Rated switching voltage	5...48 V DC
Continuous current	500 mA
Inrush current	
Solid-state type	Transistor
Voltage drop at max. load	< 1 V
Leakage current	< 10 µA
Protective circuit, load side	Diode
Short-circuit-proof / Protective circuit, load side	No / Diode
General data	
Ambient temperature (operational)	-20 °C...60 °C
Storage temperature	-40 °C...80 °C
Humidity	5–95% rel. humidity, T_u = 40°C, no condensation
Approvals	CE; cULus; EAC
Insulation coordination (EN 50178)	
Rated voltage	300 V
Impulse withstand voltage	4 kV (1.2/50 µs)
Dielectric strength for control side - load side	1.2 kV_{eff} / 1 min.
Dielectric strength to mounting rail	
Clearance and creepage distances for control side - load side	> 3 mm
Overvoltage category	III
Pollution degree	2

Dimensions		**Screw connection**	**PUSH IN connection**
Clamping range (nominal / min. / max.)	mm^2	2.5 / 0.5 / 2.5	1.5 / 0.5 / 2.5
Depth x width x height	mm	55 / 6.1 / 74.5	55 / 6.1 / 79.5
Note		Accessories and dimensioned drawings: refer to the TERMOPTO Accessories page.	

Ordering data

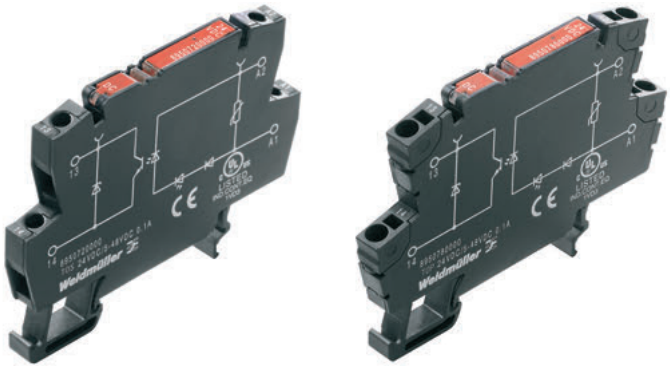
	120 V AC	**230 V AC**
Control side		
Rated control voltage	120 V AC ±20 %	230 V AC +10 %/ -15 %
Nominal control current	6.4 mA AC	6.4 mA AC
Power rating	≤ 0.61 VA	≤ 1.5 VA
Cut-in / dropout voltage	102 V / 48 V AC	207 V / 92 V AC
Input frequency	10 Hz	10 Hz
Status indicator	Green LED	Green LED
Protective circuit	RC element	RC element
Load side		
Switch-on delay	< 12.6 ms	< 12.6 ms
Switch-off delay	< 20.8 ms	< 20.8 ms

Ordering data			
Screw connection	Type	TOS 120VAC/48VDC 0.5A RC	TOS 230VAC/48VDC 0.5A RC
	Order No.	**1180290000**	**1189270000**
PUSH IN connection	Type	TOP 120VAC/48VDC 0.5A RC	TOP 230VAC/48VDC 0.5A RC
	Order No.	**1188830000**	**1189260000**
Note			

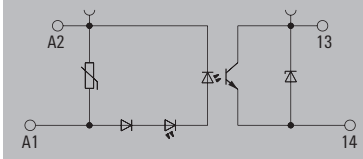
Solid-state relay, 3...33 V DC / 4 A

Output versions

- Space-saving 6.1 mm width
- Plug-in cross-connections
- Screw and PUSH IN wire connection
- Enclosed design



24 V DC



Technical data

Load side	
Rated switching voltage	3...33 V DC
Continuous current	4 A
Inrush current	
Solid-state type	MOS-FET
Voltage drop at max. load	90 mV
Leakage current	< 10 µA
Protective circuit, load side	Integrated free-wheel diode
Short-circuit-proof / Protective circuit, load side	No / Integrated free-wheel diode
General data	
Ambient temperature (operational)	-20 °C...60 °C
Storage temperature	-40 °C...80 °C
Humidity	5–95% rel. humidity, T_u = 40°C, no condensation
Approvals	CE; cULus; EAC
Insulation coordination (EN 50178)	
Rated voltage	300 V
Impulse withstand voltage	4 kV (1.2/50 µs)
Dielectric strength for control side - load side	1.2 kV_{eff} / 1 min.
Dielectric strength to mounting rail	
Clearance and creepage distances for control side - load side	> 3 mm
Overvoltage category	III
Pollution degree	2

Dimensions		**Screw connection**	**PUSH IN connection**
Clamping range (nominal / min. / max.)	mm^2	2.5 / 0.5 / 2.5	1.5 / 0.5 / 2.5
Depth x width x height	mm	55 / 6.1 / 74.5	55 / 6.1 / 79.5
Note		Accessories and dimensioned drawings: refer to the TERMOPTO Accessories page.	

Ordering data

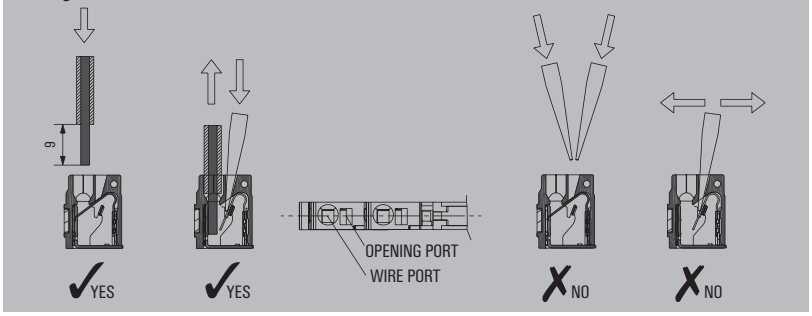
	24 V DC
Control side	
Rated control voltage	24 V DC ±20 %
Nominal control current	7 mA DC
Power rating	≤ 170 mW
Cut-in / dropout voltage	16.8 V / 6 V DC
Input frequency	10 Hz
Status indicator	Green LED
Protective circuit	Varistor, rev. polarity protection
Load side	
Switch-on delay	< 12 ms
Switch-off delay	< 14 ms

Ordering data		
Screw connection	Type	TOS 24VDC/24VDC 4A
	Order No.	**1275100000**
PUSH IN connection	Type	TOP 24VDC/24VDC 4A
	Order No.	**1254880000**
Note		

Accessories

General data – TERMOPTO

Handling the PUSH IN connection



Plug-in cross-connection

Type	No. of poles	Qty.	Order No.
yellow			
ZQV 4N / 2 GE	2	60	**1758250000**
ZQV 4N / 3 GE	3	60	**1762630000**
ZQV 4N / 4 GE	4	60	**1762620000**
ZQV 4N / 10 GE	10	20	**1758260000**
ZQV 4N / 20 GE	20	20	**1909020000**
red			
ZQV 4N / 2 RT	2	60	**1793950000**
ZQV 4N / 3 RT	3	60	**1793980000**
ZQV 4N / 4 RT	4	60	**1794010000**
ZQV 4N / 10 RT	10	20	**1794040000**
ZQV 4N / 20 RT	20	20	**1909150000**
blue			
ZQV 4N / 2 BL	2	60	**1793960000**
ZQV 4N / 3 BL	3	60	**1793990000**
ZQV 4N / 4 BL	4	60	**1794020000**
ZQV 4N / 10 BL	10	20	**1794050000**
ZQV 4N / 20 BL	20	20	**1909100000**
black			
ZQV 4N / 2 SW	2	60	**1793970000**
ZQV 4N / 3 SW	3	60	**1794000000**
ZQV 4N / 4 SW	4	60	**1794030000**
ZQV 4N / 10 SW	10	20	**1794060000**
ZQV 4N / 20 SW	20	20	**1909120000**

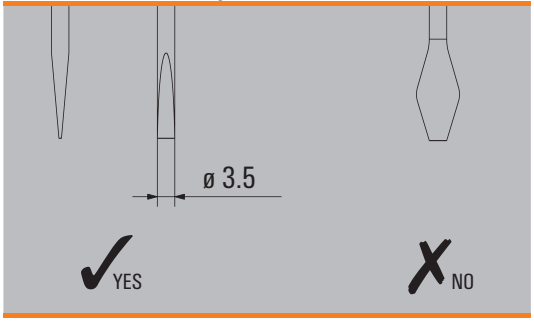
Technical data

Conductor		PUSH IN connection	Screw-connection
Solid H07V-U	mm^2	0.5...1.5	0.5...2.5
Stranded H07V-K	mm^2	0.5...1.5	0.5...2.5
"f" with wire end ferrules to DIN 46228-1	mm^2	0.5...1.5	0.5...1.5
"f" with wire end ferrules with plastic collar	mm^2	0.5...1.5	0.5...1.5
Max. clamping range	mm^2	0.13...1.5	0.13...2.5
Plug gauge to IEC 60947-1	Size	A 2	A 3
General technical data			
Nominal torque	Nm	-	0.6
Continuous current for 2-pole cross-connection	A	10	10
Continuous current for multi-pole cross-connection	A	10	10
Stripping length	mm	10	9
Ingress protection class		IP 20	IP 20
Housing material		Wemid	Wemid
UL94 flammability rating		V-0	V-0
Nominal current	A	6	6
Nominal voltage	V	250	250

Other accessories

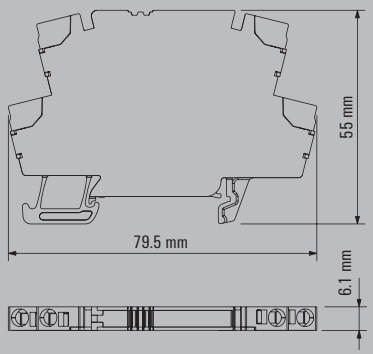
Type		Qty.	Order No.
Markers			
WS 12/6	12 x 6 mm	600	**1609900000**
Screwdriver			
SD 0.6 x 3.5 x 100		10	**9008330000**

Screwdriver – blade shape

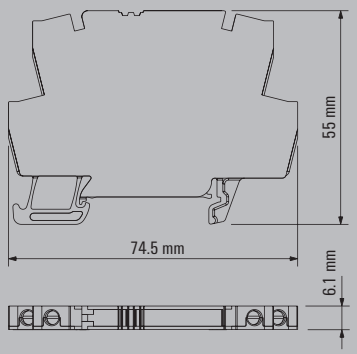


Dimensions

PUSH IN connection



Screw connection



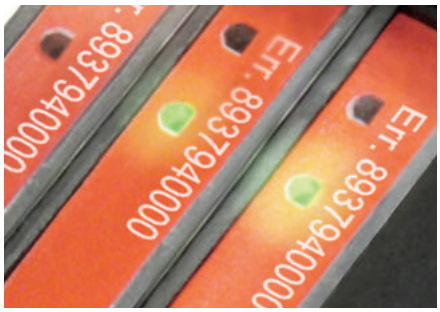
Short-circuit-proof switching amplifier for inductive loads up to 10 A

Powerful, compact solid-state relay with error signalling contact

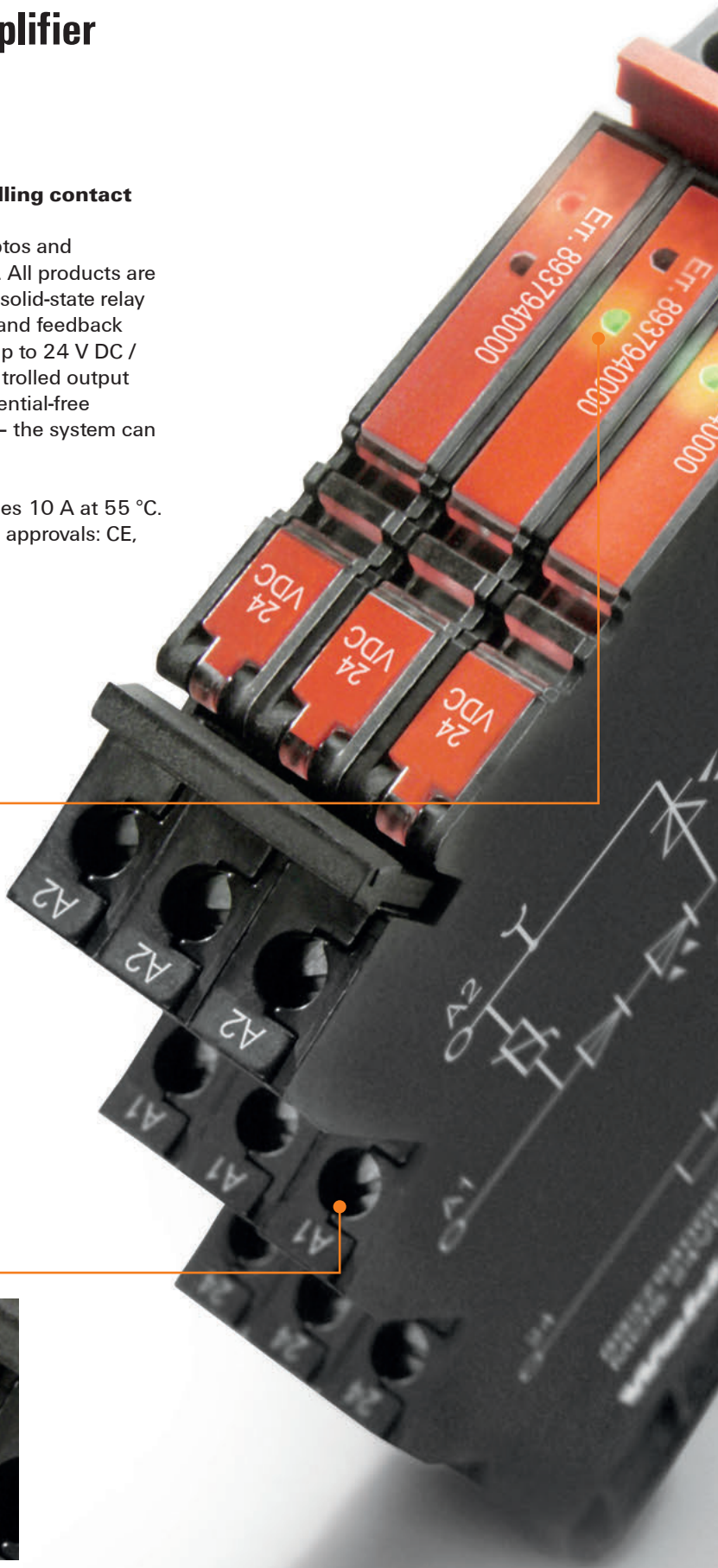
The MICROOPTO family offers the customer high-quality optos and solid-state relays for application-oriented problem solutions. All products are designed in the space-saving 6 mm terminal size. The new solid-state relay can be connected in the output circuits of control systems and feedback control modules for selective activation of inductive loads up to 24 V DC / 10 A, such as solenoid valves, contactors etc. The error controlled output monitors short-circuts and, if necessary, switched off; a potential-free signalling contact provides feedback to the control system – the system can be shut down in a controlled manner for error rectification.

The powerful output of the MICROOPTO SOLENOID switches 10 A at 55 °C. The product can be used worldwide thanks to international approvals: CE, cULus and GL.

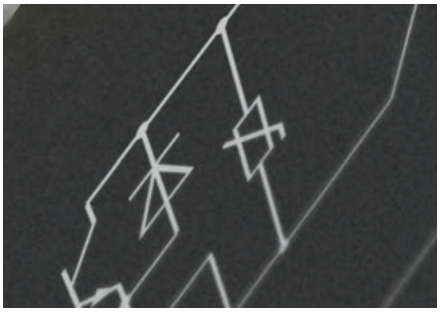
Alarm function
Clear condition display through status and error LEDs in the output.



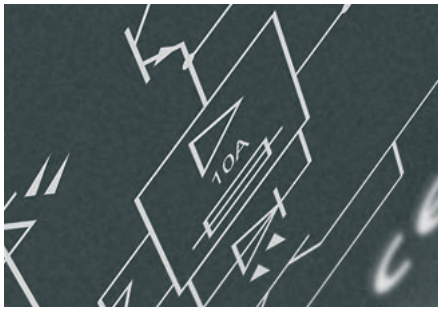
Space-saving
Space-saving 6 mm modular width.



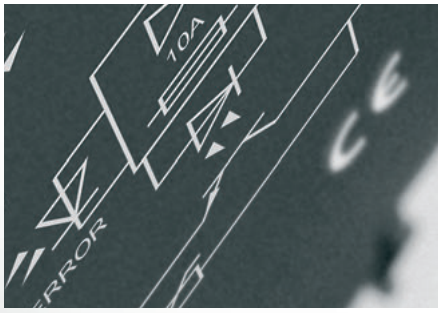
Not sensitive
Protected by suppressor circuit on input and output circuits.



Tough and sturdy
With a short-circuit-proof output.



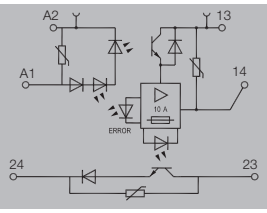
Auxiliary contact
An auxiliary contact issues alerts in event of short circuits.



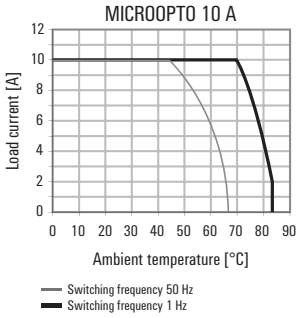
For switching valves up to 24 VDC 10 A

- Width only 6 mm
- Plug-in cross-connector
- For mounting on TS 35
- Status display and error signaling contact with an error in the output

24 V DC / 5-33 V DC 10 A



The **MICROOPTO SOLENOID** solid-state relay is used specifically as a switching amplifier for actuators up to 24 V DC and 10 A with inductive loads such as solenoid valves and contactors.
A potential-free signalling contact transmits errors, such as short circuits, to the controller.
The **MICROOPTO SOLENOID** solid-state relay is short-circuit-proof and protected against power-related transients and voltage peaks by extensive protective circuits. The closed housing also offers a high level of protection against contact.



Technical data

Control side	
Rated control voltage	24 V DC ±20 %
Power rating	400 mW
Cut-in / dropout voltage	18 V / 13 V DC
Input frequency	50 Hz
Status indicator	Error LED red; Status LED green
Protective circuit	Varistor, rev. polarity protection
Load side	
Solid-state type	POWER MOS-FET
Rated switching voltage	5...33 V DC
Continuous current	10 A
Voltage drop at max. load	approx. 100 mV
Leakage current	< 1 mA
Short-circuit-proof / Protective circuit, load side	Yes (limited for 4 h / current limitation external < 200 A) / Current sensor, Varistor, integrated free-wheel diode
Switch-on delay / Switch-off delay	typical. 250 µs / typical. 700 µs
Pulse load, max. current	≤ 11 A (≤ 200 µs)
Load category	LC A
General data	
Alarm contact	5...48 V DC / 0.1 A
Ambient temperature (operational)	-25 °C...60 °C
Storage temperature	-40 °C...60 °C
UL 94 flammability rating	V-0
Humidity	40 °C / 93 % rel. humidity, no condensation
Approvals	CE; cULus; EAC; GL
Insulation coordination (EN 50178)	
Rated voltage	300 V
Impulse withstand voltage	4 kV (1.2/50 µs)
Dielectric strength for control side - load side	1.2 kV_{eff} / 1 min.
Dielectric strength to mounting rail	1.2 kV_{eff} / 1 min.
Clearance and creepage distances for control side - load side	> 3 mm
Overvoltage category	III
Pollution degree	2

Dimensions		**Screw connection**
Clamping range (nominal / min. / max.)	mm^2	2.5 / 0.5 / 4
Depth x width x height	mm	98 / 6.1 / 88
Note		Suppressor circuitry for inductive loads, 10 cm installation clearance to inductive switching devices.

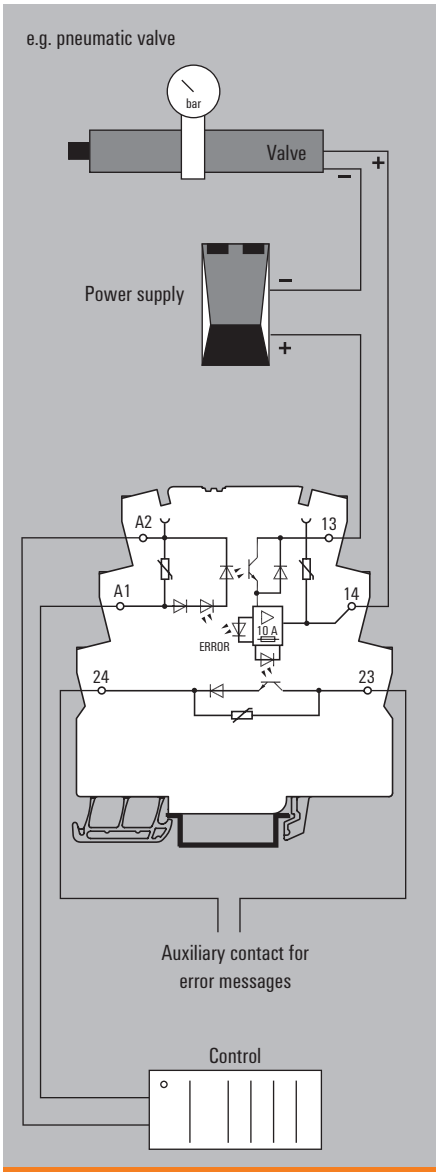
Ordering data

	Type	**Qty.**	**Order No.**
Screw connection	MOS 24VDC/5-33VDC 10A	1	**8937940000**

Note

Accessories

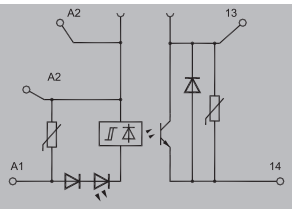
Note	Accessories and dimensioned drawings: refer to the MICROOPTO Accessories page.



For DC loads up to 300 V DC and 1A

- Only 6 mm modular width
- Plug-in cross-connection
- Power Boost: 20 A / 20 ms, 5 A / 1 sec

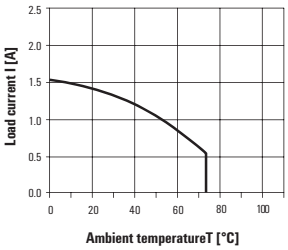
12...300 V DC 1 A



The solid-state relay **MICROOPTO 300 V DC** has been developed as a switching amplifier for high inductive loads up to 300 V DC and 1 A in motor brakes and contactors.

A power boost in the load circuit compensates transient overloads (20 A for 20 ms / 5 A for 1 s) such as making or breaking spikes. Additional protective circuits counter higher overloads.

derating curve

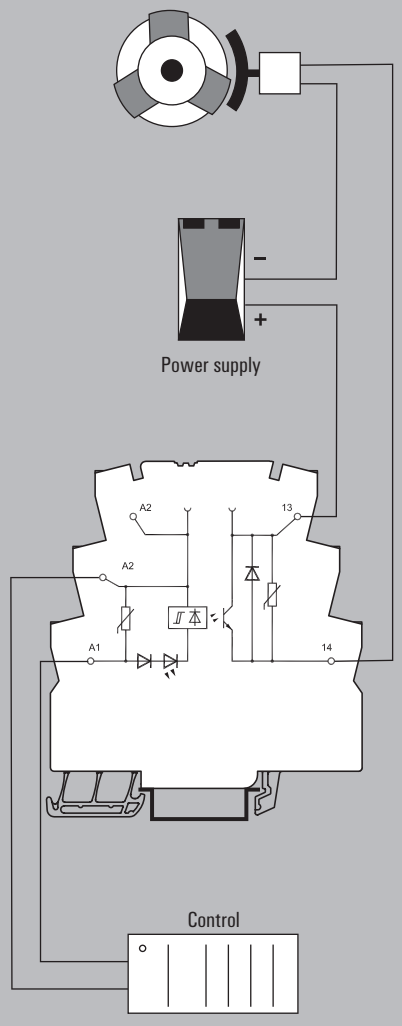


Technical data

Control side	
Rated control voltage	24 V DC ±20 %
Power rating	0.36 W
Cut-in / dropout voltage	18.8 V / 14.7 V DC
Input frequency	50...60 Hz
Status indicator	Green LED
Protective circuit	Varistor, rev. polarity protection
Load side	
Solid-state type	POWER MOS-FET
Rated switching voltage	12...300 V DC
Continuous current	1 A
Voltage drop at max. load	≤ 0.4 V
Leakage current	< 1 µA
Short-circuit-proof / Protective circuit, load side	No / Varistor, integrated free-wheel diode
Switch-on delay / Switch-off delay	< 18 µs / < 1 ms
Pulse load, max. current	27 A (10 ms)
Load category	LC A
General data	
Alarm contact	
Ambient temperature (operational)	-20 °C... °C
Storage temperature	-40 °C...80 °C
UL 94 flammability rating	V-0
Humidity	5–95% rel. humidity, T_u = 55°C, no condensation
Approvals	CE; cULus; EAC; GL
Insulation coordination (EN 50178)	
Rated voltage	300 V
Impulse withstand voltage	2.5 kV (1.2/50 µs)
Dielectric strength for control side - load side	1.2 kV_{eff} / 1 min.
Dielectric strength to mounting rail	1.2 kV_{eff} / 1 min.
Clearance and creepage distances for control side - load side	> 3 mm
Overvoltage category	II
Pollution degree	2

Dimensions		**Screw connection**
Clamping range (nominal / min. / max.)	mm²	2.5 / 0.5 / 4
Depth x width x height	mm	98 / 6.1 / 88
Note		

z. B. Example: motor brake



Ordering data

	Type	Qty.	Order No.
Screw connection	MOS 24VDC/12-300VDC 1A	1	**8937830000**

Note

Accessories

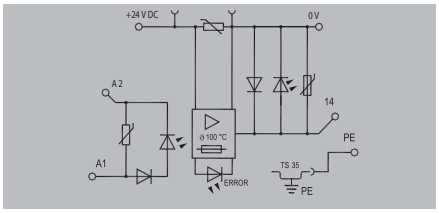
Note

Accessories and dimensioned drawings: refer to the MICROOPTO Accessories page.

For direct connection of actuators up to 24 V DC 2 A

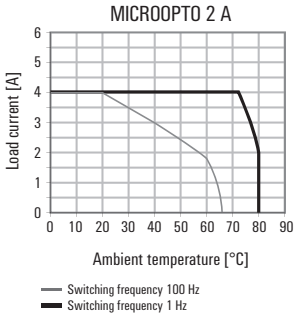
- Only 6 mm modular width
- Plug-in cross-connection
- PE connection direct to mounting rail
- Status display when error in output

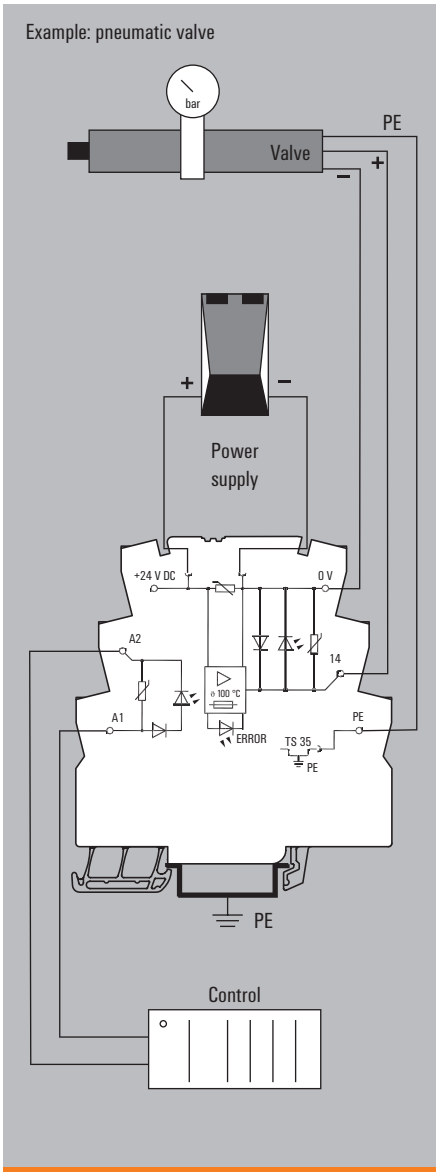
8...30 V DC 2 A



The solid-state relay **MICROOPTO ACTOR** has been specifically designed as a switching amplifier for actuators up to 24 V DC and 2 A with inductive loads such as solenoid valves and contactors. 3-wire actuators can be connected directly to the module.

This is short-circuit proof and protected against application-related transients and spikes by extensive protective circuitry.





Technical data

Control side	
Rated control voltage	24 V DC ±20 %
Power rating	≤ 170 mW
Cut-in / dropout voltage	13.8 V / 13.6 V DC
Input frequency	125 Hz
Status indicator	Error indication LED red; status LED green
Protective circuit	Varistor, rev. polarity protection
Load side	
Solid-state type	Intelligent POWER MOS-FET
Rated switching voltage	8...30 V DC
Continuous current	2 A
Voltage drop at max. load	≤ 50 mV
Leakage current	< 10 µA
Short-circuit-proof / Protective circuit, load side	Yes (thermal cut-out) / Varistor, integrated free-wheel diode
Switch-on delay / Switch-off delay	0.1 ms / < 0.5 ms
Pulse load, max. current	
Load category	LC A
General data	
Alarm contact	
Ambient temperature (operational)	-20 °C... °C
Storage temperature	-40 °C...80 °C
UL 94 flammability rating	V-0
Humidity	5–95% rel. humidity, T_u = 55°C, no condensation
Approvals	CE; cULus; EAC; GL
Insulation coordination (EN 50178)	
Rated voltage	30 V
Impulse withstand voltage	500 V (1,2/50 µ)
Dielectric strength for control side - load side	350 V_{eff} / 1 min.
Dielectric strength to mounting rail	350 V_{eff} / 1 min.
Clearance and creepage distances for control side - load side	
Overvoltage category	II
Pollution degree	2

Dimensions		**Screw connection**
Clamping range (nominal / min. / max.)	mm²	2.5 / 0.5 / 4
Depth x width x height		98 / 6.1 / 88
Note		

Ordering data

	Type	**Qty.**	**Order No.**
Screw connection	MOS 24VDC/8-30VDC 2A	1	**8937970000**

Note

Accessories

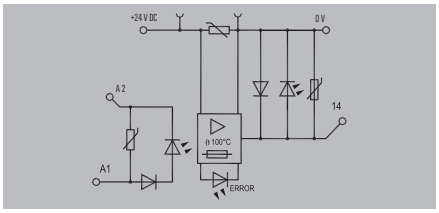
Note

Accessories and dimensioned drawings: refer to the MICROOPTO Accessories page.

For direct connection
of actuators up to 24 VDC 2 A

- Width only 6 mm
- Plug-in cross-connector
- Status display when error in output

24 V DC / 8-30 V DC 2 A E



The solid-state relay **MICROOPTO ACTOR** has been specifically designed as a switching amplifier for actuators up to 24 V DC and 2 A with inductive loads such as solenoid valves and contactors. 3-wire actuators can be connected directly to the module.
This is short-circuit proof and protected against application-related transients and spikes by extensive protective circuitry.

Technical data

Control side	
Rated control voltage	24 V DC ±20 %
Power rating	≤ 170 mW
Cut-in / dropout voltage	13.8 V / 13.6 V DC
Input frequency	10 Hz
Status indicator	Error indication LED red; status LED green
Protective circuit	Varistor, rev. polarity protection
Load side	
Solid-state type	Intelligent POWER MOS-FET
Rated switching voltage	8...30 V DC
Continuous current	2 A
Voltage drop at max. load	≤ 50 mV
Leakage current	< 10 µA
Short-circuit-proof / Protective circuit, load side	Yes (thermal cut-out) / Varistor, integrated free-wheel diode
Switch-on delay / Switch-off delay	0.1 ms / < 0.5 ms
Pulse load, max. current	
Load category	LC A
General data	
Alarm contact	
Ambient temperature (operational)	-20 °C...60 °C
Storage temperature	-40 °C...80 °C
UL 94 flammability rating	V-0
Humidity	5–95% rel. humidity, T_u = 55°C, no condensation
Approvals	EAC; GL
Insulation coordination (EN 50178)	
Rated voltage	30 V
Impulse withstand voltage	500 V (1,2/50 µ)
Dielectric strength for control side - load side	350 V_{eff} / 1 min.
Dielectric strength to mounting rail	350 V_{eff} / 1 min.
Clearance and creepage distances for control side - load side	
Overvoltage category	II
Pollution degree	2

Dimensions		**Screw connection**
Clamping range (nominal / min. / max.)	mm²	2.5 / 0.5 / 4
Depth x width x height		98 / 6.1 / 88
Note		

Ordering data

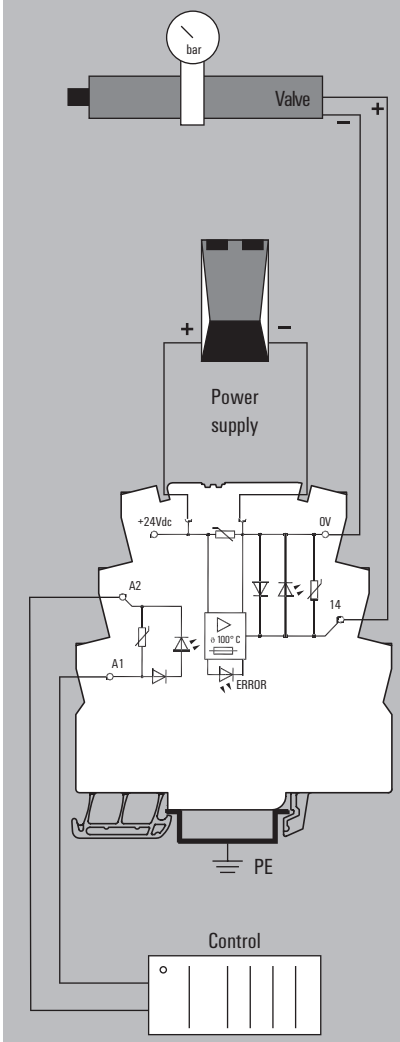
	Type	**Qty.**	**Order No.**
Screw connection	MOS 24VDC/8-30VDC 2A E	10	**1283230000**

Note

Accessories

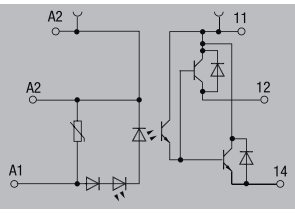
Note	Accessories and dimensional drawings: refer to the MICROOPTO Accessories page

Example: pneumatic valve



For electronically switching or inverting signals

24 V DC / 5-48 V DC 0.5 A



Electronic CO contacts are used anywhere output signals need to be changed over.

For this purpose, the input signal is directly switched through to the output side and inverted; as a result, the opto module can also be used as a pure inverter.

The advantage over electromechanical relays lies in the wear-free switching and the possibility of realising high switching frequencies.

Technical data

Control side	
Rated control voltage	24 V DC ±20 %
Power rating	160 mW
Cut-in / dropout voltage	19.5 V / 12 V DC
Input frequency	1 kHz
Status indicator	Green status LED
Protective circuit	Varistor, rev. polarity protection
Load side	
Solid-state type	Transistor
Rated switching voltage	5...48 V DC
Continuous current	500 mA
Voltage drop at max. load	Max. 1 V
Leakage current	< 1.5 mA
Short-circuit-proof / Protective circuit, load side	No / Integrated free-wheel diode
Switch-on delay / Switch-off delay	< 30 µs / < 50 µs
Pulse load, max. current	
Load category	LC A
General data	
Alarm contact	
Ambient temperature (operational)	-25 °C...60 °C
Storage temperature	-40 °C...60 °C
UL 94 flammability rating	V-0
Humidity	40 °C / 93 % rel. humidity, no condensation
Approvals	CE; cULus; EAC; GL
Insulation coordination (EN 50178)	
Rated voltage	300 V
Impulse withstand voltage	4 kV (1.2/50 µs)
Dielectric strength for control side - load side	1.2 kV_{eff} / 1 min.
Dielectric strength to mounting rail	1.2 kV_{eff} / 1 min.
Clearance and creepage distances for control side - load side	> 3 mm
Overvoltage category	III
Pollution degree	2

Dimensions		**Screw connection**
Clamping range (nominal / min. / max.)	mm^2	2.5 / 0.5 / 4
Depth x width x height	mm	98 / 6.1 / 88
Note		

Ordering data

	Type	**Qty.**	**Order No.**
Screw connection	MOS 24VDC/5-48VDC 0,5A	1	**8937980000**

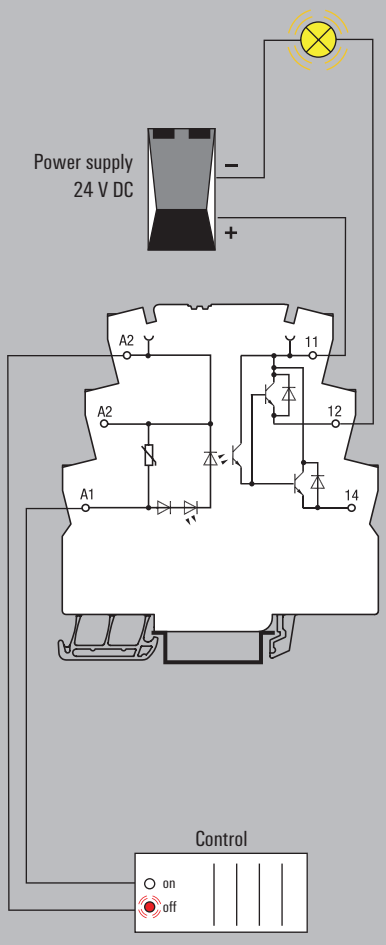
Note

Accessories

Note

Accessories and dimensioned drawings: refer to the MICROOPTO Accessories page.

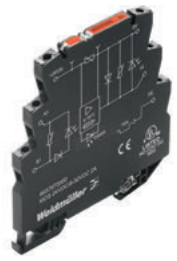
e.g. Inverter

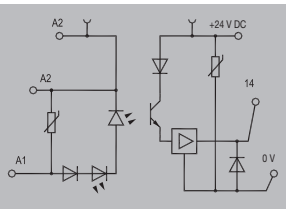


For high switching frequency up to 100 kHz

- Width only 6 mm
- Plug-in cross-connector
- For mounting on TS 35

12...28 V DC 100 kHz

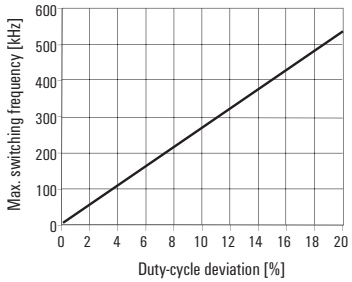




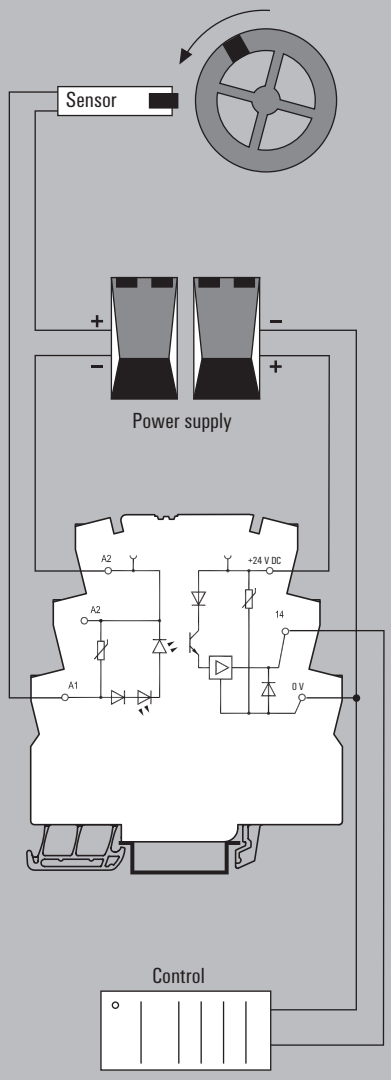
A special interior circuit in the opto module **MICROOPTO 100 kHz** ensures that rapidly transmitted signals are isolated from one another and that they can be transferred practically without delay. This allows switching frequencies up to 100 kHz to be achieved. Comprehensive suppressor circuits safeguard the module against conducted transients and voltage spikes.

Max. switching frequency is dependent on the duty cycle deviation

MOS 12-28 V DC 100 kHz (switching current 50 mA, ohmic load)



For example rotational speed measurement



Technical data

Control side	
Rated control voltage	12 V DC...28 V DC
Power rating	≤ 280 mW
Cut-in / dropout voltage	5.6 V / 5 V DC
Input frequency	100 kHz
Status indicator	Green LED
Protective circuit	Varistor, rev. polarity protection
Load side	
Solid-state type	Transistor
Rated switching voltage	19.6...28.8 V
Continuous current	max. 50 mA
Voltage drop at max. load	≤ 2 V
Leakage current	< 1 µA
Short-circuit-proof / Protective circuit, load side	No / Varistor, rev. polarity protection
Switch-on delay / Switch-off delay	< 200 ns / < 400 ns
Pulse load, max. current	0.6 A (20 ms)
Load category	LC A
General data	
Alarm contact	
Ambient temperature (operational)	-20 °C...60 °C
Storage temperature	-40 °C...80 °C
UL 94 flammability rating	V-0
Humidity	5–95% rel. humidity, T_u = 55°C, no condensation
Approvals	CE; cULus; EAC; GL
Insulation coordination (EN 50178)	
Rated voltage	30 V
Impulse withstand voltage	500 V (1,2/50 µ)
Dielectric strength for control side - load side	350 V_{eff} / 1 min.
Dielectric strength to mounting rail	350 V_{eff} / 1 min.
Clearance and creepage distances for control side - load side	
Overvoltage category	II
Pollution degree	2

Dimensions		**Screw connection**
Clamping range (nominal / min. / max.)	mm²	2.5 / 0.5 / 4
Depth x width x height	mm	98 / 6.1 / 88
Note		

Ordering data

	Type	**Qty.**	**Order No.**
Screw connection	MOS 12-28VDC 100kHz	1	**8937990000**

Note

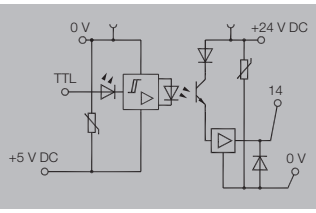
Accessories

Note

Accessories and dimensioned drawings: refer to the MICROOPTO Accessories page.

For adjusting TTL signals

5 V TTL / 24 V DC 0.1 A



To adjust sensitive TTL signals to the typical voltage level of 24 V DC used in industrial automation applications, the **MICROOPTO TTL** modules are used.

For the protection of the electronics, the sensitive TTL signals require electrical isolation from the 24 V world.

To control the optical coupler circuit via the 5 V TTL signal, an additional auxiliary voltage is fed in.

Technical data

Control side	
Rated control voltage	5 V TTL
Power rating	< 0.5 mW
Cut-in / dropout voltage	2 V / 1 V DC
Input frequency	100 kHz
Status indicator	Green status LED
Protective circuit	Varistor, rev. polarity protection
Load side	
Solid-state type	TTL
Rated switching voltage	24 VDC ±20%
Continuous current	100 mA
Voltage drop at max. load	< 1 V
Leakage current	< 20 µA
Short-circuit-proof / Protective circuit, load side	No / Integrated free-wheel diode
Switch-on delay / Switch-off delay	< 1.3 µ / < 1 µs
Pulse load, max. current	
Load category	LC A
General data	
Alarm contact	
Ambient temperature (operational)	-25 °C...60 °C
Storage temperature	-40 °C...60 °C
UL 94 flammability rating	V-0
Humidity	40 °C / 93 % rel. humidity, no condensation
Approvals	CE; cULus; EAC; GL
Insulation coordination (EN 50178)	
Rated voltage	300 V
Impulse withstand voltage	4 kV (1.2/50 µs)
Dielectric strength for control side - load side	1.2 kV_{eff} / 1 min.
Dielectric strength to mounting rail	1.2 kV_{eff} / 1 min.
Clearance and creepage distances for control side - load side	> 3 mm
Overvoltage category	III
Pollution degree	2

Dimensions		**Screw connection**
Clamping range (nominal / min. / max.)	mm^2	2.5 / 0.5 / 4
Depth x width x height	mm	98 / 6.1 / 88
Note		

Ordering data

	Type	**Qty.**	**Order No.**
Screw connection	MOS 5VTTL/24VDC 0,1A	1	**8937920000**

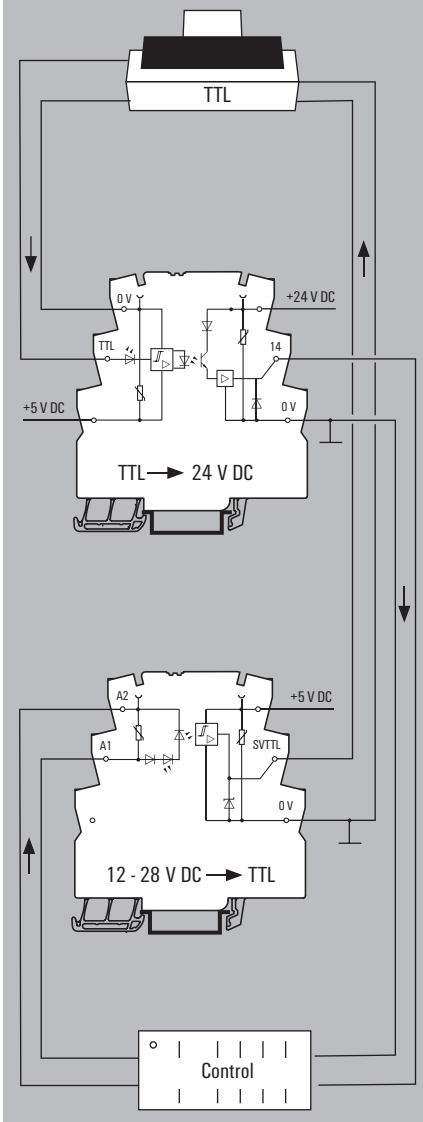
Note

Accessories

Note

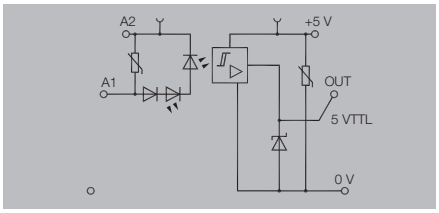
Accessories and dimensioned drawings: refer to the MICROOPTO Accessories page.

e.g. printer interface



For adjusting TTL signals

12-28 V DC / 5 V TTL



To adjust sensitive TTL signals to the typical voltage level of 24 V DC used in industrial automation applications, the **MICROOPTO TTL** modules are used.

For the protection of the electronics, the sensitive TTL signals require electrical isolation from the 24 V world.

To control the optical coupler circuit via the 5 V TTL signal, an additional auxiliary voltage is fed in.

Technical data

Control side	
Rated control voltage	12 V DC...28 V DC
Power rating	150 mW
Cut-in / dropout voltage	10.7 V / 10.6 V DC
Input frequency	100 kHz
Status indicator	Green status LED
Protective circuit	Varistor, rev. polarity protection
Load side	
Solid-state type	TTL
Rated switching voltage	5 V TTL
Continuous current	max. 50 mA
Voltage drop at max. load	90 mV
Leakage current	< 1 µA
Short-circuit-proof / Protective circuit, load side	No / Varistor
Switch-on delay / Switch-off delay	typical. < 1 µs / typical. < 4 µs
Pulse load, max. current	
Load category	LC A
General data	
Alarm contact	
Ambient temperature (operational)	-25 °C...60 °C
Storage temperature	-40 °C...60 °C
UL 94 flammability rating	V-0
Humidity	40 °C / 93 % rel. humidity, no condensation
Approvals	CE; cULus; EAC; GL
Insulation coordination (EN 50178)	
Rated voltage	300 V
Impulse withstand voltage	4 kV (1.2/50 µs)
Dielectric strength for control side - load side	1.2 kV_{eff} / 1 min.
Dielectric strength to mounting rail	1.2 kV_{eff} / 1 min.
Clearance and creepage distances for control side - load side	> 3 mm
Overvoltage category	III
Pollution degree	2

Dimensions		**Screw connection**
Clamping range (nominal / min. / max.)	mm^2	2.5 / 0.5 / 4
Depth x width x height	mm	98 / 6.1 / 88
Note		

Ordering data

	Type	**Qty.**	**Order No.**
Screw connection	MOS 12-28VDC/5VTTL	1	**8937930000**

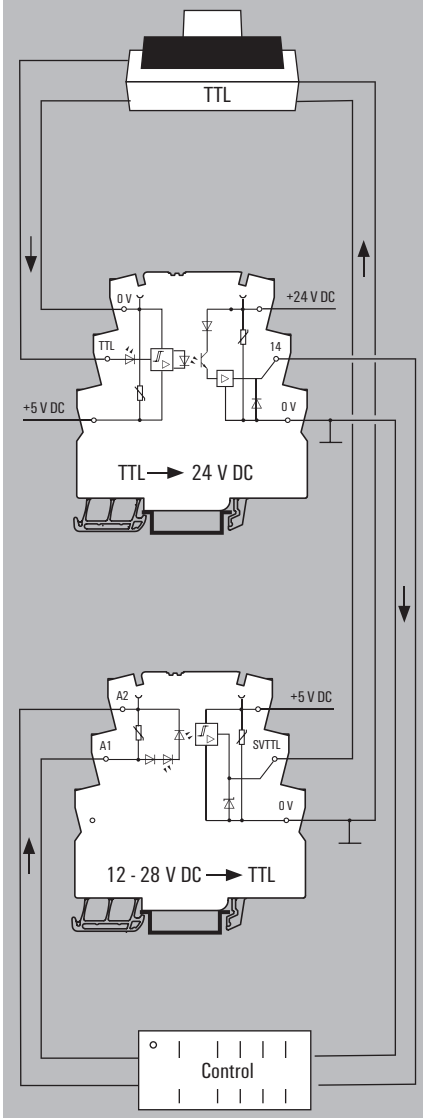
Note

Accessories

Note

Accessories and dimensioned drawings: refer to the MICROOPTO Accessories page.

e.g. printer interface



Accessories

General data – MICROOPTO

Plug-in cross-connection

Type	No. of poles	Qty.	Order No.
yellow			
ZQV 4N / 2 GE	2	60	**1758250000**
ZQV 4N / 3 GE	3	60	**1762630000**
ZQV 4N / 4 GE	4	60	**1762620000**
ZQV 4N / 10 GE	10	20	**1758260000**
ZQV 4N / 20 GE	20	20	**1909020000**
red			
ZQV 4N / 2 RT	2	60	**1793950000**
ZQV 4N / 3 RT	3	60	**1793980000**
ZQV 4N / 4 RT	4	60	**1794010000**
ZQV 4N / 10 RT	10	20	**1794040000**
ZQV 4N / 20 RT	20	20	**1909150000**
blue			
ZQV 4N / 2 BL	2	60	**1793960000**
ZQV 4N / 3 BL	3	60	**1793990000**
ZQV 4N / 4 BL	4	60	**1794020000**
ZQV 4N / 10 BL	10	20	**1794050000**
ZQV 4N / 20 BL	20	20	**1909100000**
black			
ZQV 4N / 2 SW	2	60	**1793970000**
ZQV 4N / 3 SW	3	60	**1794000000**
ZQV 4N / 4 SW	4	60	**1794030000**
ZQV 4N / 10 SW	10	20	**1794060000**
ZQV 4N / 20 SW	20	20	**1909120000**

Technical data

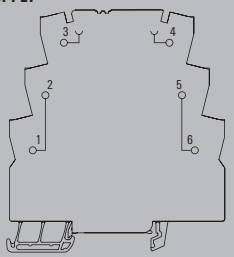
Conductor		Screw-connection
Solid H07V-U	mm^2	0.5 ... 4.0
Stranded H07V-K	mm^2	0.5 ... 2.5
"f" with wire end ferrules to DIN 46228-1	mm^2	0.5 ... 1.5
"f" with wire end ferrules with plastic collar	mm^2	0.5 ... 1.5
Max. clamping range	mm^2	0.13 ... 4.0
Plug gauge to IEC 60947-1	Size	A 3
General technical data		
Nominal torque	Nm	0.6
Continuous current for 2-pole cross-connection	A	10
Continuous current for multi-pole cross-connection	A	10
Stripping length	mm	7
Ingress protection class		IP 20
Housing material		Wemid
UL 94 flammability rating		V-0
Nominal current	A	6
Nominal voltage	V	250

Other accessories

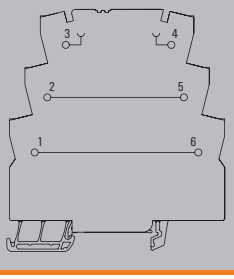
Type		Qty.	Order No.
Supply terminals			
MOS SUPPLY		1	**8973460000**
MOS FEED THROUGH		1	**8973450000**
Markers			
WS 12/6	12 x 6 mm	600	**1609900000**
Screwdriver			
SD 0.6 x 3.5 x 100		10	**9008330000**
Cross-connector for plugging into the clamping point			
QB 75/6.2/15		10	**0535200000**
Coloured insulating profile for QB			
ISPF QB75 black		10	**0526700000**
ISPF QB75 blue		10	**0526780000**
ISPF QB75 red		10	**0526760000**
End bracket			
WEW 35/2		100	**1061210000**

Drawings: Supply terminals

8973460000
MOS SUPPLY

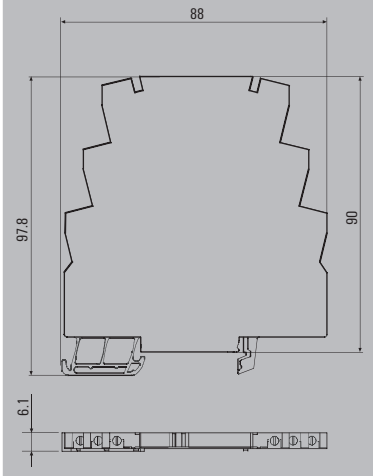


8973450000
MOS FEED THROUGH



Dimensions

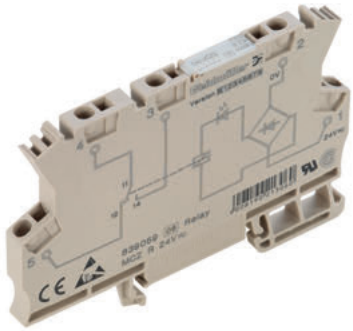
Screw connection

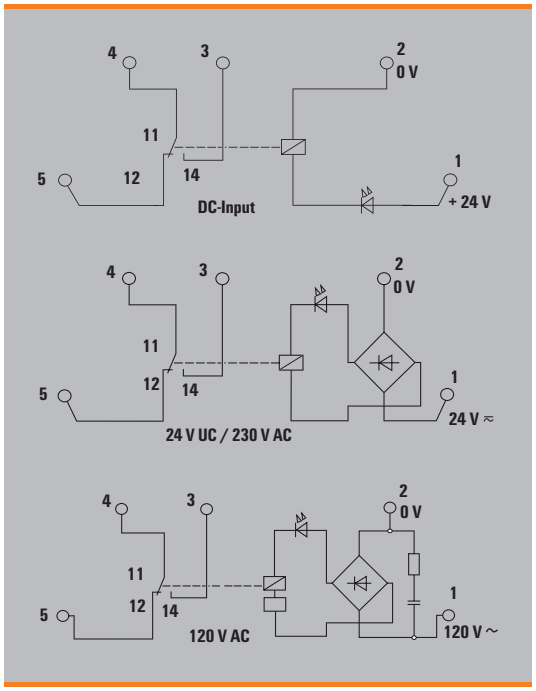


MiniConditioner MCZ R
1 CO contact AC/DC/UC coil

The module can be used as a universal interface between the controller and the actuator to switch small and medium-sized loads

- Reduced installation and commissioning costs, thanks to the use of the proven tension-spring connection system
- Pluggable cross-connection at input and output minimises the wiring workload.
- Width 6 mm
- For mounting on TS 35



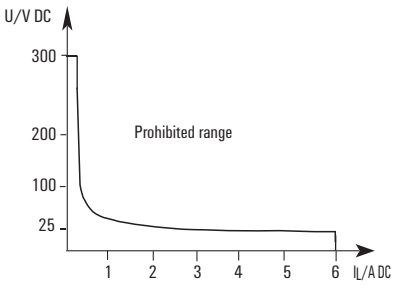


Technical data

Output		
Rated switching voltage / Continuous current		250 V AC / 6 A
Max. switching voltage, AC		250 V
Inrush current		6 A
Min. switching power		100 mA / 5 V, 10 V / 10 mA, 24 V / 1 mA
DC / AC Switching capacity (resistive), max.		144 W @ 24 V / 1500 VA
Contact material		AgSnO
Mechanical service life		10 x 10^6 switching cycles
Max. switching frequency at rated load		0.1 Hz
Rated data		
Ambient temperature (operational)		-25 °C...50 °C
Storage temperature		-40 °C...60 °C
Humidity		40 °C / 93 % rel. humidity, no condensation
Approvals		CE; CSA; cURus; EAC; GL
Insulation coordination (EN 50178)		
Rated voltage		300 V
Impulse withstand voltage		4 kV (1.2/50 µs)
Dielectric strength input – output		4 kV_{eff} / 1 s
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		4 kV_{eff} / 1 min.
Creepage and clearance distance input – output		≥ 5.5 mm
Overvoltage category		III
Pollution degree		2
Dimensions		**Tension clamp connection**
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.5 / 2.5
Depth x width x height	mm	63.2 / 6 / 91
Note		End plate AP MCZ 1.5: 8389030000 Accessories and dimensional drawings: refer to the MCZ Accessories page.

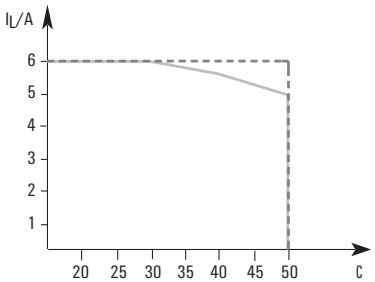
Applications

Limit curve



Derating curve

— in a row without spacing on terminal rail
- - - in a row with 20 mm spacing on terminal rail



MiniConditioner MCZ R
1 CO contact AC/DC/UC coil

Ordering data

	24 V DC 1 CO	24 V DC 1 CO Au	24 V UC 1 CO	110 V DC 1 CO
Input				
Rated control voltage	24 V DC ±20 %	24 V DC ±20 %	24 V UC ±10 %	110 V DC ±10 %
Rated current AC / DC	/ 6.3 mA	/ 6.3 mA	11 mA / 6.4 mA	/ 2.85 mA
Power rating	156 mW	156 mW	160 mVA / 150 mW	340 mW
Pull-in/drop-out voltage, typ.	19 V / 4 V DC	19 V / 4 V DC	19.5 V / 3 V AC 19.5 V / 3 V DC	68 V / 19 V DC
Pull-in/drop-out current, typ.				1.6 mA / 0.6 mA DC
Status indicator	Green LED	Green LED	Green LED	Green LED
Protective circuit	Integrated free-wheel diode, Reverse polarity protection	Integrated free-wheel diode, Reverse polarity protection	Rectifier	Rectifier
Load side				
Switch-on delay	< 5 ms	< 5 ms	< 6 ms	< 6 ms
Switch-off delay	< 15 ms	< 15 ms	< 35 ms	< 15 ms
Ordering data Complete module				
CO contact Type	MCZ R 24VDC	MCZ R 24VDC 5uAu	MCZ R 24VUC	MCZ R 110VDC
Order No.	**8365980000**	**8442960000**	**8390590000**	**8467470000**
Type				
Order No.				
Note		Can safely switch a load of: 1...60 V AC/DC, 1...300 mA. If higher loads are switched this can damage the gold plating.		

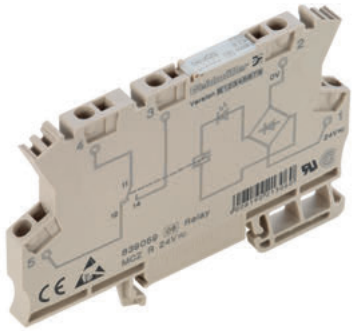
Ordering data

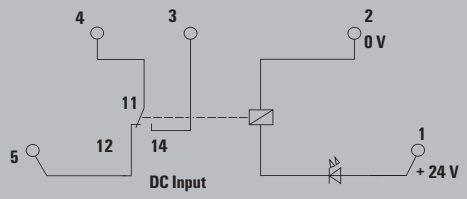
	120 V AC 1 CO	230 V AC 1 CO
Input		
Rated control voltage	120 V AC -15 % / +10 %	230 V AC ±10 %
Rated current AC / DC	7 mA /	9.5 mA /
Power rating	0.85 VA	2.1 VA
Pull-in/drop-out voltage, typ.	85 V / 17 V AC	150 V / 60 V AC
Pull-in/drop-out current, typ.	4 mA / 1.3 mA AC	5 mA / 2.5 mA AC
Status indicator	Green LED	Green LED
Protective circuit	Rectifier	Rectifier
Load side		
Switch-on delay	< 17 ms	< 11 ms
Switch-off delay	< 35 ms	< 35 ms
Ordering data Complete module		
CO contact Type	MCZ R 120VAC	MCZ R 230VAC
Order No.	**8420880000**	**8237710000**
Type		
Order No.		
Note		

MCZ R TRAK

1 CO contact or 1 NO contact DC coil

- 1 CO contact
- Component for rail industry applications
- Vibration requirements according to EN 61373, requirements category 1 class B
- Voltage fluctuations -30 %/+25 % and ±40 % for 0.1 sec
- Voltage interruptions at input up to 10 ms
- Condensation permissible



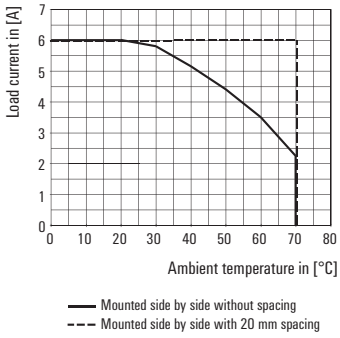


Technical data

Output		
Rated switching voltage / Continuous current		250 V AC / 6 A
Max. switching voltage, AC		250 V
Inrush current		6 A
Min. switching power		12 V / 100 mA
DC / AC Switching capacity (resistive), max.		120 W @ 24 V / 1500 VA
Contact material		AgSnO
Mechanical service life		10 x 10^6 switching cycles
Max. switching frequency at rated load		0.1 Hz
Rated data		
Ambient temperature (operational)		-25 °C...70 °C
Storage temperature		-40 °C...85 °C
Humidity		95 % for 30 days, minimal condensation to EN 50155
Approvals		CE; EAC
Insulation coordination (EN 50178)		
Rated voltage		300 V
Impulse withstand voltage		4 kV (1.2/50 µs)
Dielectric strength input – output		4 kV_{eff} / 1 s
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		4 kV_{eff} / 1 min.
Creepage and clearance distance input – output		≥ 5.5 mm
Overvoltage category		III
Pollution degree		2
Dimensions		**Tension clamp connection**
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.5 / 2.5
Depth x width x height	mm	63.2 / 6 / 91
Note		End plate AP MCZ 1.5: 8389030000 Accessories and dimensional drawings: refer to the MCZ Accessories page.

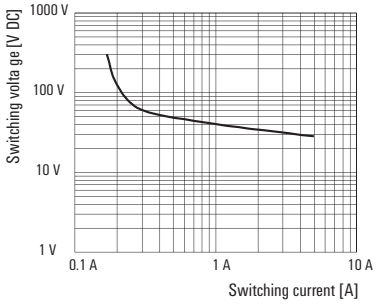
Applications

Derating



DC load braking capacity

resistive load



MCZ R TRAK

1 CO contact or 1 NO contact DC coil

Ordering data	24 V DC TRAK	36 V DC TRAK	48...110 V DC TRAK
Input			
Rated control voltage	24 V DC +25 % / -30 %	36 V DC +25 % / -30 %	48 V...110 V DC +25 % / -30 %
Rated current AC / DC	/ 11.5...16.5 mA	/ 8...12 mA	/ < 3 mA
Power rating	195...500 mW	200...540 mW	< 300 mW
Pull-in/drop-out voltage, typ.	14 V / 3 V DC	18 V / 4.5 V DC	25 V / 6 V DC
Pull-in/drop-out current, typ.			
Status indicator	Green LED	Green LED	Green LED
Protective circuit	Integrated free-wheel diode, Reverse polarity protection	Integrated free-wheel diode, Reverse polarity protection	Integrated free-wheel diode, Reverse polarity protection
Load side			
Switch-on delay	< 11 ms	< 6 ms	< 4 ms
Switch-off delay	< 50 ms	< 70 ms	< 100 ms

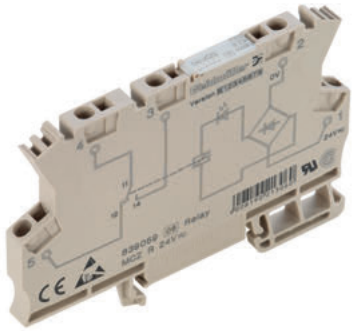
Ordering data				
Complete module				
CO contact	Type	MCZ R 24Vdc 1CO TRAK	MCZ R 36Vdc 1CO TRAK	MCZ R 48...110Vdc 1CO TRAK
	Order No.	**8713890000**	**8713900000**	**8713910000**
NO contact	Type	MCZ R 24Vdc 1NO TRAK		MCZ R 48...110Vdc 1NO TRAK
	Order No.	**8499550000**		**8574070000**

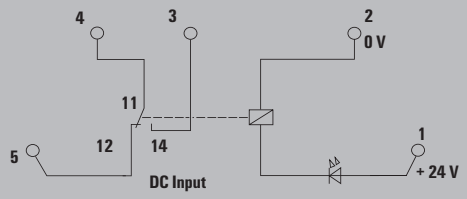
Note			

MCZ R TRAK Au

1 CO contact or 1 NO contact DC coil

- 1 CO with hard gold-plated contacts
- Component for rail industry applications
- Vibration requirements according to EN 61373, requirements category 1 class B
- Voltage fluctuations -30 %/+25 % and ±40 % for 0.1 sec
- Voltage interruptions at input up to 10 ms
- Condensation permissible



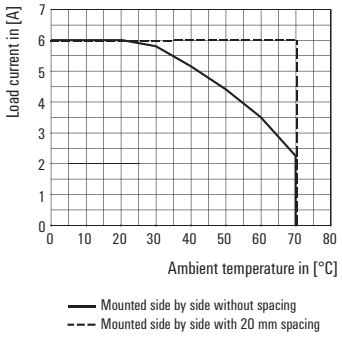


Technical data

Output		
Rated switching voltage / Continuous current		250 V AC / 6 A
Max. switching voltage, AC		250 V
Inrush current		6 A
Min. switching power		1 V / 1 mA
DC / AC Switching capacity (resistive), max.		120 W @ 24 V / 1500 VA
Contact material		AgSnO 5µm Au
Mechanical service life		10 x 10^6 switching cycles
Max. switching frequency at rated load		0.1 Hz
Rated data		
Ambient temperature (operational)		-25 °C...70 °C
Storage temperature		-40 °C...85 °C
Humidity		95 % for 30 days, minimal condensation to EN 50155
Approvals		CE; EAC
Insulation coordination (EN 50178)		
Rated voltage		300 V
Impulse withstand voltage		4 kV (1.2/50 µs)
Dielectric strength input – output		4 kV_{eff} / 1 s
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		4 kV_{eff} / 1 min.
Creepage and clearance distance input – output		≥ 5.5 mm
Overvoltage category		III
Pollution degree		2
Dimensions		**Tension clamp connection**
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.5 / 2.5
Depth x width x height	mm	63.2 / 6 / 91
Note		End plate AP MCZ 1.5: 8389030000 Accessories and dimensional drawings: refer to the MCZ Accessories page.

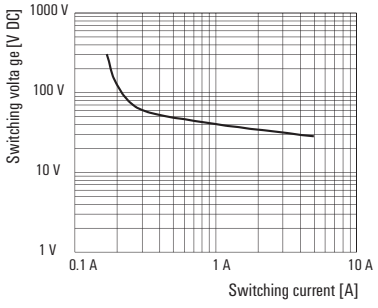
Applications

Derating



DC load braking capacity

resistive load



MCZ R TRAK Au

1 CO contact or 1 NO contact DC coil

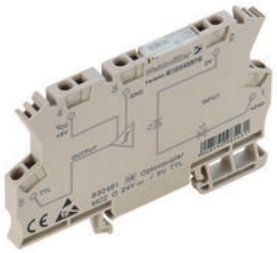
Ordering data		24 V DC TRAK Au	36 V DC TRAK Au	48...110 V DC TRAK Au
Input				
Rated control voltage		24 V DC +25 % / -30 %	36 V DC +25 % / -30 %	48 V...110 V DC +25 % / -30 %
Rated current AC / DC		11.5...16.5 mA	8...12 mA	< 3 mA
Power rating		195...500 mW	200...540 mW	< 300 mW
Pull-in/drop-out voltage, typ.		14 V / 3 V DC	18 V / 4.5 V DC	25 V / 6 V DC
Pull-in/drop-out current, typ.				
Status indicator		Green LED	Green LED	Green LED
Protective circuit		Integrated free-wheel diode, Reverse polarity protection	Integrated free-wheel diode, Reverse polarity protection	Integrated free-wheel diode, Reverse polarity protection
Load side				
Switch-on delay		< 11 ms	< 6 ms	< 4 ms
Switch-off delay		< 50 ms	< 70 ms	< 100 ms
Ordering data				
CO contact	Type	MCZ R 24VDC 1CO AU TRAK	MCZ R 36VDC 1CO AU TRAK	MCZ R 48...110VDC 1CO AU TRAK
	Order No.	**8790520000**	**8790510000**	**8790500000**
	Type			
	Order No.			
Note		Can safely switch a load of: 1...60 V AC/DC, 1...300 mA. If higher loads are switched this can damage the gold plating.	Can safely switch a load of: 1...60 V AC/DC, 1...300 mA. If higher loads are switched this can damage the gold plating.	Can safely switch a load of: 1...60 V AC/DC, 1...300 mA. If higher loads are switched this can damage the gold plating.

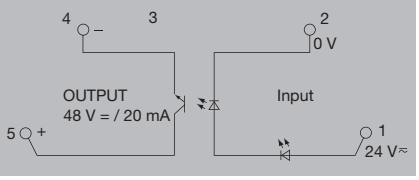
MiniConditioner MCZ O

- Universal interface between controller and sensor/ actuator
- Tension-clamp connection system
- Plug-in cross-connection
- 6 mm modular wide

24 V UC

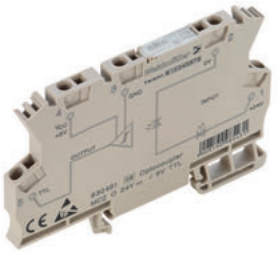
Connection system

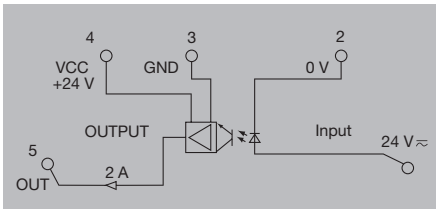




24 V UC / 24 V 2 A

Connection system





Technical data

Control side		
Rated control voltage	24 V UC ±20 %	24 V UC ±20 %
Nominal control current	10 mA DC ±20 %, 10 mA AC ±20 %	10 mA DC ±20 %, 10 mA AC ±20 %
Cut-in / dropout voltage	14.4 V / 13 V AC 16.8 V / 15.7 V DC	14.4 V / 13 V AC 15 V / 15 V DC
Input frequency	AC: 5 Hz / DC: 10 Hz	AC: 10 Hz / DC: 30 Hz
Power rating	230 mW / 280 mVA	195 mW / 220 mVA
Status indicator	Green LED	LED
Protective circuit		
Load side		
Rated switching voltage	5...48 V DC	24 VDC ±20%
Continuous current	20 mA	2 A
Inrush current		
Solid-state type	Transistor	Transistor
Voltage drop at max. load	≤ 1 V	≤ 1.8 V
Leakage current		
Protective circuit, load side	Integrated free-wheel diode	Varistor
Short-circuit-proof	No	Yes
Switch-on delay	AC: 10 ms / DC: 20 ms	≤ 10 ms
Switch-off delay	AC: 45 ms / DC: 40 ms	≤ 10 ms
General data		
Ambient temperature (operational)	-25 °C...50 °C	-25 °C...40 °C
Storage temperature	-40 °C...85 °C	-40 °C...60 °C
Humidity	40 °C / 93 % rel. humidity, no condensation	40 °C / 93 % rel. humidity, no condensation
Approvals	CE; CSA; cURus; EAC	CE; CSA; cURus; EAC
Insulation coordination (EN 50178)		
Rated voltage	300 V	300 V
Impulse withstand voltage	6 kV (1.2/50 µs)	6 kV (1.2/50 µs)
Dielectric strength for control side - load side	4 kV_{eff} / 1 min.	1.2 kV_{eff} / 5 s
Dielectric strength to mounting rail	4 kV_{eff} / 1 min.	4 kV_{eff} / 1 min.
Clearance and creepage distances for control side - load side	≥ 5.5 mm	≥ 5.5 mm
Overvoltage category	III	III
Pollution degree	2	2

Dimensions			
Clamping range (nominal / min. / max.)	mm²	Tension clamp connection 1.5 / 0.5 / 1.5	Tension clamp connection 1.5 / 0.5 / 1.5
Depth x width x height	mm	63.2 / 6 / 91	63.2 / 6 / 91
Note			* Status indicator: green = OK, yellow = partial short circuit, blinking red = short circuit

Ordering data

	Type	Qty.	Order No.
Tension-clamp connection	MCZ O 24VUC	10	**8365940000**
Tension-clamp connection	MCZ O 24VUC	10	**8287730000**

Note

Accessories

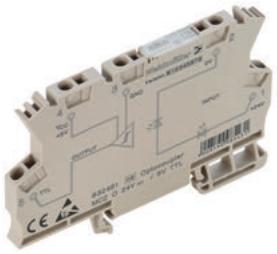
Note	
End plate AP MCZ 1.5: 8389030000 Accessories and dimensional drawings: refer to the MCZ Accessories page.	End plate AP MCZ 1.5: 8389030000 Accessories and dimensional drawings: refer to the MCZ Accessories page.

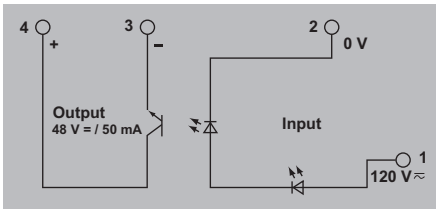
MiniConditioner MCZ O

- Universal interface between controller and sensor/ actuator
- Tension-clamp connection system
- Plug-in cross-connection
- 6 mm modular wide

120 V UC

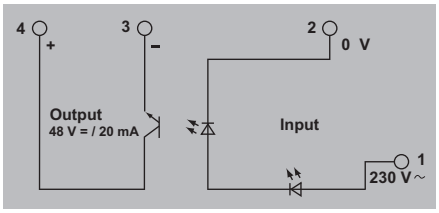
Connection system





230 V AC

Connection system



Technical data

Control side		
Rated control voltage	120 V UC +5 / -15 %	230 V AC +5 % / -15 %
Nominal control current	3 mA DC (±10 %), 3 mA AC (±10 %)	10 mA AC ±20 %
Cut-in / dropout voltage	65 V / 64 V AC 70 V / 64 V DC	175 V / 125 V AC
Input frequency	AC: 5 Hz / DC: 20 Hz	AC: 5 Hz duty factor 1:2
Power rating	350 mW / 400 mVA	2.3 VA
Status indicator	Green LED	Green LED
Protective circuit		
Load side		
Rated switching voltage	5...48 V DC	5...48 V DC
Continuous current	50 mA	20 mA
Inrush current		
Solid-state type	Transistor	Transistor
Voltage drop at max. load	1.6 V	1.6 V
Leakage current	≤ 1 mA	≤ 1 mA
Protective circuit, load side	Integrated free-wheel diode	Integrated free-wheel diode
Short-circuit-proof	No	No
Switch-on delay	≤ 30 ms	≤ 30 ms
Switch-off delay	≤ 40 ms	≤ 40 ms
General data		
Ambient temperature (operational)	-25 °C...40 °C	-25 °C...40 °C
Storage temperature	-40 °C...60 °C	-40 °C...60 °C
Humidity	40 °C / 93 % rel. humidity, no condensation	40 °C / 93 % rel. humidity, no condensation
Approvals	CE; CSA; cURus; EAC	CE; CSA; cURus; EAC
Insulation coordination (EN 50178)		
Rated voltage	300 V	300 V
Impulse withstand voltage	6 kV (1.2/50 µs)	6 kV (1.2/50 µs)
Dielectric strength for control side - load side	1.2 kV_{eff} / 5 s	1.2 kV_{eff} / 5 s
Dielectric strength to mounting rail	4 kV_{eff} / 1 min.	4 kV_{eff} / 1 min.
Clearance and creepage distances for control side - load side	≥ 5.5 mm	≥ 5.5 mm
Overvoltage category	III	III
Pollution degree	2	2

Dimensions		**Tension clamp connection**	**Tension clamp connection**
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.5 / 1.5	1.5 / 0.5 / 1.5
Depth x width x height	mm	63.2 / 6 / 91	63.2 / 6 / 91
Note			

Ordering data

	Type	**Qty.**	**Order No.**
Tension-clamp connection	MCZ O 120VUC	10	**8421060000**
Tension-clamp connection	MCZ O 230VAC	10	**8421380000**

Note

Accessories

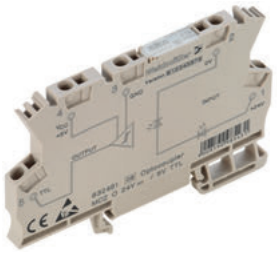
Note	
	End plate AP MCZ 1.5: 8389030000 Accessories and dimensional drawings: refer to the MCZ Accessories page.
	End plate AP MCZ 1.5: 8389030000 Accessories and dimensional drawings: refer to the MCZ Accessories page.

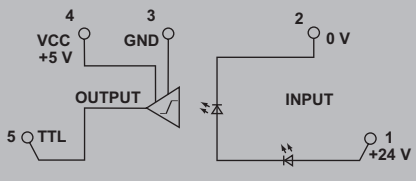
MiniConditioner MCZ O

- Universal interface between controller and sensor/ actuator
- Tension-clamp connection system
- Plug-in cross-connection
- 6 mm modular wide

24 V DC / 5 V TTL

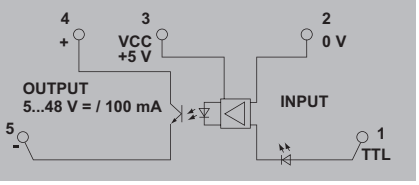
Connection system





5 V TTL / 5...48 V DC

Connection system



Technical data

Control side		
Rated control voltage	24 V DC ±16 %	5 V TTL
Nominal control current	5 mA DC (±20 %)	1.65 mA DC
Cut-in / dropout voltage	16.8 V / 16.5 V DC	
Input frequency	100 kHz	2.4 kHz
Power rating	112 mW	10 mW
Status indicator	Green LED	Green LED
Protective circuit		
Load side		
Rated switching voltage	5 V TTL	5...48 V DC
Continuous current	8 ma, Fan out = 20 LS-TTL	100 mA
Inrush current		
Solid-state type	TTL	TTL
Voltage drop at max. load		≤ 1.8 V
Leakage current		
Protective circuit, load side	Diode	Diode
Short-circuit-proof	No	No
Switch-on delay	1 µs (at 20 V DC)	< 17 µs
Switch-off delay	2.5 µs (at 28 V DC)	< 250 µs
General data		
Ambient temperature (operational)	-25 °C...40 °C	-25 °C...40 °C
Storage temperature	-40 °C...60 °C	-40 °C...60 °C
Humidity	40 °C / 93 % rel. humidity, no condensation	40 °C / 93 % rel. humidity, no condensation
Approvals	CE; CSA; cURus; EAC	CE; CSA; cURus; EAC
Insulation coordination (EN 50178)		
Rated voltage	300 V	300 V
Impulse withstand voltage	6 kV (1.2/50 µs)	6 kV (1.2/50 µs)
Dielectric strength for control side - load side	1.2 kV_{eff} / 5 s	1.2 kV_{eff} / 5 s
Dielectric strength to mounting rail	4 kV_{eff} / 1 min.	4 kV_{eff} / 1 min.
Clearance and creepage distances for control side - load side	≥ 5.5 mm	≥ 5.5 mm
Overvoltage category	III	III
Pollution degree	2	2

Dimensions		**Tension clamp connection**	**Tension clamp connection**
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.5 / 1.5	1.5 / 0.5 / 1.5
Depth x width x height	mm	63.2 / 6 / 91	63.2 / 6 / 91
Note			

Ordering data

	Type	**Qty.**	**Order No.**
Tension-clamp connection	MCZ O 24VDC	10	**8324610000**
	MCZ O 5VTTL	10	**8398940000**

Note		

Accessories

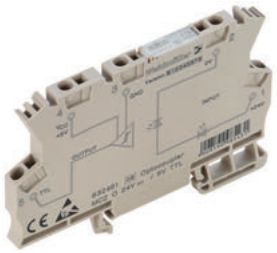
Note	End plate AP MCZ 1.5: 8389030000 Accessories and dimensional drawings: refer to the MCZ Accessories page.	End plate AP MCZ 1.5: 8389030000 Accessories and dimensional drawings: refer to the MCZ Accessories page.

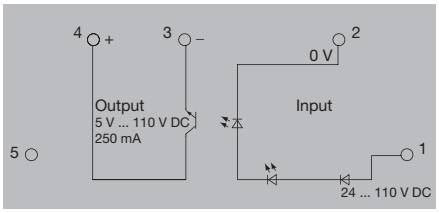
MCZ O TRAK

- Component for railway engineering
- Meets the requirements of EN 50155
- Voltage fluctuations of -30% / +25%
- Operating temperature: -25 °C...+70 °C (85 °C / 10 min.) acc. to EN 50155
- Condensation permissible

24 V DC TRAK

Connection system





Technical data

Control side	
Rated control voltage	24...110 V DC -30 / +25 %
Nominal control current	2.8 mA DC
Cut-in / dropout voltage	9.6 V / 9 V DC
Input frequency	10 Hz
Power rating	
Status indicator	Green LED
Protective circuit	
Load side	
Rated switching voltage	5...137.5 V DC
Continuous current	180 mA
Inrush current	
Solid-state type	Transistor
Voltage drop at max. load	≤ 1.7 V
Leakage current	
Protective circuit, load side	Varistor, integrated free-wheel diode
Short-circuit-proof	No
Switch-on delay	≤ 10 ms
Switch-off delay	≤ 40 ms
General data	
Ambient temperature (operational)	-25 °C...70 °C
Storage temperature	-40 °C...85 °C
Humidity	95 % for 30 days, minimal condensation to EN 50155
Approvals	CE; EAC
Insulation coordination (EN 50178)	
Rated voltage	300 V
Impulse withstand voltage	6 kV (1.2/50 µs)
Dielectric strength for control side - load side	1.2 kV_{eff} / 5 s
Dielectric strength to mounting rail	4 kV_{eff} / 1 min.
Clearance and creepage distances for control side - load side	≥ 5.5 mm
Overvoltage category	III
Pollution degree	2

Dimensions		**Tension clamp connection**
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.5 / 1.5
Depth x width x height	mm	63.2 / 6 / 91
Note		

Ordering data

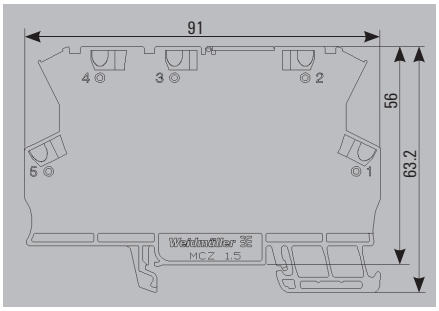
	Type	**Qty.**	**Order No.**
Tension-clamp connection	MCZ O TRAK 24.110VDC	10	**8820710000**

Note

Accessories

Note	
	End plate AP MCZ 1.5: 8389030000 Accessories and dimensional drawings: refer to the MCZ Accessories page.

MCZ accessories



Ordering data

	Type	Qty.	Order No.
End plate	AP MCZ 1.5	50	8389030000

Ordering data

	No. of poles	Type	Qty.	Order No.
Plug-in cross-connection, yellow	2	ZQV 4N / 2 GE	60	1758250000
Plug-in cross-connection, yellow	3	ZQV 4N / 3 GE	60	1762630000
Plug-in cross-connection, yellow	4	ZQV 4N / 4 GE	60	1762620000
Plug-in cross-connection, yellow	10	ZQV 4N / 10 GE	20	1758260000
Plug-in cross-connection, yellow	20	ZQV 4N / 20 GE	20	1909020000
		red		
Plug-in cross-connection, red	2	ZQV 4N / 2 RT	60	1793950000
Plug-in cross-connection, red	3	ZQV 4N / 3 RT	60	1793980000
Plug-in cross-connection, red	4	ZQV 4N / 4 RT	60	1794010000
Plug-in cross-connection, red	10	ZQV 4N / 10 RT	20	1794040000
Plug-in cross-connection, red	20	ZQV 4N / 20 RT	20	1909150000
		blue		
Plug-in cross-connection, blue	2	ZQV 4N / 2 BL	60	1793960000
Plug-in cross-connection, blue	3	ZQV 4N / 3 BL	60	1793990000
Plug-in cross-connection, blue	4	ZQV 4N / 4 BL	60	1794020000
Plug-in cross-connection, blue	10	ZQV 4N / 10 BL	20	1794050000
Plug-in cross-connection, blue	20	ZQV 4N / 20 BL	20	1909100000
		black		
Plug-in cross-connection, black	2	ZQV 4N / 2 SW	60	1793970000
Plug-in cross-connection, black	3	ZQV 4N / 3 SW	60	1794000000
Plug-in cross-connection, black	4	ZQV 4N / 4 SW	60	1794030000
Plug-in cross-connection, black	10	ZQV 4N / 10 SW	20	1794060000
Plug-in cross-connection, black	20	ZQV 4N / 20 SW	20	1909120000

Ordering data

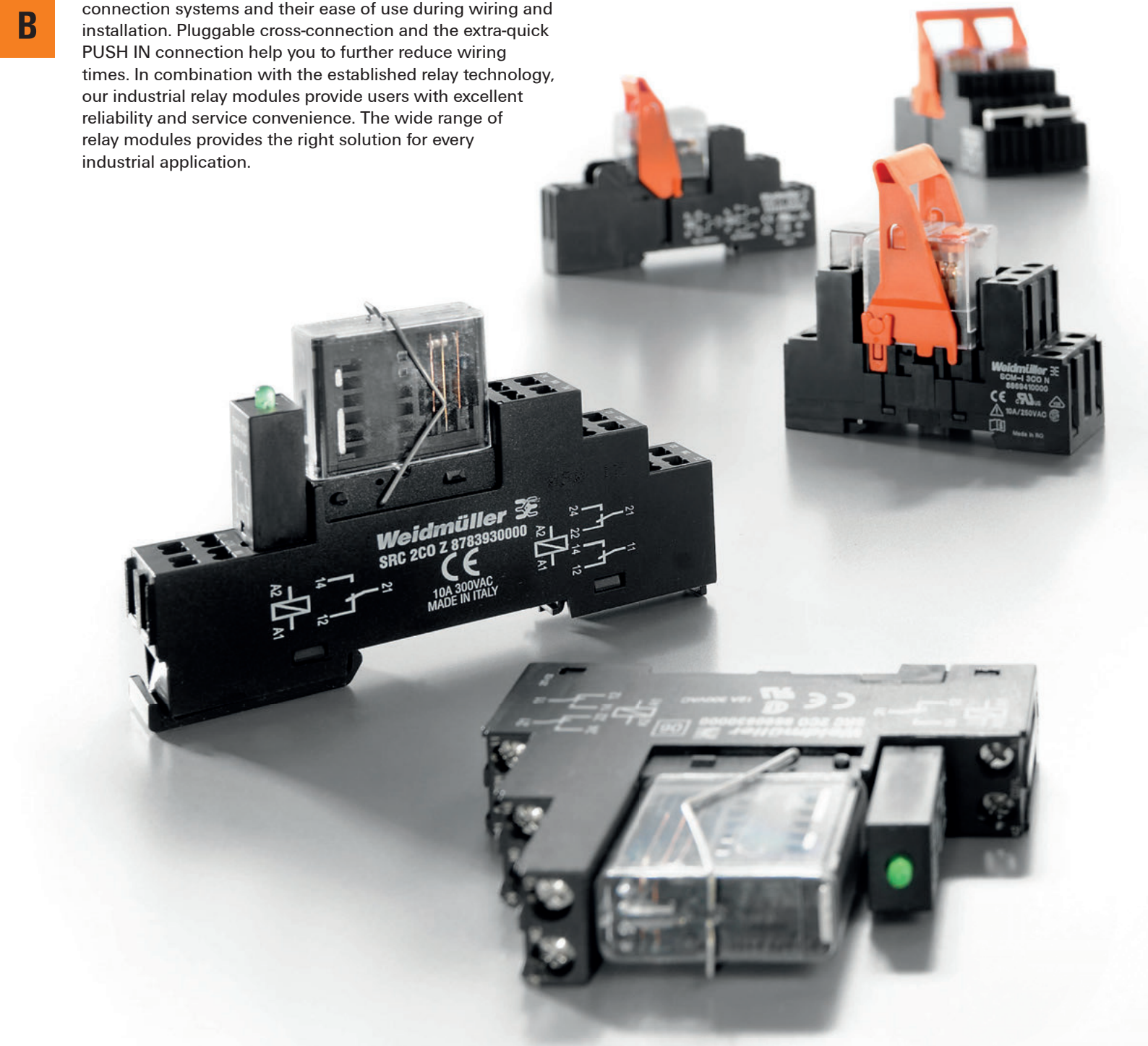
	Type	Qty.	Order No.
Terminal markers	WS 10/6 MC NEUTRAL	600	1828450000
Screwdriver	SD 0.6x3.5x100	1	9008330000
End bracket	WEW 35/2	100	1061200000

Industrial relay modules

Industrial relay module with the proven connection technology

Easy handling and safe connections

Weidmüller's relay bases are remarkable for their secure connection systems and their ease of use during wiring and installation. Pluggable cross-connection and the extra-quick PUSH IN connection help you to further reduce wiring times. In combination with the established relay technology, our industrial relay modules provide users with excellent reliability and service convenience. The wide range of relay modules provides the right solution for every industrial application.



A long service life is a key factor in a wide range of industrial applications

D-SERIES relay modules deliver impressively long-lasting high performance

You stringent requirements on your relay combinations in an industrial environment. Our D-SERIES relay modules were specially designed for ambitious industrial applications. Let's connect.

TÜV Type Approved
TÜV Rheinland Group

In many industrial applications, voltages between 110 and 220 V are used to control actuators. Load currents greater than 100 mA cause these high voltages to create wear-intensive light arcs on the relay contacts.

We have specially designed our D-SERIES relay modules for all-purpose use in a wide range of industrial applications. They are much more reliable than conventional solutions and so help to minimise maintenance and replacement costs.

The formation of light arcs is effectively avoided with D-SERIES products thanks to contact series connection, built-in blow magnets and low-wear contacts – for a noticeably longer service life.

Reliable at high currents and voltages
Requirements increase where current consumption is high. D-SERIES industrial relay modules are used where high voltages and load currents impact on the actuators. For example, when motors, solenoid valves or brakes are actuated in machine construction.

For convenient servicing
Optional LED status indicator and test button.

With a long service life
The smart contact series connection and a built-in blow magnet reduce the contact erosion at loads of up to 220 V DC/10 A.

Contacts for every application
Thanks to various contact materials (AgNi, AgSnO, AgCdO), the products of the D-SERIES are equipped for small, medium and high loads.

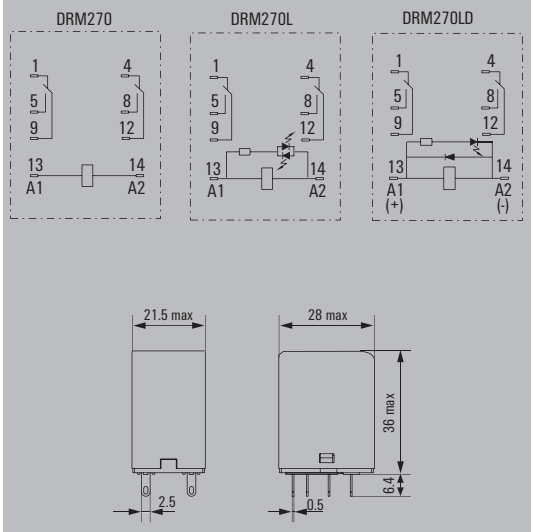
With extensive accessories
Flexible in use thanks to relay bases, markers and pluggable circuits (e.g. LED or free-wheel diode).

For every control voltage
The wide range of coil voltages from 5 V DC – 380 V AC enable them to be used on any control voltage imaginable.

DRM 270 relay
2 CO, AC/DC coil

- Compact design combined with high switching capacity
- Wide range of coil voltages
- Optional test button (AC red, DC blue)
- Optional status LED (AC red, DC green)
- Optional free-wheel diode

Circuit diagram



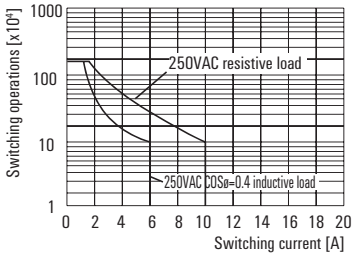
Technical data

Output		
Rated switching voltage / Continuous current		250 V AC / 10 A
Max. switching voltage, AC		250 V
Inrush current		
Min. switching power		12 V / 10 mA
DC / AC Switching capacity (resistive), max.		240 W @ 24 V / 2500 VA
Contact material		AgNi 0.15 gold flashed
Mechanical service life		20 x 10^6 switching cycles
Max. switching frequency at rated load		0.1 Hz
Rated data		
Ambient temperature (operational)		-40 °C...60 °C
Storage temperature		-40 °C...70 °C
Humidity		35...85 % rel. humidity, no condensation
Approvals		cURus; EAC
Insulation coordination (EN 50178)		
Rated voltage		250 V
Impulse withstand voltage		6 kV (1.2/50 µs)
Dielectric strength input – output		1.8 kV_{eff} / 1 min.
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		
Creepage and clearance distance input – output		≥ 5.5 mm
Overvoltage category		III
Pollution degree		2
Dimensions		**Plug-in connection**
Depth x width x height	mm	36 / 21.5 / 28

Note

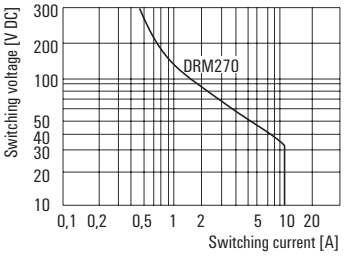
Applications

Electrical endurance



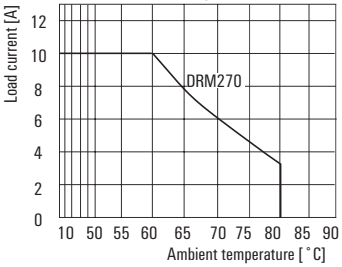
DC load breaking capacity

Resistive Load

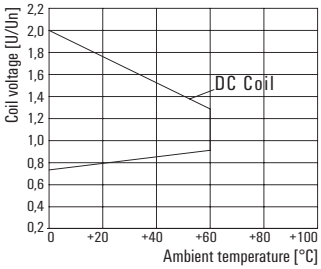


Derating curve

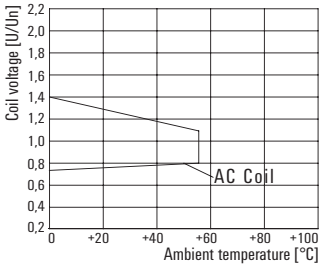
in combination with relay socket



Operating voltage range [DC]



Operating voltage range [AC]



DRM 270 relay
2 CO, AC/DC coil

Type code

		DRM					
Type	DRM						
Type of construction							
	270 2 change over contact						
Coil voltage							
	006 6 V DC / 012 12 V DC						
	024 24 V DC / 048 48 V DC						
	110 110 V DC / 220 220 V DC						
	524 24 V AC / 548 48 V AC						
	615 115 V AC / 730 230 V AC						
LED	L (Red for AC coil; green for DC coil)						
Test lever	T (Red for AC coil; green for DC coil)						
Free-wheel diode	D						

Ordering data

		12 V DC 2CO	24 V DC 2CO	48 V DC 2CO	110 V DC 2CO	220 V DC 2CO
Input						
Rated control voltage		12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
Rated current AC / DC		/ 75 mA	/ 36.9 mA	/ 18.5 mA	/ 10 mA	/ 5.2 mA
Power rating		0.9 W	0.9 W	0.9 W	1.2 W	1.2 W
Pull-in/drop-out voltage, typ.		9 V / 1.2 V DC	18 V / 2.4 V DC	36 V / 4.8 V DC	82.5 V / 11 V DC	154 V / 22 V DC
Pull-in/drop-out current, typ.						
Output						
Switch-on delay		< 20 ms	< 20 ms	< 20 ms	< 20 ms	< 20 ms
Switch-off delay		< 20 ms	< 20 ms	< 20 ms	< 20 ms	< 20 ms
Ordering data						
Standard	Type	DRM270012	DRM270024	DRM270048	DRM270110	DRM270220
	Order No.	**7760056050**	**7760056051**	**7760056052**	**7760056053**	**7760056054**
with LED	Type	DRM270012L	DRM270024L	DRM270048L	DRM270110L	DRM270220L
	Order No.	**7760056059**	**7760056060**	**7760056061**	**7760056062**	**7760056063**
With test button + LED	Type	DRM270012LT	DRM270024LT	DRM270048LT	DRM270110LT	DRM270220LT
	Order No.	**7760056068**	**7760056069**	**7760056070**	**7760056071**	**7760056072**
with LED	Type		DRM270024LD			
+ Free-wheel diode	Order No.		**7760056077**			
Note						

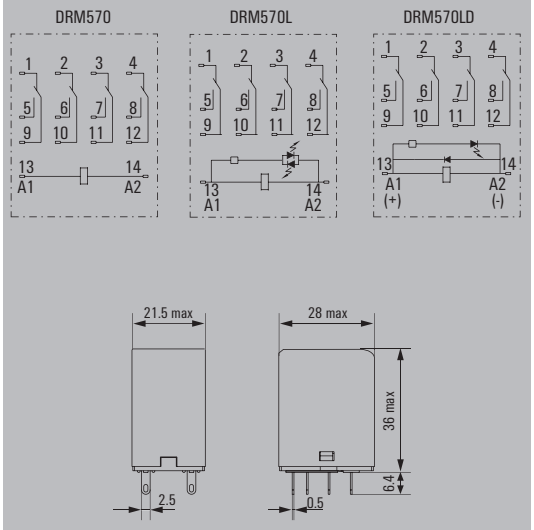
Ordering data

		24 V AC 2CO	48 V AC 2CO	115 V AC 2CO	230 V AC 2CO
Input					
Rated control voltage		24 V AC	48 V AC	115 V AC	230 V AC
Rated current AC / DC		62.4 mA (50 Hz), 52.2 mA (60 Hz) /	33.3 mA (50 Hz), 27.8 mA (60 Hz) /	12.6 mA (50 Hz), 10.8 mA (60 Hz) /	6.1 mA (50 Hz), 5.2 mA (60 Hz) /
Power rating		1.0...1.2VA (60HZ)	1.0...1.2VA (60HZ)	1.0...1.2VA (60HZ)	1.0...1.2VA (60HZ)
Pull-in/drop-out voltage, typ.		19.2 V / 7.2 V AC	38.4 V / 14.4 V AC	92 V / 34.5 V AC	184 V / 69 V AC
Pull-in/drop-out current, typ.					
Output					
Switch-on delay		< 20 ms	< 20 ms	< 20 ms	< 20 ms
Switch-off delay		< 20 ms	< 20 ms	< 20 ms	< 20 ms
Ordering data					
Standard	Type	DRM270524	DRM270548	DRM270615	DRM270730
	Order No.	**7760056055**	**7760056056**	**7760056057**	**7760056058**
with LED	Type	DRM270524L	DRM270548L	DRM270615L	DRM270730L
	Order No.	**7760056064**	**7760056065**	**7760056066**	**7760056067**
With test button + LED	Type	DRM270524LT	DRM270548LT	DRM270615LT	DRM270730LT
	Order No.	**7760056073**	**7760056074**	**7760056075**	**7760056076**
	Type				
	Order No.				
Note					

DRM 570 relay
4 CO AC/DC coil

- Compact design combined with high switching capacity
- Wide range of coil voltages
- Optional test button (AC red, DC blue)
- Optional status LED (AC red, DC green)
- Optional free-wheel diode

Circuit diagram



Technical data

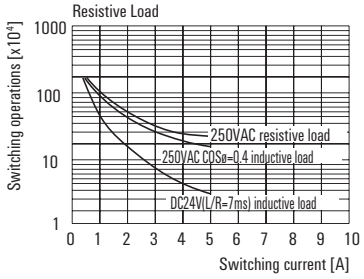
Output		
Rated switching voltage / Continuous current		250 V AC / 5 A
Max. switching voltage, AC		250 V
Inrush current		
Min. switching power		12 V / 10 mA
DC / AC Switching capacity (resistive), max.		120 W @ 24 V / 1250 VA
Contact material		AgNi 0.15 gold flashed
Mechanical service life		20 x 10^6 switching cycles
Max. switching frequency at rated load		0.1 Hz
Rated data		
Ambient temperature (operational)		-40 °C...60 °C
Storage temperature		-40 °C...70 °C
Humidity		35...85 % rel. humidity, no condensation
Approvals		cURus; EAC
Insulation coordination (EN 50178)		
Rated voltage		250 V
Impulse withstand voltage		6 kV (1.2/50 µs)
Dielectric strength input – output		1.8 kV_{eff} / 1 min.
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		
Creepage and clearance distance input – output		≥ 5.5 mm
Overvoltage category		III
Pollution degree		2
Dimensions		**Plug-in connection**
Depth x width x height	mm	36 / 21.5 / 28

Note

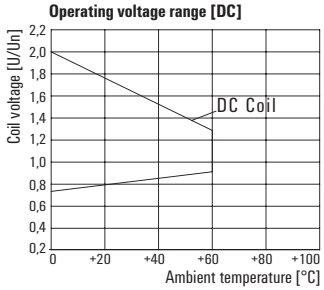
Applications

Electrical endurance

Resistive Load

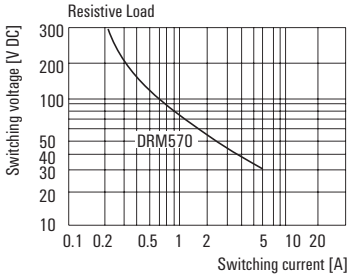


Operating voltage range [DC]

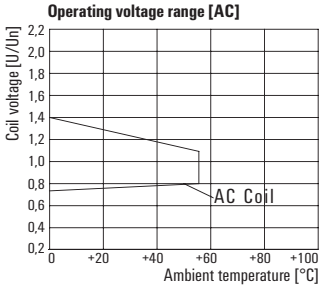


DC load braking capacity

Resistive Load

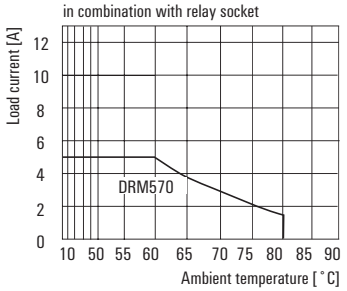


Operating voltage range [AC]



Derating curve

in combination with relay socket



DRM 570 relay
4 CO AC/DC coil

Type code

DRM						

Type	DRM	
Type of construction		
	570	4 change over contact
Coil voltage		
	006	6 V DC / 012 12 V DC
	024	24 V DC / 048 48 V DC
	110	110 V DC / 220 220 V DC
	524	24 V AC / 548 48 V AC
	615	115 V AC / 730 230 V AC
LED	L (Red for AC coil; green for DC coil)	
Test lever	T (Red for AC coil; green for DC coil)	
Free-wheel diode	D	

Ordering data

	12 V DC 4CO	24 V DC 4CO	48 V DC 4CO	110 V DC 4CO	220 V DC 4CO
Input					
Rated control voltage	12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
Rated current AC / DC	/ 75 mA	/ 36.9 mA	/ 18.5 mA	/ 10 mA	/ 5.2 mA
Power rating	0.9 W	0.9 W	0.9 W	1.2 W	1.2 W
Pull-in/drop-out voltage, typ.	9 V / 1.2 V DC	18 V / 2.4 V DC	36 V / 4.8 V DC	82.5 V / 11 V DC	154 V / 22 V DC
Pull-in/drop-out current, typ.					
Output					
Switch-on delay	< 20 ms	< 20 ms	< 20 ms	< 20 ms	< 20 ms
Switch-off delay	< 20 ms	< 20 ms	< 20 ms	< 20 ms	< 20 ms
Ordering data					
Standard Type	DRM570012	DRM570024	DRM570048	DRM570110	DRM570220
Order No.	**7760056078**	**7760056079**	**7760056080**	**7760056081**	**7760056082**
with LED Type	DRM570012L	DRM570024L	DRM570048L	DRM570110L	DRM570220L
Order No.	**7760056087**	**7760056088**	**7760056089**	**7760056090**	**7760056091**
With test button + LED Type	DRM570012LT	DRM570024LT	DRM570048LT	DRM570110LT	DRM570220LT
Order No.	**7760056096**	**7760056097**	**7760056098**	**7760056099**	**7760056100**
with LED Type		DRM570024LD			
+ Free-wheel diode Order No.		**7760056105**			
Note					

Ordering data

	24 V AC 4CO	48 V AC 4CO	115 V AC 4CO	230 V AC 4CO
Input				
Rated control voltage	24 V AC	48 V AC	115 V AC	230 V AC
Rated current AC / DC	62.4 mA (50 Hz), 52.2 mA (60 Hz) /	33.3 mA (50 Hz), 27.8 mA (60 Hz) /	12.6 mA (50 Hz), 10.8 mA (60 Hz) /	6.1 mA (50 Hz), 5.2 mA (60 Hz) /
Power rating	1.0...1.2VA (60HZ)	1.0...1.2VA (60HZ)	1.0...1.2VA (60HZ)	1.0...1.2VA (60HZ)
Pull-in/drop-out voltage, typ.	19.2 V / 7.2 V AC	38.4 V / 14.4 V AC	92 V / 34.5 V AC	184 V / 69 V AC
Pull-in/drop-out current, typ.				
Output				
Switch-on delay	< 20 ms	< 20 ms	< 20 ms	< 20 ms
Switch-off delay	< 20 ms	< 20 ms	< 20 ms	< 20 ms
Ordering data				
Standard Type	DRM570524	DRM570548	DRM570615	DRM570730
Order No.	**7760056083**	**7760056084**	**7760056085**	**7760056086**
with LED Type	DRM570524L	DRM570548L	DRM570615L	DRM570730L
Order No.	**7760056092**	**7760056093**	**7760056094**	**7760056095**
With test button + LED Type	DRM570524LT	DRM570548LT	DRM570615LT	DRM570730LT
Order No.	**7760056101**	**7760056102**	**7760056103**	**7760056104**
Type				
Order No.				
Note				

Accessories for DRM relays

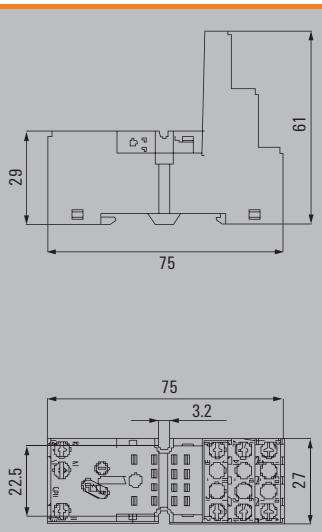
Ordering data

Technical data		
Rated current	2CO/4CO	4 x 6 A, 2 x 12 A
Rated voltage		300 V AC
Dielectric strength for input - output		>4000 Vrms
Insulating material group (VDE 0110b)		C / 250 V AC
Ambient temperature		-40...+70 °C
Protection class		IP 20
Wire cross section / with wire end ferrule		2 x 2.5 mm² / 2 x 1.5 mm²
Max. torque		0.5 Nm / 0.8 Nm
Packing unit		10 pcs.
Description		**Type** / **Order No.**
Socket, snaps onto DIN-rail, 2CO		SCM ECO 2CO **7760056263**
Socket, snaps onto DIN-rail, 4CO		SCM ECO 4CO **7760056264**

Metal clip (recommended in applications with vibrations)

Type	Order No.
DRM clip M (for DRM relay)	**7760056108**

Dimensions in mm



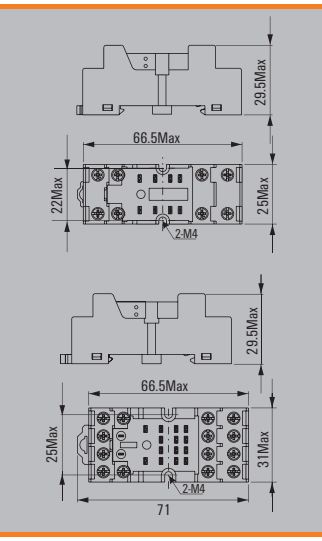
Ordering data

Technical data		
Rated current	2CO/4CO	2 x 12 A / 4 x 10 A
Rated voltage		300 V AC
Dielectric strength for input - output		2500 Vrms
Dielectric strength between the contacts		2500 Vrms
Max. torque		0.5 Nm/0.8 Nm
Wire cross section		0.5-2.5 mm²
Ambient temperature (operational)		-40 °C...+70 °C
Weight	2CO/4CO	35 g/43 g
Packing unit		20 pcs
Description		**Type** / **Qty.** / **Order No.**
Socket, snaps onto DIN-rail, 2CO		FS 2CO* 10 **7760056106**
Socket, snaps onto DIN-rail, 4CO		FS 4CO 10 **7760056107**
		* Functional module is not suitable for this type of sockets.

Metal clip (recommended in applications with vibrations)

Type	Order No.
DRM clip M (for DRM relay)	**7760056108**

Dimensions in mm



DRM clip M

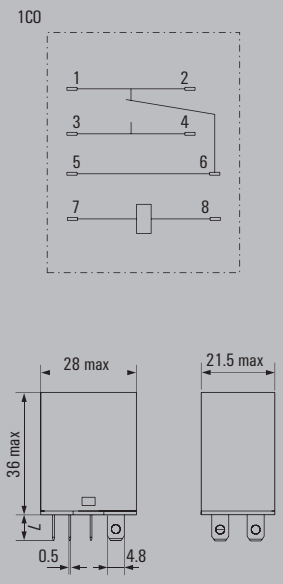
Functional modules

Technical data	Type	Order No.
Free-wheel diode 6...230 V DC	RIM 1 6/230 V DC	**7760056169**
RC-combined protection110...230 V AC	RIM 3 110/230 V AC	**7760056014**
RC-combined protection110...230 V AC with LED*	RIM 3 110/230 V AC LED	**7760056045**
Green LED 6...24 V DC with free-wheel diode	RIM 2 6/24 V DC	**7760056015**
Green LED 24...60 V DC with free-wheel diode	RIM 2 24/60 V DC	**7760056016**
Green LED 110...230 V DC	RIM 2 110/230 V DC	**7760056017**
Green LED 6...24 V DC / V AC	RIM 3 6/24 V UC	**7940018457**
Green LED 24...60 V DC / V AC	RIM 3 24/60 V UC	**7760056018**
Green LED 110...230 V DC / V AC	RIM 3 110/230 V UC	**7940018455**
*Not for FS sockets just for SCM sockets		

DRL power relay
1 CO AC/DC coil

- High wear resistance in case of AC loads
- High dielectric strength: 2,000 V

Circuit diagram



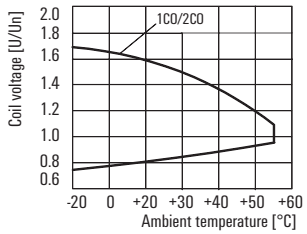
Technical data

Output		
Rated switching voltage / Continuous current		250 V AC / 16 A
Max. switching voltage, AC		250 V
Inrush current		
Min. switching power		12 V / 100 mA
DC / AC Switching capacity (resistive), max.		384 W @ 24 V / 4000 VA
Contact material		AgCdO
Mechanical service life		10 x 10^6 switching cycles
Max. switching frequency at rated load		0.1 Hz
Rated data		
Ambient temperature (operational)		-25 °C...55 °C
Storage temperature		-25 °C...55 °C
Humidity		35 % to 85 % relative humidity level
Approvals		cURus; EAC
Insulation coordination (EN 50178)		
Rated voltage		250 V
Impulse withstand voltage		5 kV (1.2/50 µs)
Dielectric strength input – output		2 kV_{eff} / 1 min
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		
Creepage and clearance distance input – output		≥ 4 mm
Overvoltage category		III
Pollution degree		3
Dimensions		**Plug-in connection**
Depth x width x height	mm	36 / 21.5 / 28

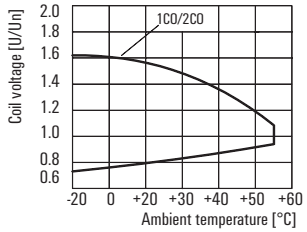
Note

Applications

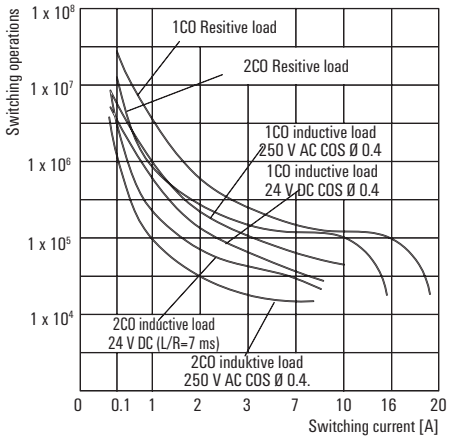
Operating voltage range [DC]



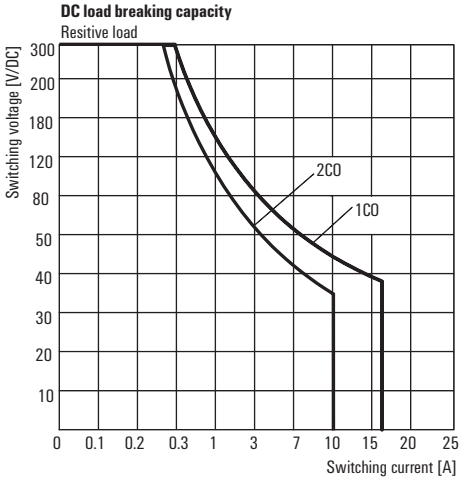
Operating voltage range [AC]



Electrical endurance



DC load breaking capacity



DRL power relay
1 CO AC/DC coil

Type code

	DRL			
Type	DRL			
Type of construction				
	170	1 change over contact		
	270	2 change over contacts		
Coil voltage				
	012	12 V DC / 024	24 V DC	
	048	48 V DC / 110	110 V DC	
	220	220 V DC / 524	24 V AC	
	615	115 V AC / 730	230 V AC	
LED indicator	L			

Ordering data

	12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
Input					
Rated control voltage	12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
Rated current AC / DC	/ 75 mA	/ 36.9 mA	/ 18.5 mA	/ 10 mA	/ 5.2 mA
Power rating	0.9 W	0.9 W	0.9 W	0.9 W	0.9 W
Pull-in/drop-out voltage, typ.	9 V / 1.2 V DC	18 V / 2.4 V DC	36 V / 4.8 V DC	82.5 V / 11 V DC	154 V / 22 V DC
Pull-in/drop-out current, typ.					
Status indicator	Green LED, Mechanical	Green LED, Mechanical	Green LED, Mechanical	Green LED, Mechanical	Green LED, Mechanical
Output					
Switch-on delay	< 20 ms	< 20 ms	< 20 ms	< 20 ms	< 20 ms
Switch-off delay	< 20 ms	< 20 ms	< 20 ms	< 20 ms	< 20 ms

Ordering data						
1 change over contact	Type	DRL170012L	DRL170024L	DRL170048L	DRL170110L	DRL170220L
	Order No.	**1133450000**	**1133460000**	**1133470000**	**1133480000**	**1133490000**
	Type					
	Order No.					
Note						

Ordering data

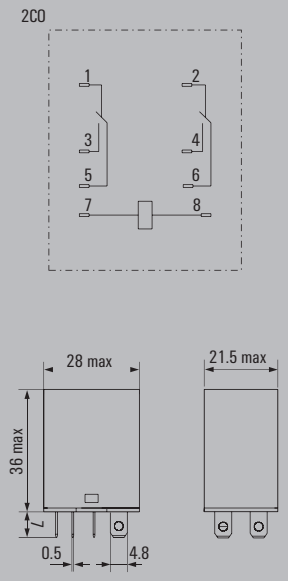
	24 V AC	115 V AC	230 V AC
Input			
Rated control voltage	24 V AC	115 V AC	230 V AC
Rated current AC / DC	54 mA /	12,9 mA /	6.8 mA /
Power rating	1.2 VA	1.2 VA	1.2 VA
Pull-in/drop-out voltage, typ.	19.2 V / 7.2 V AC	92 V / 34.5 V AC	184 V / 69 V AC
Pull-in/drop-out current, typ.			
Status indicator	red LED, Mechanical	red LED, Mechanical	red LED, Mechanical
Output			
Switch-on delay	< 20 ms	< 20 ms	< 20 ms
Switch-off delay	< 20 ms	< 20 ms	< 20 ms

Ordering data				
1 change over contact	Type	DRL170524L	DRL170615L	DRL170730L
	Order No.	**1133840000**	**1133850000**	**1133860000**
	Type			
	Order No.			
Note				

DRL power relay
2 CO AC/DC coil

- High wear resistance in case of AC loads
- High dielectric strength: 2,000 V

Circuit diagram



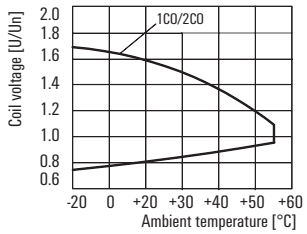
Technical data

Output		
Rated switching voltage / Continuous current		250 V AC / 10 A
Max. switching voltage, AC		250 V
Inrush current		
Min. switching power		12 V / 100 mA
DC / AC Switching capacity (resistive), max.		240 W @ 24 V / 2500 VA
Contact material		AgCdO
Mechanical service life		10 x 10^6 switching cycles
Max. switching frequency at rated load		0.1 Hz
Rated data		
Ambient temperature (operational)		-25 °C...55 °C
Storage temperature		-25 °C...55 °C
Humidity		35 % to 85 % relative humidity level
Approvals		cURus; EAC
Insulation coordination (EN 50178)		
Rated voltage		250 V
Impulse withstand voltage		5 kV (1.2/50 µs)
Dielectric strength input – output		2 kV_{eff} / 1 min
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		
Creepage and clearance distance input – output		≥ 4 mm
Overvoltage category		III
Pollution degree		3
Dimensions		**Plug-in connection**
Depth x width x height	mm	36 / 21.5 / 28

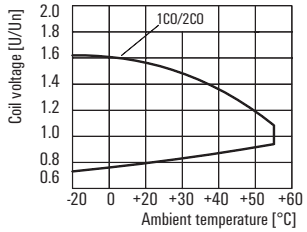
Note

Applications

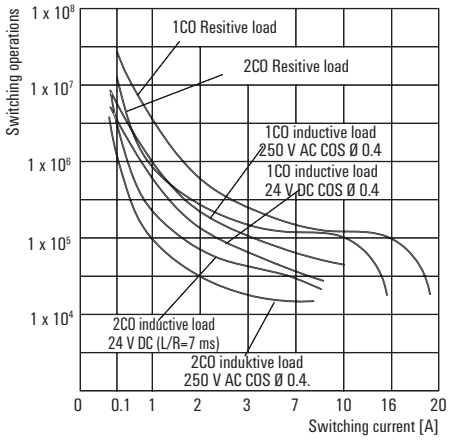
Operating voltage range [DC]



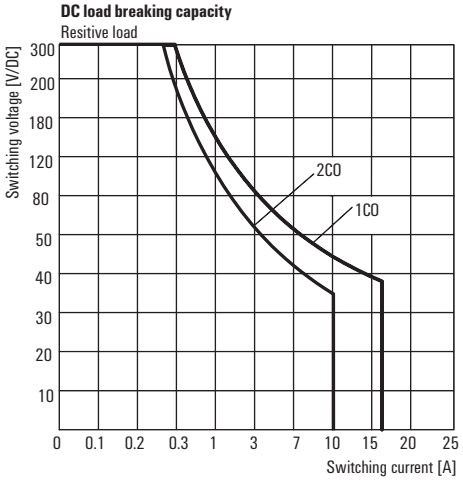
Operating voltage range [AC]



Electrical endurance



DC load breaking capacity



DRL power relay
2 CO AC/DC coil

Type code

	DRL			
Type	DRL			
Type of construction				
	170	1 change over contact		
	270	2 change over contacts		
Coil voltage				
	012	12 V DC / 024	24 V DC	
	048	48 V DC / 110	110 V DC	
	220	220 V DC / 524	24 V AC	
	615	115 V AC / 730	230 V AC	
LED indicator	L			

Ordering data

	12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
Input					
Rated control voltage	12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
Rated current AC / DC	/ 75 mA	/ 36.9 mA	/ 18.5 mA	/ 10 mA	/ 5.2 mA
Power rating	0.9 W	0.9 W	0.9 W	0.9 W	0.9 W
Pull-in/drop-out voltage, typ.	9 V / 1.2 V DC	18 V / 2.4 V DC	36 V / 4.8 V DC	82.5 V / 11 V DC	154 V / 22 V DC
Pull-in/drop-out current, typ.					
Status indicator	Green LED, Mechanical	Green LED, Mechanical	Green LED, Mechanical	Green LED, Mechanical	Green LED, Mechanical
Output					
Switch-on delay	< 20 ms	< 20 ms	< 20 ms	< 20 ms	< 20 ms
Switch-off delay	< 20 ms	< 20 ms	< 20 ms	< 20 ms	< 20 ms

Ordering data					
2 change over contacts Type	DRL270012L	DRL270024L	DRL270048L	DRL270110L	DRL270220L
Order No.	**1133510000**	**1133520000**	**1133530000**	**1133540000**	**1133550000**
Type					
Order No.					
Note					

Ordering data

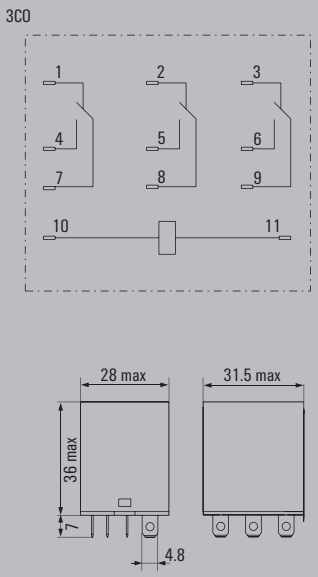
	24 V AC	115 V AC	230 V AC
Input			
Rated control voltage	24 V AC	115 V AC	230 V AC
Rated current AC / DC	54 mA /	12,9 mA /	6.8 mA /
Power rating	1.2 VA	1.2 VA	1.2 VA
Pull-in/drop-out voltage, typ.	19.2 V / 7.2 V AC	92 V / 34.5 V AC	184 V / 69 V AC
Pull-in/drop-out current, typ.			
Status indicator	red LED, Mechanical	red LED, Mechanical	red LED, Mechanical
Output			
Switch-on delay	< 20 ms	< 20 ms	< 20 ms
Switch-off delay	< 20 ms	< 20 ms	< 20 ms

Ordering data			
2 change over contacts Type	DRL270524L	DRL270615L	DRL270730L
Order No.	**1133870000**	**1133880000**	**1133890000**
Type			
Order No.			
Note			

DRL power relay
3 CO AC/DC coil

- High wear resistance in case of AC loads
- High dielectric strength: 2,000 V

Circuit diagram



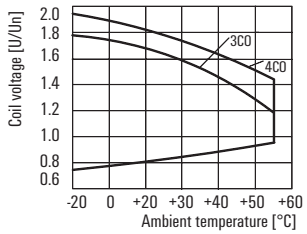
Technical data

Output		
Rated switching voltage / Continuous current		250 V AC / 10 A
Max. switching voltage, AC		250 V
Inrush current		
Min. switching power		12 V / 100 mA
DC / AC Switching capacity (resistive), max.		240 W @ 24 V / 2500 VA
Contact material		AgCdO
Mechanical service life		10 x 10^6 switching cycles
Max. switching frequency at rated load		0.1 Hz
Rated data		
Ambient temperature (operational)		-25 °C...55 °C
Storage temperature		-25 °C...55 °C
Humidity		35 % to 85 % relative humidity level
Approvals		cURus; EAC
Insulation coordination (EN 50178)		
Rated voltage		250 V
Impulse withstand voltage		5 kV (1.2/50 µs)
Dielectric strength input – output		2 kV_{eff} / 1 min
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		
Creepage and clearance distance input – output		≥ 4 mm
Overvoltage category		III
Pollution degree		3
Dimensions		**Plug-in connection**
Depth x width x height	mm	36 / 31.5 / 28

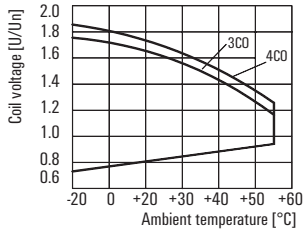
Note

Applications

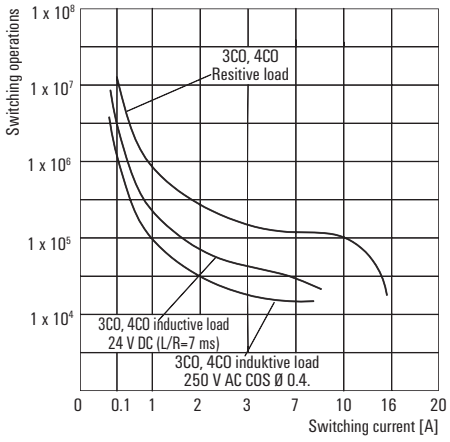
Operating voltage range [DC]



Operating voltage range [AC]

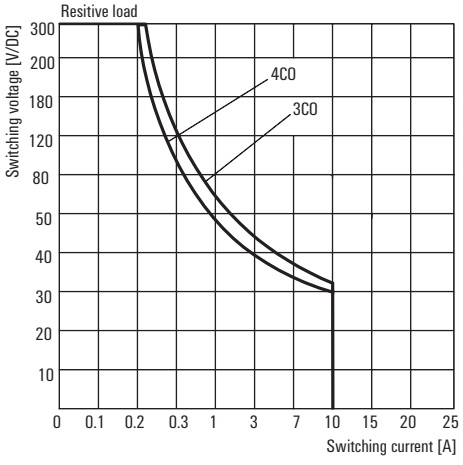


Electrical endurance



DC load breaking capacity

Resitive load



DRL power relay
3 CO AC/DC coil

Type code

	DRL			
Type	DRL			
Type of construction				
	370	3 change over contact		
	570	4 change over contacts		
Coil voltage				
	012	12 V DC / 024	24 V DC	
	048	48 V DC / 110	110 V DC	
	220	220 V DC / 524	24 V AC	
	615	115 V AC / 730	230 V AC	
LED indicator	L			

Ordering data

	12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
Input					
Rated control voltage	12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
Rated current AC / DC	/ 120 mA	/ 60 mA	/ 30 mA	/ 13.1 mA	/ 6.7 mA
Power rating	1.4 W	1.4 W	1.4 W	1.4 W	1.4 W
Pull-in/drop-out voltage, typ.	9 V / 1.2 V DC	18 V / 2.4 V DC	36 V / 4.8 V DC	82.5 V / 11 V DC	154 V / 22 V DC
Pull-in/drop-out current, typ.					
Status indicator	Green LED, Mechanical	Green LED, Mechanical	Green LED, Mechanical	Green LED, Mechanical	Green LED, Mechanical
Output					
Switch-on delay	< 20 ms	< 20 ms	< 20 ms	< 20 ms	< 20 ms
Switch-off delay	< 20 ms	< 20 ms	< 20 ms	< 20 ms	< 20 ms

Ordering data					
3 change over contacts Type	DRL370012L	DRL370024L	DRL370048L	DRL370110L	DRL370220L
Order No.	**1133570000**	**1133580000**	**1133590000**	**1133600000**	**1133610000**
Type					
Order No.					
Note					

Ordering data

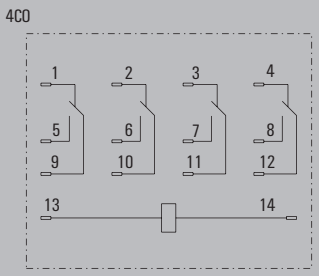
	24 V AC	115 V AC	230 V AC
Input			
Rated control voltage	24 V AC	115 V AC	230 V AC
Rated current AC / DC	80 mA /	16 mA /	10 mA /
Power rating	2 VA	2 VA	2 VA
Pull-in/drop-out voltage, typ.	19.2 V / 7.2 V AC	92 V / 34.5 V AC	184 V / 69 V AC
Pull-in/drop-out current, typ.			
Status indicator	red LED, Mechanical	red LED, Mechanical	red LED, Mechanical
Output			
Switch-on delay	< 20 ms	< 20 ms	< 20 ms
Switch-off delay	< 20 ms	< 20 ms	< 20 ms

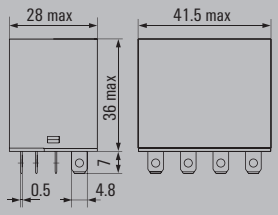
Ordering data			
3 change over contacts Type	DRL370524L	DRL370615L	DRL370730L
Order No.	**1133910000**	**1133920000**	**1133930000**
Type			
Order No.			
Note			

DRL power relay
4 CO AC/DC coil

- High wear resistance in case of AC loads
- High dielectric strength: 2,000 V

Circuit diagram





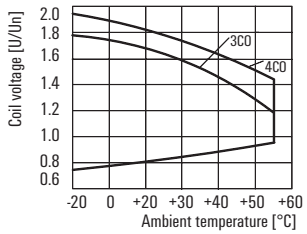
Technical data

Output		
Rated switching voltage / Continuous current		250 V AC / 10 A
Max. switching voltage, AC		250 V
Inrush current		
Min. switching power		12 V / 100 mA
DC / AC Switching capacity (resistive), max.		240 W @ 24 V / 2500 VA
Contact material		AgCdO
Mechanical service life		10 x 10^6 switching cycles
Max. switching frequency at rated load		0.1 Hz
Rated data		
Ambient temperature (operational)		-25 °C...55 °C
Storage temperature		-25 °C...55 °C
Humidity		35 % to 85 % relative humidity level
Approvals		cURus; EAC
Insulation coordination (EN 50178)		
Rated voltage		250 V
Impulse withstand voltage		5 kV (1.2/50 µs)
Dielectric strength input – output		2 kV_{eff} / 1 min
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		
Creepage and clearance distance input – output		≥ 4 mm
Overvoltage category		III
Pollution degree		3
Dimensions		**Plug-in connection**
Depth x width x height	mm	36 / 41.5 / 28

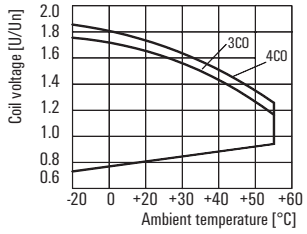
Note

Applications

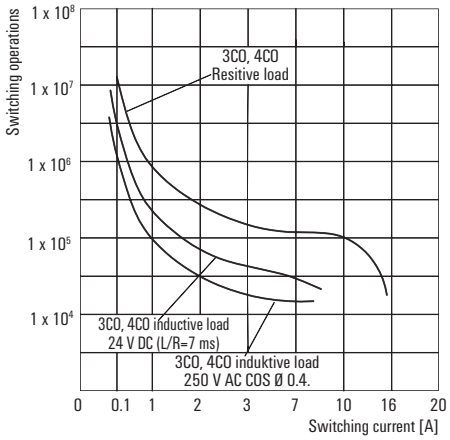
Operating voltage range [DC]



Operating voltage range [AC]

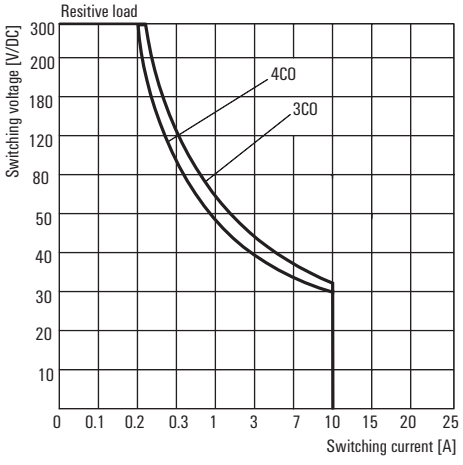


Electrical endurance



DC load breaking capacity

Resitive load



DRL power relay
4 CO AC/DC coil

Type code DRL [ ] [ ] [ ]

Type	DRL	
Type of construction		
	370	3 change over contact
	570	4 change over contacts
Coil voltage		
	012	12 V DC / 024 24 V DC
	048	48 V DC / 110 110 V DC
	220	220 V DC / 524 24 V AC
	615	115 V AC / 730 230 V AC
LED indicator	L	

Ordering data

	12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
Input					
Rated control voltage	12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
Rated current AC / DC	/ 125 mA	/ 66.7 mA	/ 31.2 mA	/ 16.2 mA	/ 7.6 mA
Power rating	1.5 W	1.5 W	1.5 W	1.5 W	1.5 W
Pull-in/drop-out voltage, typ.	9 V / 1.2 V DC	18 V / 2.4 V DC	36 V / 4.8 V DC	82.5 V / 11 V DC	154 V / 22 V DC
Pull-in/drop-out current, typ.					
Status indicator	Green LED, Mechanical	Green LED, Mechanical	Green LED, Mechanical	Green LED, Mechanical	Green LED, Mechanical
Output					
Switch-on delay	< 20 ms	< 20 ms	< 20 ms	< 20 ms	< 20 ms
Switch-off delay	< 20 ms	< 20 ms	< 20 ms	< 20 ms	< 20 ms

Ordering data					
4 change over contacts Type	DRL570012L	DRL570024L	DRL570048L	DRL570110L	DRL570220L
Order No.	**1133620000**	**1133630000**	**1133640000**	**1133650000**	**1133660000**
Type					
Order No.					
Note					

Ordering data

	24 V AC	115 V AC	230 V AC
Input			
Rated control voltage	24 V AC	115 V AC	230 V AC
Rated current AC / DC	/ 93.5 mA	/ 25.5 mA	/ 13.1 mA
Power rating	2.5 VA	2.5 VA	2.5 VA
Pull-in/drop-out voltage, typ.	19.2 V / 7.2 V AC	92 V / 34.5 V AC	184 V / 69 V AC
Pull-in/drop-out current, typ.			
Status indicator	red LED, Mechanical	red LED, Mechanical	red LED, Mechanical
Output			
Switch-on delay	< 20 ms	< 20 ms	< 20 ms
Switch-off delay	< 20 ms	< 20 ms	< 20 ms

Ordering data			
4 change over contacts Type	DRL570524L	DRL570615L	DRL570730L
Order No.	**1133940000**	**1133950000**	**1133960000**
Type			
Order No.			
Note			

Accessories for DRL relay

Ordering data

Technical data	
Rated voltage	300 V
Rated current	10 A
Dielectric strength for input - output	2,000 V
Dielectric strength between the contacts	2,500 V
Ambient temperature (operational)	-40 ... 85 °C
Pollution severity	2
Over voltage class	III
Max. torque	1.0 Nm
Wire cross section	0.5 ... 2.5 mm²
Protection class (IEC 61810)	IP10
Approvals	CE , cURus

Description	Type	Qty.	Order No.
Socket, snaps onto DIN-rail, 2CO	SLD F 2CO	10	7760056225
Socket, snaps onto DIN-rail, 3CO	SLD F 3CO	10	7760056226
Socket, snaps onto DIN-rail, 4CO	SLD F 4CO	10	7760056227

Ordering data

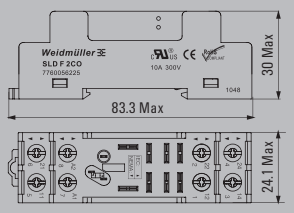
Technical data		Order No.
Metal clips SLD F 2CO	SLD clip 2CO	7760056108
Metal clips SLD F 3CO	SLD clip 3CO	7760056234
Metal clips SLD F 4CO	SLD clip 4CO	7760056235

Ordering data

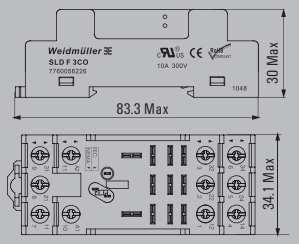
Technical data	Type	Order No.
Free-wheel diode 6...230 V DC, for SLD F 2CO/3CO	RIM 1 6/230 V DC	7760056169
RC element 110...230 V AC, for SLD F 2CO/3CO	RIM 3 110/230 V AC	7760056014
RC element 6 ... 230 V AC, for SLD F 4CO	RIM 5 6/230 V AC	1174670000
Free-wheel diode 6...230 V DC, for SLD F 4CO	RIM 5 6/230 V DC	1174650000

Dimensions in mm

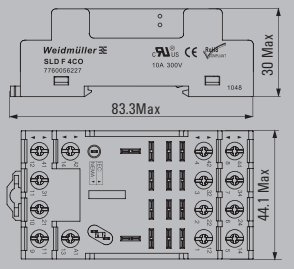
SLD F 2CO



SLD F 3CO



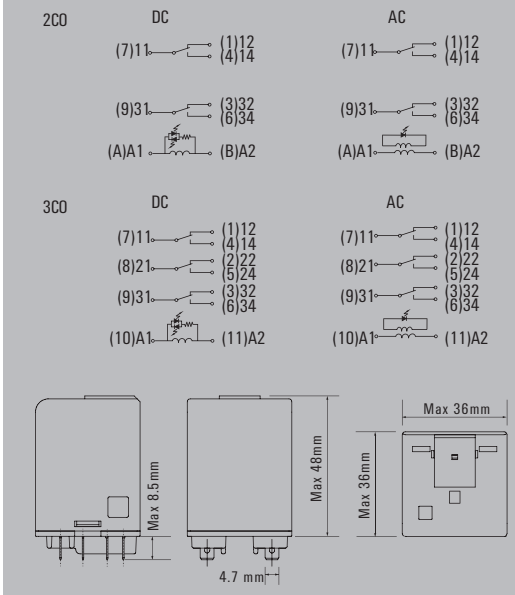
SLD F 4CO



DRW power relay
2 CO AC/DC coil
3 CO AC/DC coil

- Suitable for switching high load voltages
- With LED and test lever

Circuit diagram



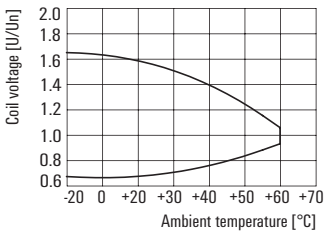
Technical data

Output		
Rated switching voltage / Continuous current		400 VAC / 16 A
Max. switching voltage, AC		400 V
Inrush current		
Min. switching power		12 V / 100 mA
DC / AC Switching capacity (resistive), max.		384 W @ 24 V / 6400 VA
Contact material		AgCdO
Mechanical service life		10 x 10^6 switching cycles
Max. switching frequency at rated load		1 Hz
Rated data		
Ambient temperature (operational)		-40 °C...60 °C
Storage temperature		-40 °C...60 °C
Humidity		35 % to 85 % relative humidity level
Approvals		cURus
Insulation coordination (EN 50178)		
Rated voltage		400 V
Impulse withstand voltage		6 kV (1.2/50 µs)
Dielectric strength input – output		2.5 KV_{eff} / 1 min.
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		
Creepage and clearance distance input – output		≥ 5.5 mm
Overvoltage category		III
Pollution degree		3
Dimensions		**Plug-in connection**
Depth x width x height	mm	48 / 36 / 36

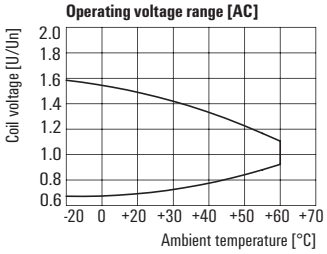
Note

Applications

Operating voltage range [DC]

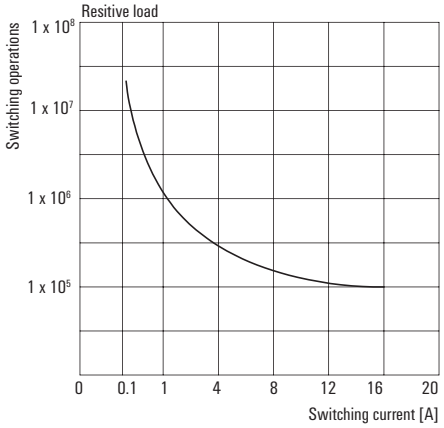


Operating voltage range [AC]



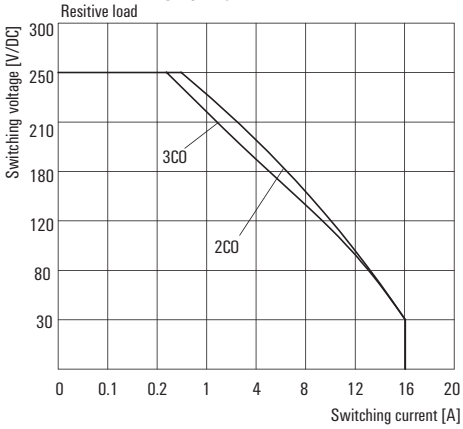
Electrical endurance

Resitive load



DC load breaking capacity

Resitive load



DRW power relay
2 CO AC/DC coil
3 CO AC/DC coil

Type code	DRW			
Type	DRW			
Type of construction				
	270	2CO		
	174	1NC		
Coil voltage				
	012	12 V DC / 024	24 V DC	
	048	48 V DC / 110	110 V DC	
	220	220 V DC / 524	24 V AC	
	548	48 V AC / 615	115 V AC	
	730	230 V AC / 900	400 V AC	
With LED and test lever				
	LT			

Ordering data

		12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
Input						
Rated control voltage		12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
Rated current AC / DC		/ 120 mA	/ 60 mA	/ 30 mA	/ 13 mA	/ 6.7 mA
Power rating		1.5 W	1.5 W	1.5 W	1.5 W	1.5 W
Pull-in/drop-out voltage, typ.		9 V / 1.2 V DC	18 V / 2.4 V DC	36 V / 4.8 V DC	82.5 V / 11 V DC	165 V / 22 V DC
Pull-in/drop-out current, typ.						
Status indicator		Green LED, Mechanical	Green LED, Mechanical	Green LED, Mechanical	Green LED, Mechanical	Green LED, Mechanical
Output						
Switch-on delay		< 20 ms	< 20 ms	< 20 ms	< 20 ms	< 20 ms
Switch-off delay		< 10 ms	< 10 ms	< 10 ms	< 10 ms	< 10 ms
Ordering data						
2 CO contact	Type	DRW270012LT	DRW270024LT	DRW270048LT	DRW270110LT	DRW270220LT
	Order No.	**1219730000**	**1219740000**	**1219750000**	**1219760000**	**1219770000**
3 CO contact	Type	DRW370012LT	DRW370024LT	DRW370048LT	DRW370110LT	DRW370220LT
	Order No.	**1219780000**	**1219790000**	**1219810000**	**1219820000**	**1219830000**
Ordering data Test-button lock						
	Type	Test Lever Block DRH/DRW	Test Lever Block DRH/DRW	Test Lever Block DRH/DRW	Test Lever Block DRH/DRW	Test Lever Block DRH/DRW
	Order No.	**7760056249**	**7760056249**	**7760056249**	**7760056249**	**7760056249**
Note						

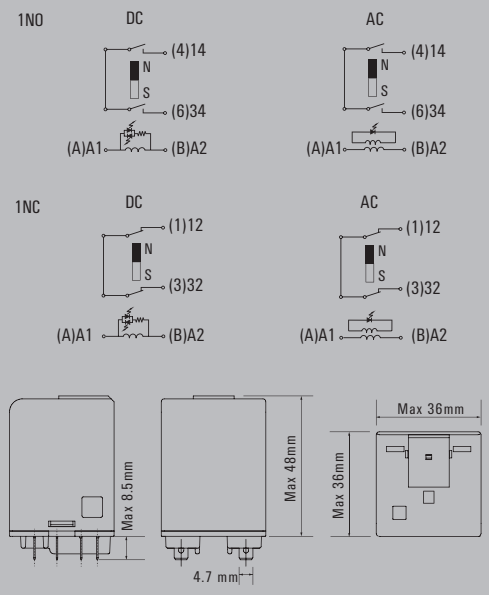
Ordering data

		24 V AC	48 V AC	115 V AC	230 V AC	400 V AC
Input						
Rated control voltage		24 V AC	48 V AC	115 V AC	230 V AC	400 V AC
Rated current AC / DC		101.7 mA /	50.5 mA /	21 mA /	10,6 mA /	6.1 mA /
Power rating		2.5 VA	2.5 VA	2.5 VA	2.5 VA	2.5 VA
Pull-in/drop-out voltage, typ.		19.2 V / 7.2 V AC	38.4 V / 14.4 V AC	92 V / 34.5 V AC	184 V / 69 V AC	320 V / 120 V AC
Pull-in/drop-out current, typ.						
Status indicator		red LED, Mechanical	red LED, Mechanical	red LED, Mechanical	red LED, Mechanical	red LED, Mechanical
Output						
Switch-on delay		< 20 ms	< 20 ms	< 20 ms	< 20 ms	< 20 ms
Switch-off delay		< 10 ms	< 10 ms	< 10 ms	< 10 ms	< 10 ms
Ordering data						
2 CO contact	Type	DRW270524LT	DRW270548LT	DRW270615LT	DRW270730LT	DRW270900LT
	Order No.	**1219350000**	**1219360000**	**1219370000**	**1219380000**	**1219390000**
3 CO contact	Type	DRW370524LT	DRW370548LT	DRW370615LT	DRW370730LT	DRW370900LT
	Order No.	**1219410000**	**1219420000**	**1219430000**	**1219440000**	**1219450000**
Ordering data Test-button lock						
	Type	Test Lever Block DRH/DRW	Test Lever Block DRH/DRW	Test Lever Block DRH/DRW	Test Lever Block DRH/DRW	Test Lever Block DRH/DRW
	Order No.	**7760056249**	**7760056249**	**7760056249**	**7760056249**	**7760056249**
Note						

DRH DC relay
1 NO AC/DC coil
1 NC AC/DC coil

- Suitable for switching high DC loads
- With blowout magnet
- With LED and test button
- For switching high DC loads up to 10 A at 220 V DC

Circuit diagram



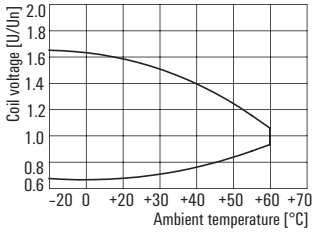
Technical data

Output		
Rated switching voltage / Continuous current		500 V AC / 16 A
Max. switching voltage, AC		500 V
Inrush current		
Min. switching power		12 V / 100 mA
DC / AC Switching capacity (resistive), max.		2200 W @ 220 V / 8000 VA
Contact material		AgSnO2
Mechanical service life		10 x 10^6 switching cycles
Max. switching frequency at rated load		1 Hz
Rated data		
Ambient temperature (operational)		-40 °C...60 °C
Storage temperature		-40 °C...60 °C
Humidity		35 % to 85 % relative humidity level
Approvals		cURus; EAC
Insulation coordination (EN 50178)		
Rated voltage		400 V
Impulse withstand voltage		6 kV (1.2/50 µs)
Dielectric strength input – output		4 kV_{eff} / 1 min
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		
Creepage and clearance distance input – output		≥ 5.5 mm
Overvoltage category		III
Pollution degree		3
Dimensions		**Plug-in connection**
Depth x width x height	mm	48 / 36 / 36

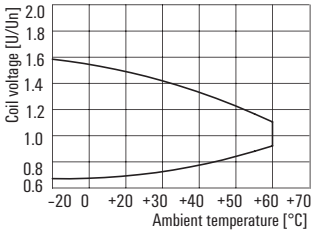
Note

Applications

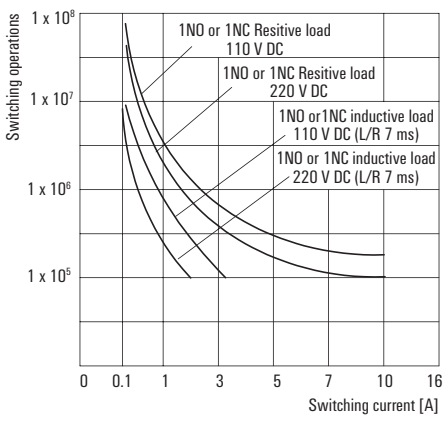
Operating voltage range [DC]



Operating voltage range [AC]

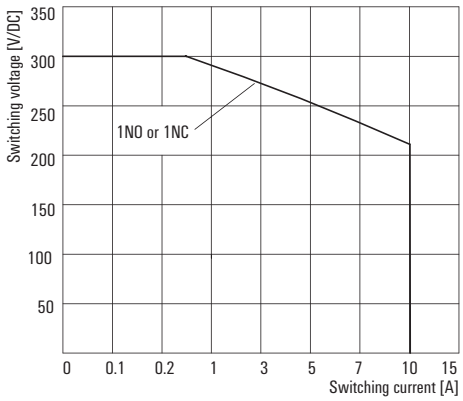


Electrical endurance



DC Load breaking capacity [DC]

Resistive load



DRH DC relay
1 NO AC/DC coil
1 NC AC/DC coil

Type code

	DRH			
Type	DRH			
Type of construction				
	173	1NO		
	174	1NC		
Coil voltage				
	012	12 V DC / 024	24 V DC	
	048	48 V DC / 110	110 V DC	
	220	220 V DC / 524	24 V AC	
	548	48 V AC / 615	115 V AC	
	730	230 V AC		
With LED and test lever				
	LT			

Ordering data

		12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
Input						
Rated control voltage		12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
Rated current AC / DC		/ 120 mA	/ 60 mA	/ 30 mA	/ 13 mA	/ 6.7 mA
Power rating		1.5 W	1.5 W	1.5 W	1.5 W	1.5 W
Pull-in/drop-out voltage, typ.		9 V / 1.2 V DC	18 V / 2.4 V DC	36 V / 4.8 V DC	82.5 V / 11 V DC	154 V / 22 V DC
Pull-in/drop-out current, typ.						
Status indicator		Green LED, Mechanical	Green LED, Mechanical	Green LED, Mechanical	Green LED, Mechanical	red LED, Mechanical
Output						
Switch-on delay		< 20 ms	< 20 ms	< 20 ms	< 20 ms	< 20 ms
Switch-off delay		< 20 ms	< 20 ms	< 20 ms	< 20 ms	< 20 ms
Ordering data						
1 NO contact	Type	DRH173012LT	DRH173024LT	DRH173048LT	DRH173110LT	DRH173220LT
	Order No.	**1219840000**	**1219850000**	**1219860000**	**1219870000**	**1219880000**
1 NC contact	Type	DRH174012LT	DRH174024LT	DRH174048LT	DRH174110LT	DRH174220LT
	Order No.	**1219940000**	**1219950000**	**1219960000**	**1219970000**	**1219980000**
Ordering data Test-button lock						
	Type	Test Lever Block DRH/DRW	Test Lever Block DRH/DRW	Test Lever Block DRH/DRW	Test Lever Block DRH/DRW	Test Lever Block DRH/DRW
	Order No.	**7760056249**	**7760056249**	**7760056249**	**7760056249**	**7760056249**
Note						

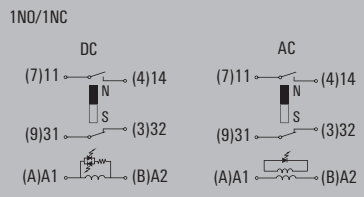
Ordering data

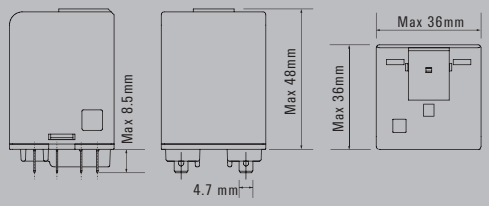
		24 V AC	48 V AC	115 V AC	230 V AC
Input					
Rated control voltage		24 V AC	48 V AC	115 V AC	230 V AC
Rated current AC / DC		101.7 mA /	50.5 mA /	21 mA /	10,6 mA /
Power rating		2.5 VA	2.5 VA	2.5 VA	2.5 VA
Pull-in/drop-out voltage, typ.		19.2 V / 7.2 V AC	38.4 V / 14.4 V AC	92 V / 34.5 V AC	184 V / 69 V AC
Pull-in/drop-out current, typ.					
Status indicator		red LED, Mechanical	red LED, Mechanical	red LED, Mechanical	red LED, Mechanical
Output					
Switch-on delay		< 20 ms	< 20 ms	< 20 ms	< 20 ms
Switch-off delay		< 20 ms	< 20 ms	< 20 ms	< 20 ms
Ordering data					
1 NO contact	Type	DRH173524LT	DRH173548LT	DRH173615LT	DRH173730LT
	Order No.	**1219890000**	**1219910000**	**1219920000**	**1219930000**
1 NC contact	Type	DRH174524LT	DRH174548LT	DRH174615LT	DRH174730LT
	Order No.	**1219990000**	**1220010000**	**1220020000**	**1220030000**
Ordering data Test-button lock					
	Type	Test Lever Block DRH/DRW	Test Lever Block DRH/DRW	Test Lever Block DRH/DRW	Test Lever Block DRH/DRW
	Order No.	**7760056249**	**7760056249**	**7760056249**	**7760056249**
Note					

DRH DC relay
1 NO / 1 NC AC/DC coil

- Suitable for switching high DC loads
- With blowout magnet
- With LED and test button
- For switching high DC loads up to 3 A at 220 V DC

Circuit diagram





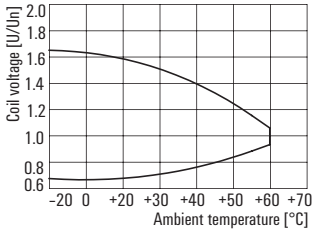
Technical data

Output		
Rated switching voltage / Continuous current		250 V AC / 16 A
Max. switching voltage, AC		250 V
Inrush current		
Min. switching power		12 V / 100 mA
DC / AC Switching capacity (resistive), max.		660 W @ 220 V / 4000 VA
Contact material		AgSnO2
Mechanical service life		10 x 10^6 switching cycles
Max. switching frequency at rated load		1 Hz
Rated data		
Ambient temperature (operational)		-40 °C...60 °C
Storage temperature		-40 °C...60 °C
Humidity		35 % to 85 % relative humidity level
Approvals		cURus; EAC
Insulation coordination (EN 50178)		
Rated voltage		400 V
Impulse withstand voltage		6 kV (1.2/50 µs)
Dielectric strength input – output		4 kV_{eff} / 1 min
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		
Creepage and clearance distance input – output		≥ 5.5 mm
Overvoltage category		III
Pollution degree		3
Dimensions		**Plug-in connection**
Depth x width x height	mm	48 / 36 / 36

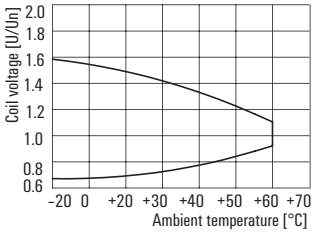
Note

Applications

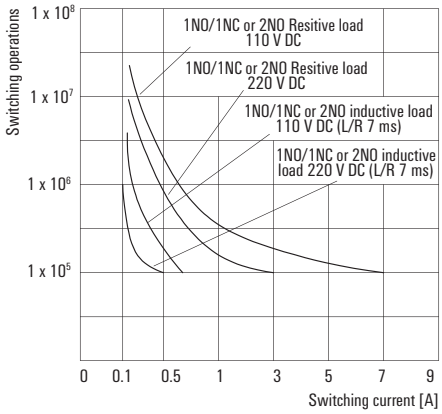
Operating voltage range [DC]



Operating voltage range [AC]

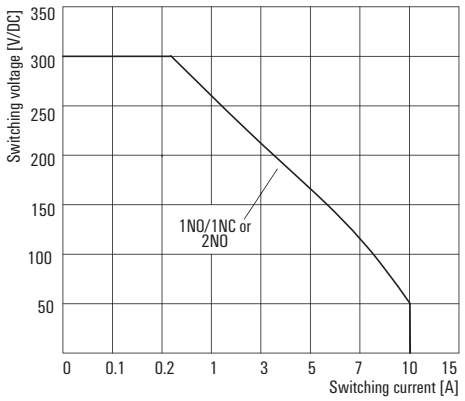


Electrical endurance



DC Load breaking capacity [DC]

Resistive load



DRH DC relay
1 NO / 1 NC AC/DC coil

Type code

	DRH			
Type	DRH			
Type of construction				
	275	1NO/1NC		
	276	2NO		
Coil voltage				
	012	12 V DC / 024	24 V DC	
	048	48 V DC / 110	110 V DC	
	220	220 V DC / 524	24 V AC	
	548	48 V AC / 615	115 V AC	
	730	230 V AC		
With LED and test lever				
	LT			

Ordering data

		12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
Input						
Rated control voltage		12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
Rated current AC / DC		/ 120 mA	/ 60 mA	/ 30 mA	/ 13 mA	/ 6.7 mA
Power rating		1.5 W	1.5 W	1.5 W	1.5 W	1.5 W
Pull-in/drop-out voltage, typ.		9 V / 1.2 V DC	18 V / 2.4 V DC	36 V / 4.8 V DC	82.5 V / 11 V DC	154 V / 22 V DC
Pull-in/drop-out current, typ.						
Status indicator		Green LED, Mechanical	Green LED, Mechanical	Green LED, Mechanical	Green LED, Mechanical	Green LED, Mechanical
Output						
Switch-on delay		< 20 ms	< 20 ms	< 20 ms	< 20 ms	< 20 ms
Switch-off delay		< 20 ms	< 20 ms	< 20 ms	< 20 ms	< 20 ms
Ordering data						
1 NO / 1 NC contact	Type	DRH275012LT	DRH275024LT	DRH275048LT	DRH275110LT	DRH275220LT
	Order No.	**1220040000**	**1220050000**	**1220060000**	**1220070000**	**1220080000**
	Type					
	Order No.					
Ordering data Test-button lock						
	Type	Test Lever Block DRH/DRW	Test Lever Block DRH/DRW	Test Lever Block DRH/DRW	Test Lever Block DRH/DRW	Test Lever Block DRH/DRW
	Order No.	**7760056249**	**7760056249**	**7760056249**	**7760056249**	**7760056249**
Note						

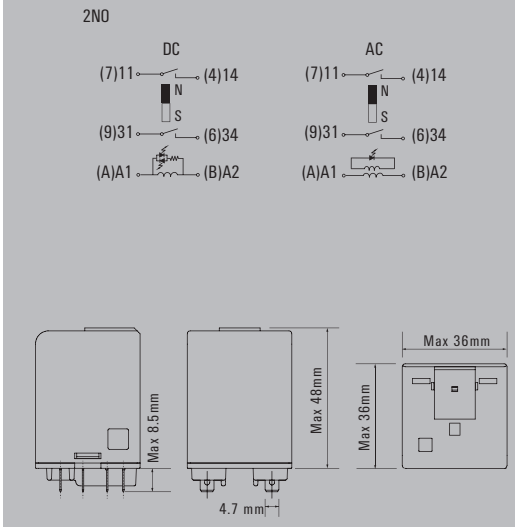
Ordering data

		24 V AC	48 V AC	115 V AC	230 V AC
Input					
Rated control voltage		24 V AC	48 V AC	115 V AC	230 V AC
Rated current AC / DC		101.7 mA /	50.5 mA /	21 mA /	10,6 mA /
Power rating		2.5 VA	2.5 VA	2.5 VA	2.5 VA
Pull-in/drop-out voltage, typ.		19.2 V / 7.2 V AC	38.4 V / 14.4 V AC	92 V / 34.5 V AC	184 V / 69 V AC
Pull-in/drop-out current, typ.					
Status indicator		red LED, Mechanical	red LED, Mechanical	red LED, Mechanical	red LED, Mechanical
Output					
Switch-on delay		< 20 ms	< 20 ms	< 20 ms	< 20 ms
Switch-off delay		< 20 ms	< 20 ms	< 20 ms	< 20 ms
Ordering data					
1 NO / 1 NC contact	Type	DRH275524LT	DRH275548LT	DRH275615LT	DRH275730LT
	Order No.	**1220090000**	**1220110000**	**1220120000**	**1220130000**
	Type				
	Order No.				
Ordering data Test-button lock					
	Type	Test Lever Block DRH/DRW	Test Lever Block DRH/DRW	Test Lever Block DRH/DRW	Test Lever Block DRH/DRW
	Order No.	**7760056249**	**7760056249**	**7760056249**	**7760056249**
Note					

DRH DC relay
2 NO AC/DC coil

- Suitable for switching high DC loads
- With blowout magnet
- With LED and test button
- For switching high DC loads up to 3 A at 220 V DC

Circuit diagram



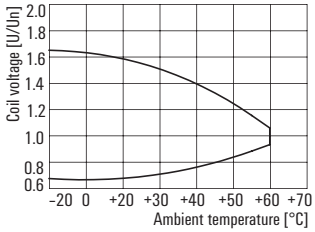
Technical data

Output		
Rated switching voltage / Continuous current		250 V AC / 16 A
Max. switching voltage, AC		250 V
Inrush current		
Min. switching power		12 V / 100 mA
DC / AC Switching capacity (resistive), max.		660 W @ 220 V / 4000 VA
Contact material		AgSnO2
Mechanical service life		10 x 10^6 switching cycles
Max. switching frequency at rated load		1 Hz
Rated data		
Ambient temperature (operational)		-40 °C...60 °C
Storage temperature		-40 °C...60 °C
Humidity		35 % to 85 % relative humidity level
Approvals		cURus; EAC
Insulation coordination (EN 50178)		
Rated voltage		400 V
Impulse withstand voltage		6 kV (1.2/50 µs)
Dielectric strength input – output		4 kV_{eff} / 1 min
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		
Creepage and clearance distance input – output		≥ 5.5 mm
Overvoltage category		III
Pollution degree		3
Dimensions		**Plug-in connection**
Depth x width x height	mm	48 / 36 / 36

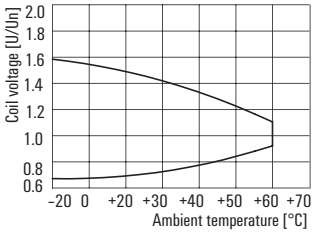
Note

Applications

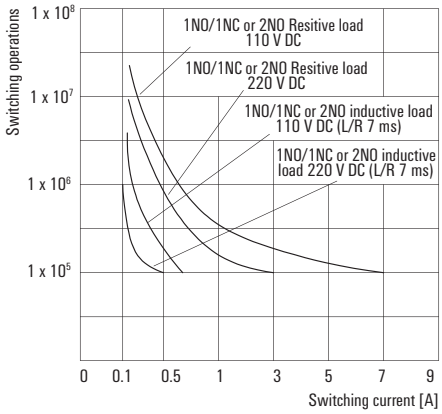
Operating voltage range [DC]



Operating voltage range [AC]

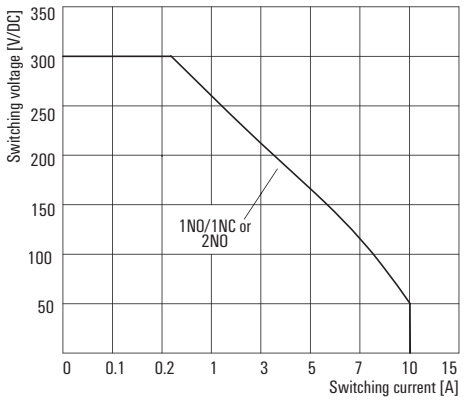


Electrical endurance



DC Load breaking capacity [DC]

Resistive load



DRH DC relay
2 NO AC/DC coil

Type code

	DRH			
Type	DRH			
Type of construction				
	275	1NO/1NC		
	276	2NO		
Coil voltage				
	012	12 V DC / 024	24 V DC	
	048	48 V DC / 110	110 V DC	
	220	220 V DC / 524	24 V AC	
	548	48 V AC / 615	115 V AC	
	730	230 V AC		
With LED and test lever				
	LT			

Ordering data

		12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
Input						
Rated control voltage		12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
Rated current AC / DC		/ 120 mA	/ 60 mA	/ 30 mA	/ 13 mA	/ 6.7 mA
Power rating		1.5 W	1.5 W	1.5 W	1.5 W	1.5 W
Pull-in/drop-out voltage, typ.		9 V / 1.2 V DC	18 V / 2.4 V DC	36 V / 4.8 V DC	82.5 V / 11 V DC	154 V / 22 V DC
Pull-in/drop-out current, typ.						
Status indicator		Green LED, Mechanical	Green LED, Mechanical	Green LED, Mechanical	Green LED, Mechanical	Green LED, Mechanical
Output						
Switch-on delay		< 20 ms	< 20 ms	< 20 ms	< 20 ms	< 20 ms
Switch-off delay		< 20 ms	< 20 ms	< 20 ms	< 20 ms	< 20 ms
Ordering data						
2 NO contact	Type	DRH276012LT	DRH276024LT	DRH276048LT	DRH276110LT	DRH276220LT
	Order No.	**1220140000**	**1220150000**	**1220170000**	**1220180000**	**1220190000**
	Type					
	Order No.					
Ordering data Test-button lock						
	Type	Test Lever Block DRH/DRW	Test Lever Block DRH/DRW	Test Lever Block DRH/DRW	Test Lever Block DRH/DRW	Test Lever Block DRH/DRW
	Order No.	**7760056249**	**7760056249**	**7760056249**	**7760056249**	**7760056249**
Note						

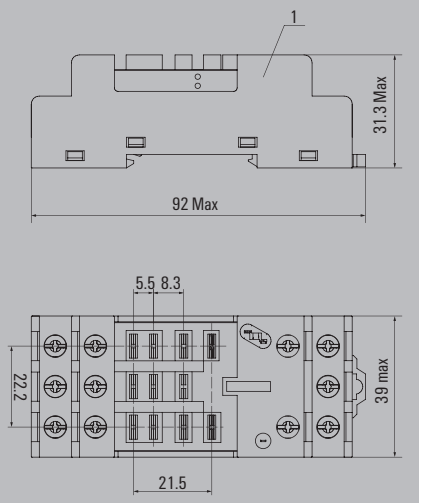
Ordering data

		24 V AC	48 V AC	115 V AC	230 V AC
Input					
Rated control voltage		24 V AC	48 V AC	115 V AC	230 V AC
Rated current AC / DC		101.7 mA /	50.5 mA /	21 mA /	10,6 mA /
Power rating		2.5 VA	2.5 VA	2.5 VA	2.5 VA
Pull-in/drop-out voltage, typ.		19.2 V / 7.2 V AC	38.4 V / 14.4 V AC	92 V / 34.5 V AC	184 V / 69 V AC
Pull-in/drop-out current, typ.					
Status indicator		red LED, Mechanical	red LED, Mechanical	red LED, Mechanical	red LED, Mechanical
Output					
Switch-on delay		< 20 ms	< 20 ms	< 20 ms	< 20 ms
Switch-off delay		< 20 ms	< 20 ms	< 20 ms	< 20 ms
Ordering data					
2 NO contact	Type	DRH276524LT	DRH276548LT	DRH276615LT	DRH276730LT
	Order No.	**1220200000**	**1220210000**	**1220220000**	**1220230000**
	Type				
	Order No.				
Ordering data Test-button lock					
	Type	Test Lever Block DRH/DRW	Test Lever Block DRH/DRW	Test Lever Block DRH/DRW	Test Lever Block DRH/DRW
	Order No.	**7760056249**	**7760056249**	**7760056249**	**7760056249**
Note					

Accessories for DRH and DRW relay

Dimensions in mm

SPW ECO 3CO



Ordering data

Technical data	
Rated voltage	400 V AC
Rated current	16 A
Dielectric strength for input - output	4,000 V
Dielectric strength between the contacts	4,000 V
Ambient temperature (operational)	-40 ... 60 °C
Pollution severity	2
Over voltage class	II
Max. torque/max.	1.2 Nm
Wire cross section	0.5 ... 4 mm²
Protection class (IEC 61810)	IP10
Weight	64 g
Approvals	CE, cURus

Description	Type	Qty.	Order No.
Socket, snaps onto DIN-rail, 3CO	SPW ECO 3CO	10	**1220250000**
Metal clip	Metal clip DRH/DRW	10	**1220260000**

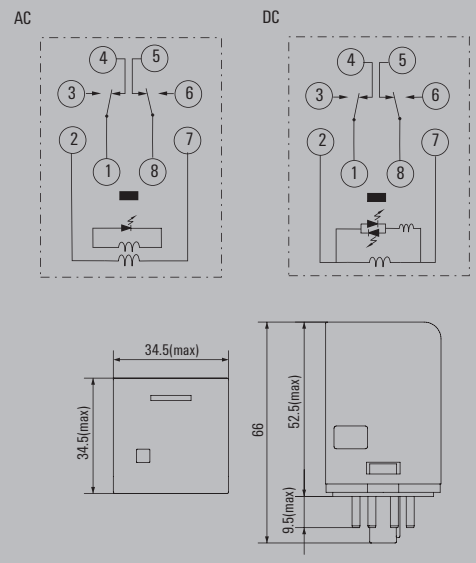
Functional modules

Technical data		Order No.
RC element 6 ... 230 V AC	RIM 5 6/230 V AC	**1174670000**
Free-wheel diode 6 ... 230 V DC	RIM 5 6/230 V DC	**1174650000**

DRR power relay
2 CO AC/DC coil

- 2,500 VA switching capacity
- 8-pole relay

Circuit diagram



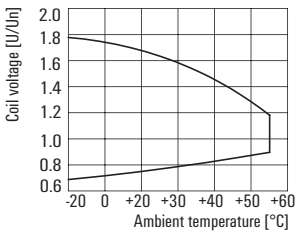
Technical data

Output		
Rated switching voltage / Continuous current		250 V AC / 10 A
Max. switching voltage, AC		250 V
Inrush current		
Min. switching power		12 V / 100 mA
DC / AC Switching capacity (resistive), max.		240 W @ 24 V / 2500 VA
Contact material		AgNi
Mechanical service life		10 x 10^6 switching cycles
Max. switching frequency at rated load		0.1 Hz
Rated data		
Ambient temperature (operational)		-25 °C...55 °C
Storage temperature		-25 °C...55 °C
Humidity		5...85 % rel. humidity, no condensation
Approvals		EAC
Insulation coordination (EN 50178)		
Rated voltage		250 V
Impulse withstand voltage		4 kV (1.2/50 µs)
Dielectric strength input – output		2.5 KV_{eff} / 1 min.
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		
Creepage and clearance distance input – output		≥ 3 mm
Overvoltage category		III
Pollution degree		3
Dimensions		**Plug-in connection**
Depth x width x height	mm	66 / 34.5 / 34.5

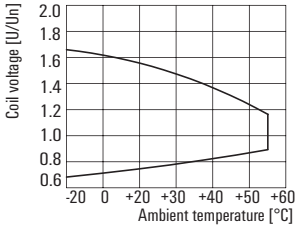
Note

Applications

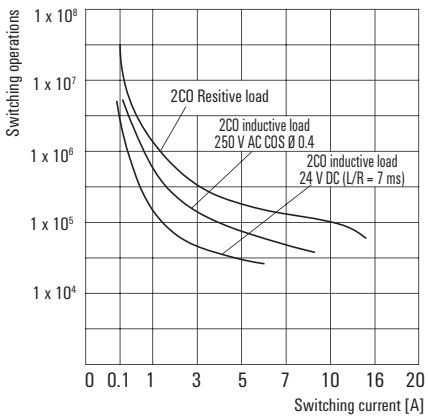
Operating voltage range [DC]



Operating voltage range [AC]

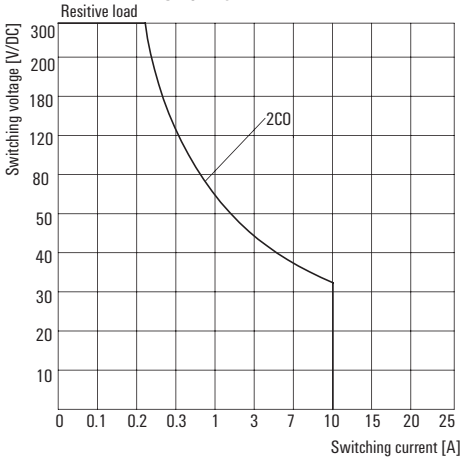


Electrical endurance



DC load breaking capacity

Resitive load



DRR power relay
2 CO AC/DC coil

Type code

	DRR			
Type	DRR			
Type of construction				
	270	2 change over contacts		
Coil voltage				
	012	12 V DC / 024	24 V DC	
	048	48 V DC / 110	110 V DC	
	220	220 V DC / 524	24 V AC	
	615	115 V AC / 730	230 V AC	
LED indicator	L			

Ordering data

	12 V DC 2CO	24 V DC 2CO	48 V DC 2CO	110 V DC 2CO	220 V DC 2CO
Input					
Rated control voltage	12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
Rated current AC / DC	/ 125 mA	/ 55.8 mA	/ 29.2 mA	/ 15 mA	/ 7.6 mA
Power rating	1.5 W	1.5 W	1.5 W	1.5 W	1.5 W
Pull-in/drop-out voltage, typ.	9 V / 1.8 V DC	18 V / 3.6 V DC	36 V / 7.2 V DC	82.5 V / 16.5 V DC	165 V / 33 V DC
Pull-in/drop-out current, typ.					
Status indicator	Green LED, Mechanical	Green LED, Mechanical	Green LED, Mechanical	Green LED, Mechanical	Green LED, Mechanical
Output					
Switch-on delay	< 30 ms	< 30 ms	< 30 ms	< 30 ms	< 30 ms
Switch-off delay	< 20 ms	< 20 ms	< 20 ms	< 20 ms	< 20 ms

Ordering data					
Type	DRR270012L	DRR270024L	DRR270048L	DRR270110L	DRR270220L
Order No.	**1133360000**	**1133370000**	**1133380000**	**1133390000**	**1133400000**
Type					
Order No.					
Note					

Ordering data

	24 V AC 2CO	115 V AC 2CO	230 V AC 2CO
Input			
Rated control voltage	24 V AC	115 V AC	230 V AC
Rated current AC / DC	130 mA (50 Hz), 116 mA (60 Hz) /	29.8 mA (50 Hz), 25.4 mA (60 Hz) /	14.9 mA (50 Hz), 12.7 mA (60 Hz) /
Power rating	2.7 VA	2.7 VA	2.7 VA
Pull-in/drop-out voltage, typ.	19.2 V / 7.2 V AC	92 V / 34.5 V AC	184 V / 69 V AC
Pull-in/drop-out current, typ.			
Status indicator	red LED, Mechanical	red LED, Mechanical	red LED, Mechanical
Output			
Switch-on delay	< 30 ms	< 30 ms	< 30 ms
Switch-off delay	< 20 ms	< 20 ms	< 20 ms

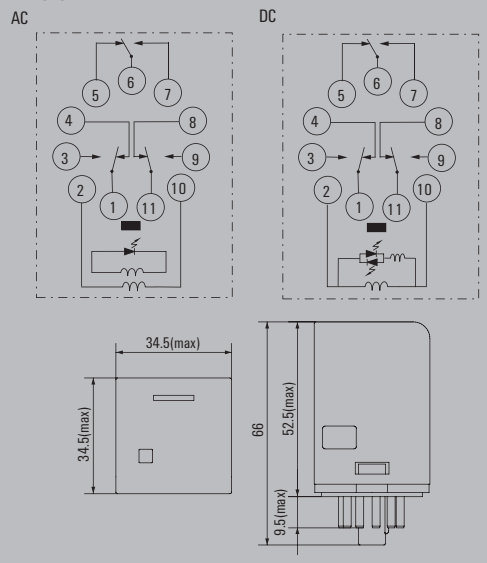
Ordering data			
Type	DRR270524L	DRR270615L	DRR270730L
Order No.	**1133760000**	**1133780000**	**1133800000**
Type			
Order No.			
Note			

DRR power relay
3 CO AC/DC coil

- 2,500 VA switching capacity
- 11-pole relay

Circuit diagram

DRR310



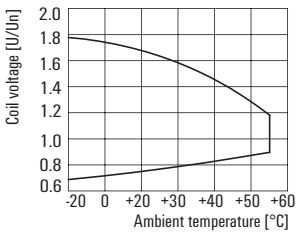
Technical data

Output		
Rated switching voltage / Continuous current		250 V AC / 10 A
Max. switching voltage, AC		250 V
Inrush current		
Min. switching power		12 V / 100 mA
DC / AC Switching capacity (resistive), max.		240 W @ 24 V / 2500 VA
Contact material		AgNi
Mechanical service life		10 x 10^6 switching cycles
Max. switching frequency at rated load		0.1 Hz
Rated data		
Ambient temperature (operational)		-25 °C...55 °C
Storage temperature		-25 °C...55 °C
Humidity		5...85 % rel. humidity, no condensation
Approvals		EAC
Insulation coordination (EN 50178)		
Rated voltage		250 V
Impulse withstand voltage		4 kV (1.2/50 µs)
Dielectric strength input – output		2.5 KV_{eff} / 1 min.
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		
Creepage and clearance distance input – output		≥ 3 mm
Overvoltage category		III
Pollution degree		3
Dimensions		**Plug-in connection**
Depth x width x height	mm	66 / 34.5 / 34.5

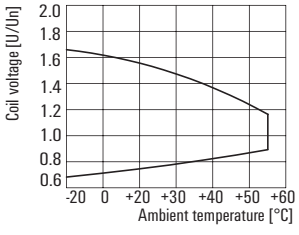
Note

Applications

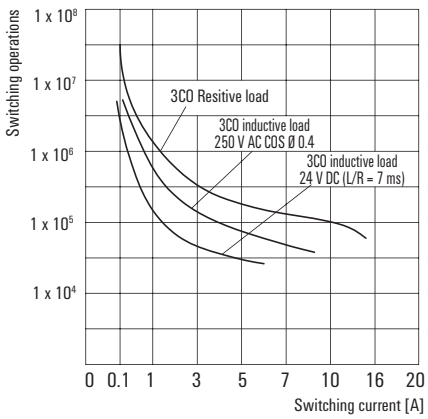
Operating voltage range [DC]



Operating voltage range [AC]

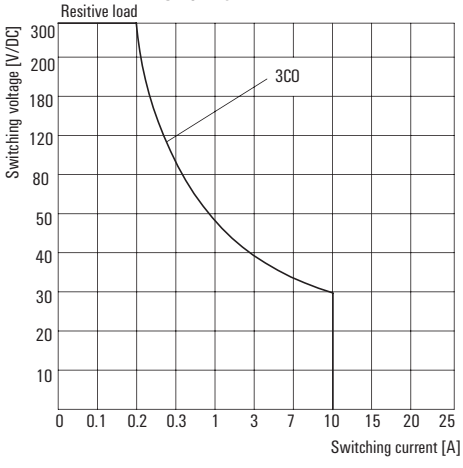


Electrical endurance



DC load breaking capacity

Resitive load



DRR power relay
3 CO AC/DC coil

Type code

DRR			

Type	DRR	
Type of construction		
	370	3 change over contacts
Coil voltage		
	012	12 V DC / 024 24 V DC
	048	48 V DC / 110 110 V DC
	220	220 V DC / 524 24 V AC
	615	115 V AC / 730 230 V AC
LED indicator	L	

Ordering data

	12 V DC 3CO	24 V DC 3CO	48 V DC 3CO	110 V DC 3CO	220 V DC 3CO
Input					
Rated control voltage	12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
Rated current AC / DC	/ 125 mA	/ 55.8 mA	/ 29.2 mA	/ 15 mA	/ 7.6 mA
Power rating	1.5 W	1.5 W	1.5 W	1.5 W	1.5 W
Pull-in/drop-out voltage, typ.	9 V / 1.8 V DC	18 V / 3.6 V DC	36 V / 7.2 V DC	82.5 V / 16.5 V DC	165 V / 33 V DC
Pull-in/drop-out current, typ.					
Status indicator	Green LED, Mechanical	Green LED, Mechanical	Green LED, Mechanical	Green LED, Mechanical	Green LED, Mechanical
Output					
Switch-on delay	< 30 ms	< 30 ms	< 30 ms	< 30 ms	< 30 ms
Switch-off delay	< 20 ms	< 20 ms	< 20 ms	< 20 ms	< 20 ms

Ordering data					
Type	DRR370012L	DRR370024L	DRR370048L	DRR370110L	DRR370220L
Order No.	**1133410000**	**1133420000**	**1133430000**	**1133440000**	**1133560000**
Type					
Order No.					
Note					

Ordering data

	24 V AC 3CO	115 V AC 3CO	230 V AC 3CO
Input			
Rated control voltage	24 V AC	115 V AC	230 V AC
Rated current AC / DC	130 mA (50 Hz), 116 mA (60 Hz) /	29.8 mA (50 Hz), 25.4 mA (60 Hz) /	14.9 mA (50 Hz), 12.7 mA (60 Hz) /
Power rating	2.7 VA	2.7 VA	2.7 VA
Pull-in/drop-out voltage, typ.	19.2 V / 7.2 V AC	92 V / 34.5 V AC	184 V / 69 V AC
Pull-in/drop-out current, typ.			
Status indicator	red LED, Mechanical	red LED, Mechanical	red LED, Mechanical
Output			
Switch-on delay	< 30 ms	< 30 ms	< 30 ms
Switch-off delay	< 20 ms	< 20 ms	< 20 ms

Ordering data			
Type	DRR370524L	DRR370615L	DRR370730L
Order No.	**1133810000**	**1133820000**	**1133830000**
Type			
Order No.			
Note			

Accessories for DRR relay

Ordering data

Technical data	
Rated voltage	300 V
Rated current	12 A
Dielectric strength for input - output	4,000 V
Dielectric strength between the contacts	2,500 V
Operating temperature	-40 ... 85 °C
Pollution severity	2
Over voltage class	III
Max. torque	1.0 Nm
Wire cross section	0.5 ... 2.5 mm²
Protection class (IEC 61810)	IP20
Weight	50 g
Approvals	CE

Description	Type	Qty.	Order No.
Socket, snaps onto DIN-rail, 8-pin	SRD ECO 2CO	10	**1132810000**
Socket, snaps onto DIN-rail, 11-pin	SRD ECO 3CO	10	**1132820000**

Metal clip

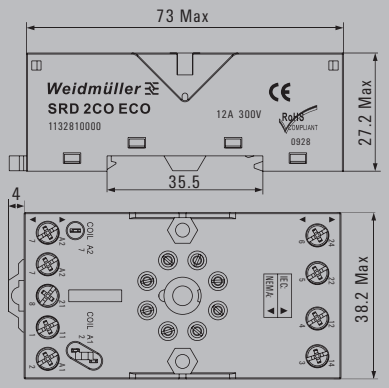
Description		Order No.
Metal clip for DRR relay sockets	DRR SOCKET METAL CLIP	**1134160000**

Functional modules

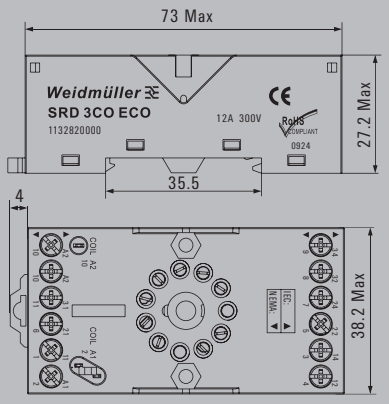
Technical data		Order No.
RC element 6 ... 230 V AC	RIM 5 6/230 V AC	**1174670000**
Free-wheel diode 6 ... 230 V DC	RIM 5 6/230 V DC	**1174650000**

Dimensions in mm

SRD ECO 2CO



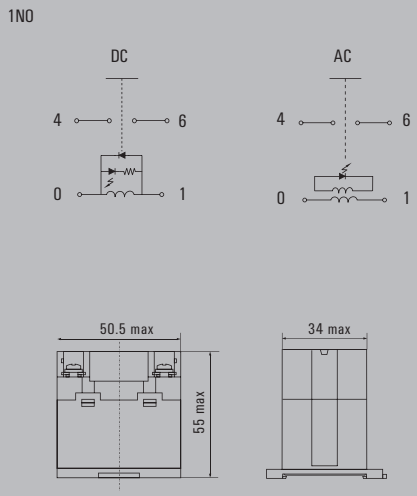
SRD ECO 3CO



PWR high-power relay
1 NO AC/DC coil

- Max. load current: 30 A

Circuit diagram



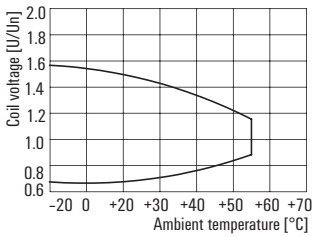
Technical data

Output		
Rated switching voltage / Continuous current		277 V AC / 30 A
Max. switching voltage, AC		277 V
Inrush current		
Min. switching power		12 V / 100 mA
DC / AC Switching capacity (resistive), max.		720 W @ 24 V / 8300 VA
Contact material		AgNi
Mechanical service life		
Max. switching frequency at rated load		0.1 Hz
Rated data		
Ambient temperature (operational)		-25 °C...55 °C
Storage temperature		-25 °C...55 °C
Humidity		35...85 % rel. humidity, no condensation
Approvals		cURus; EAC
Insulation coordination (EN 50178)		
Rated voltage		250 V
Impulse withstand voltage		6 kV (1.2/50 µs)
Dielectric strength input – output		4 kV_{eff} / 1 min
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		
Creepage and clearance distance input – output		≥ 5.5 mm
Overvoltage category		III
Pollution degree		3
Dimensions		
Depth x width x height	mm	55 / 50.5 / 34

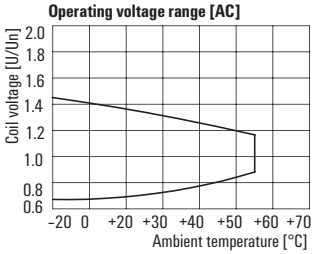
Note

Applications

Operating voltage range [DC]

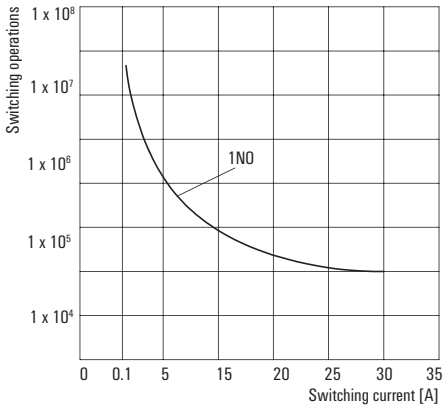


Operating voltage range [AC]



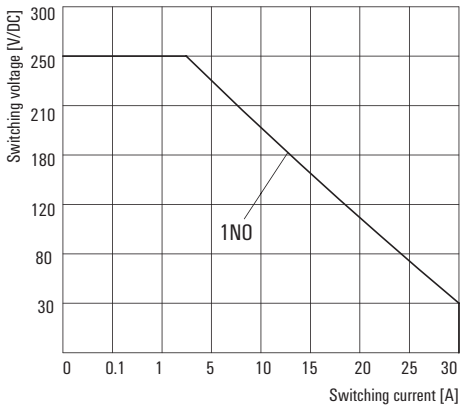
Electrical endurance

Resistive load



DC Load breaking capacity [DC]

Resistive load



PWR high-power relay
1 NO AC/DC coil

Type code

	PWR			
Type	PWR			
Type of construction and mounting				
	173	1N.O. contact, DIN-rail mounting		
Coil voltage	006	6 V DC / 012	12 V DC	
	024	24 V DC / 048	48 V DC	
	110	110 V DC / 220	220 V DC	
	524	24 V AC / 548	48 V AC	
	615	115 V AC / 730	230 V AC	
	880	380 V AC		
LED indicator	L	with LED		

Ordering data

	12 V DC 1 NO	24 V DC 1 NO	48 V DC 1 NO	110 V DC 1 NO	220 V DC 1 NO
Input					
Rated control voltage	12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
Rated current AC / DC	/ 160 mA	/ 79.2 mA	/ 39.3 mA	/ 17.3 mA	/ 8.7 mA
Power rating	1.9 W	1.9 W	1.9 W	1.9 W	1.9 W
Pull-in/drop-out voltage, typ.	9 V / 1.8 V DC	18 V / 3.6 V DC	36 V / 7.2 V DC	82.5 V / 16.5 V DC	165 V / 33 V DC
Pull-in/drop-out current, typ.					
Status indicator					
Output					
Switch-on delay	< 20 ms	< 20 ms	< 20 ms	< 20 ms	< 20 ms
Switch-off delay	< 10 ms	< 10 ms	< 10 ms	< 10 ms	< 10 ms

Ordering data						
Din rail installation	Type	PWR173012L	PWR173024L	PWR173048L	PWR173110L	PWR173220L
	Order No.	**1219470000**	**1219480000**	**1219490000**	**1219510000**	**1219520000**
	Type					
	Order No.					
Note						

Ordering data

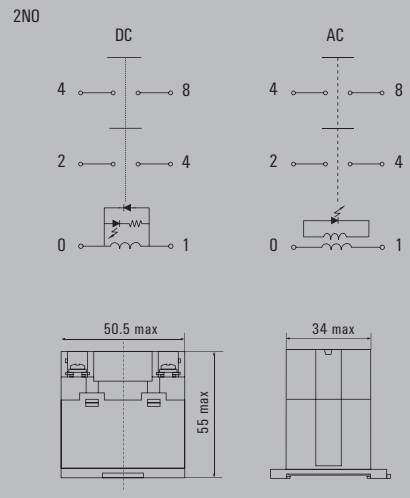
	24 V AC 1 NO	48 V AC 1 NO	115 V AC 1 NO	230 V AC 1 NO	380 V AC 1 NO
Input					
Rated control voltage	24 V AC	48 V AC	115 V AC	230 V AC	380 V AC
Rated current AC / DC	87.3 mA /	43.6 mA /	22.1 mA /	11 mA /	6.1 mA /
Power rating	2.5 VA	2.5 VA	2.5 VA	2.5 VA	2.5 VA
Pull-in/drop-out voltage, typ.	18 V / 3.6 V AC	36 V / 7.2 V AC	86.3 V / 17.3 V AC	172.5 V / 34.5 V AC	285 V / 57 V AC
Pull-in/drop-out current, typ.					
Status indicator					
Output					
Switch-on delay	< 20 ms	< 20 ms	< 20 ms	< 20 ms	< 20 ms
Switch-off delay	< 10 ms	< 10 ms	< 10 ms	< 10 ms	< 10 ms

Ordering data						
Din rail installation	Type	PWR173524L	PWR173548L	PWR173615L	PWR173730L	PWR173880L
	Order No.	**1219090000**	**1219120000**	**1219130000**	**1219140000**	**1219150000**
	Type					
	Order No.					
Note						

PWR high-power relay
2 NO AC/DC coil

- Max. load current: 25 A

Circuit diagram



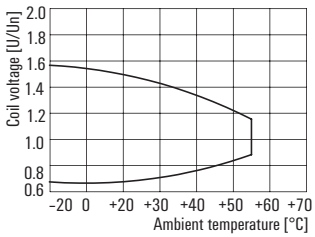
Technical data

Output		
Rated switching voltage / Continuous current		277 V AC / 25 A
Max. switching voltage, AC		277 V
Inrush current		
Min. switching power		12 V / 100 mA
DC / AC Switching capacity (resistive), max.		600 W @ 24 V / 6900 VA
Contact material		AgNi
Mechanical service life		
Max. switching frequency at rated load		0.1 Hz
Rated data		
Ambient temperature (operational)		-25 °C...55 °C
Storage temperature		-25 °C...55 °C
Humidity		35...85 % rel. humidity, no condensation
Approvals		cURus; EAC
Insulation coordination (EN 50178)		
Rated voltage		250 V
Impulse withstand voltage		6 kV (1.2/50 µs)
Dielectric strength input – output		4 kV_{eff} / 1 min
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		
Creepage and clearance distance input – output		≥ 5.5 mm
Overvoltage category		III
Pollution degree		3
Dimensions		
Depth x width x height	mm	55 / 50.5 / 34

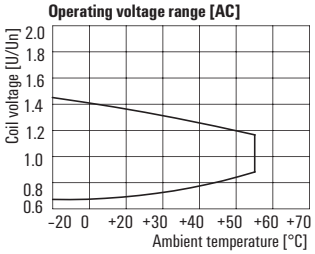
Note

Applications

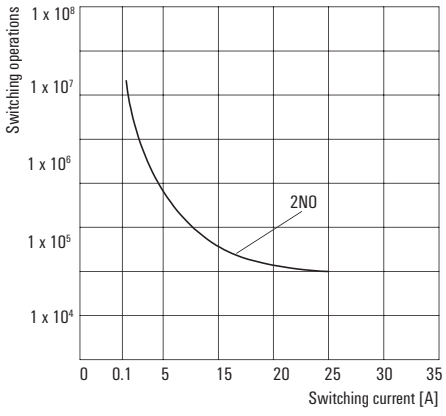
Operating voltage range [DC]



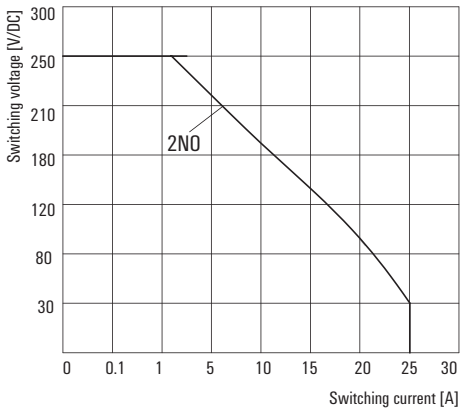
Operating voltage range [AC]



Electrical endurance
Resistive load



DC Load breaking capacity [DC]
Resistive load



PWR high-power relay
2 NO AC/DC coil

Type code

	PWR			
Type	PWR			
Type of construction and mounting	276 2N.O. contact, DIN-rail mounting			
Coil voltage	006	6 V DC / 012	12 V DC	
	024	24 V DC / 048	48 V DC	
	110	110 V DC / 220	220 V DC	
	524	24 V AC / 548	48 V AC	
	615	115 V AC / 730	230 V AC	
	880	380 V AC		
LED indicator	L	with LED		

Ordering data

	12 V DC 2 NO	24 V DC 2 NO	48 V DC 2 NO	110 V DC 2 NO	220 V DC 2 NO
Input					
Rated control voltage	12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
Rated current AC / DC	/ 160 mA	/ 79.2 mA	/ 39.3 mA	/ 17.3 mA	/ 8.7 mA
Power rating	1.9 W	1.9 W	1.9 W	1.9 W	1.9 W
Pull-in/drop-out voltage, typ.	9 V / 1.8 V DC	18 V / 3.6 V DC	36 V / 7.2 V DC	82.5 V / 16.5 V DC	165 V / 33 V DC
Pull-in/drop-out current, typ.					
Status indicator					
Output					
Switch-on delay	< 30 ms	< 30 ms	< 30 ms	< 30 ms	< 30 ms
Switch-off delay	< 30 ms	< 30 ms	< 30 ms	< 30 ms	< 30 ms

Ordering data						
Din rail installation	Type	PWR276012L	PWR276024L	PWR276048L	PWR276110L	PWR276220L
	Order No.	**1219540000**	**1219550000**	**1219560000**	**1219570000**	**1219580000**
	Type					
	Order No.					
Note						

Ordering data

	24 V AC 2 NO	48 V AC 2 NO	115 V AC 2 NO	230 V AC 2 NO	380 V AC 2 NO
Input					
Rated control voltage	24 V AC	48 V AC	115 V AC	230 V AC	380 V AC
Rated current AC / DC	87.3 mA /	43.6 mA /	22.1 mA /	11 mA /	6.1 mA /
Power rating	2.5 VA	2.5 VA	2.5 VA	2.5 VA	2.5 VA
Pull-in/drop-out voltage, typ.	18 V / 3.6 V AC	36 V / 7.2 V AC	86.3 V / 17.3 V AC	172.5 V / 34.5 V AC	285 V / 57 V AC
Pull-in/drop-out current, typ.					
Status indicator					
Output					
Switch-on delay	< 30 ms	< 30 ms	< 30 ms	< 30 ms	< 30 ms
Switch-off delay	< 30 ms	< 30 ms	< 30 ms	< 30 ms	< 30 ms

Ordering data						
Din rail installation	Type	PWR276524L	PWR276548L	PWR276615L	PWR276730L	PWR276880L
	Order No.	**1219160000**	**1219170000**	**1219180000**	**1219190000**	**1219220000**
	Type					
	Order No.					
Note						

Coupling modules – the industrial standard

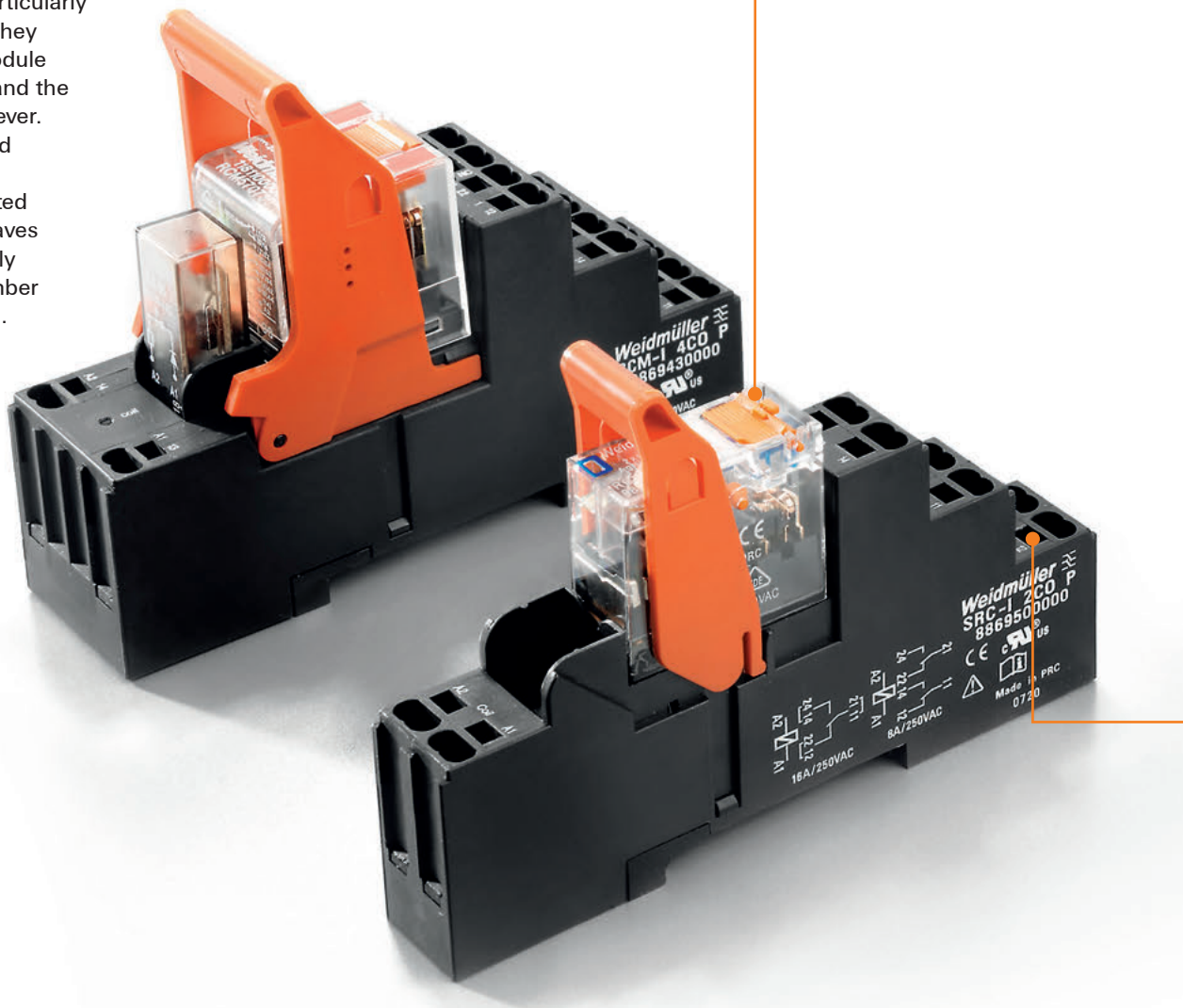
PUSH IN

Relay module with 1 to 4 CO contacts

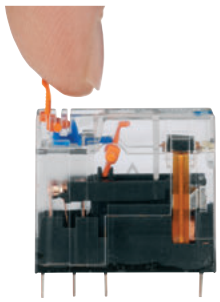
The RIDER SERIES and its RCI, RCM, RRD and RPW product lines have been successfully integrated into the entire Weidmüller line of relay products. This modular-designed product series formally complies with international standards. A variety of pluggable versions are available with from one to four CO contacts and your choice of connection method.

Our innovative relay bases with PUSH IN connection systems are available for both the RCI/RCL and RCM product lines. PUSH IN technology is safe and easy to use and it allows you to reduce costs with less wiring time. The relay modules are designed for industrial applications and feature sturdy relay pins and industrial-standard pinning. A mechanically operated, stay-down test button is integrated into the design. It enables switching statuses to be simulated during initial commissioning. Additional product features include LED status indicators and free-wheel diodes (DC).

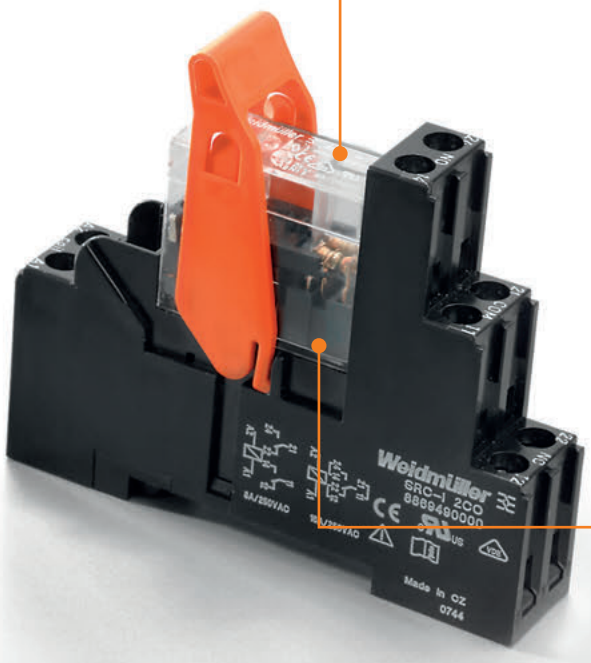
Our relay kits are particularly convenient to use. They include the relay module with status display and the base with ejection lever. The kits are delivered fully assembled and with completely tested functionality. This saves time during assembly and educes the number of products required.



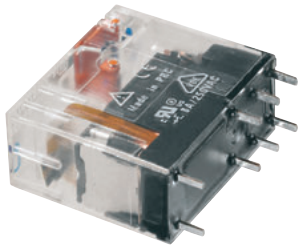
Simple
The stay-down test button simplifies commissioning and service work.



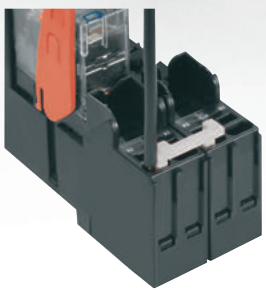
Customised
Suppressor circuitry and LED can be integrated into a relay module or as a pluggable module at the base.



Safe
The heavy-duty industrial pins ensure a reliable connection.



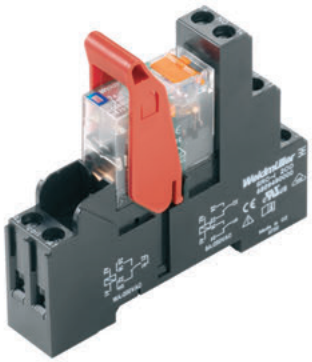
Saves time
No-screw PUSH IN connections and cross-connections can reduce wiring time by more than 50 %.



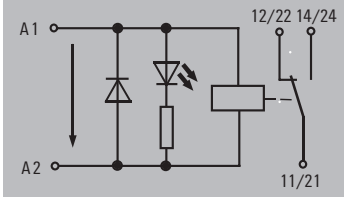
RCI KIT with screw connection

1 CO contact

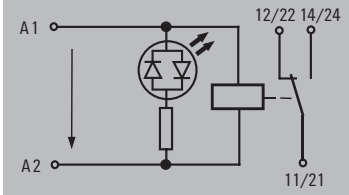
- 4000 VA switching capacity
- Stable plug-in connections
- LED (AC red / DC green) integrated in relay
- Protective suppressor circuit for DC coil
- Optional test button with latching function and inspection window
- Identification of coils (AC red / DC blue)



DC-Version



AC-Version



Technical data

Output		
Rated switching voltage / Continuous current		250 V AC / 16 A[1]
Max. switching voltage, AC		400 V
Inrush current		30 A / 4 s
Min. switching power		100 mA / 5 V, 10 V / 10 mA, 24 V / 1 mA
DC / AC Switching capacity (resistive), max.		384 W @ 24 V / 4000 VA
Contact material		AgNi 90/10
Mechanical service life		AC coil 5 x 10^6 Switch. cycles, DC coil 10 x 10^8 Switch. cycles
Max. switching frequency at rated load		0.1 Hz
Rated data		
Ambient temperature (operational)		-40 °C...70 °C
Storage temperature		-40 °C...70 °C
Humidity		40 °C / 93 % rel. humidity, no condensation
Approvals		CE; EAC; GL
Insulation coordination (EN 50178)		
Rated voltage		250 V
Impulse withstand voltage		5 kV (1.2/50 µs)
Dielectric strength input – output		5 kV_{eff} / 1min
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		
Creepage and clearance distance input – output		≥ 8 mm
Overvoltage category		III
Pollution degree		2
Dimensions		**Screw connection**
Clamping range (nominal / min. / max.)	mm^2	2.5 / 0.5 / 2.5
Depth x width x height	mm	70 / 15.5 / 77
Note		1) For full continuous current (16 A), relay connections 11 - 21, 12 - 22 and 14 - 24 must be bridged.

Ordering data

	24 V DC 1CO	24 V AC 1CO	115 V AC 1CO	230 V AC 1CO
Input				
Rated control voltage	24 V DC	24 V AC	115 V AC	230 V AC
Rated current AC / DC	/ 16.7 mA	31.6 mA /	7 mA /	3.5 mA /
Power rating	420 mW	0.75 VA	0.8 VA	0.8 VA
Pull-in/drop-out voltage, typ.	16.8 V / 2.4 V DC	18 V / 3.6 V AC	86.3 V / 17.3 V AC	172.5 V / 34.5 V AC
Status indicator	Green LED, Mechanical	red LED, Mechanical	red LED, Mechanical	red LED, Mechanical
Protective circuit	Integrated free-wheel diode			
Output				
Switch-on delay	≤ 8 ms	≤ 8 ms	≤ 8 ms	≤ 8 ms
Switch-off delay	≤ 6 ms	≤ 6 ms	≤ 6 ms	≤ 6 ms
Ordering data				
w. test button Type	RCIKIT 24VDC 1CO LD/PB	RCIKIT 24VAC 1CO LD/PB	RCIKIT 115VAC 1CO LD/PB	RCIKIT 230VAC 1CO LD/PB
w. test button Order No.	**8881580000**	**8881590000**	**8897060000**	**8881600000**
w.o. test button Type	RCIKIT 24VDC 1CO LED	RCIKIT 24VAC 1CO LED	RCIKIT 115VAC 1CO LD	RCIKIT 230VAC 1CO LED
w.o. test button Order No.	**8871000000**	**8871010000**	**8897090000**	**8871020000**

Ordering data Spare relay	w. test button	w.o. test button	w. test button	w.o. test button	w. test button	w.o. test button	w. test button	w.o. test button
Type	RCI374AC4	RCI314AC4	RCI374R24	RCI314R24	RCI374S15	RCI314S15	RCI374T30	RCI314T30
Order No.	**8870250000**	**8870100000**	**8870280000**	**8870130000**	**8870290000**	**8870140000**	**8870300000**	**8870150000**

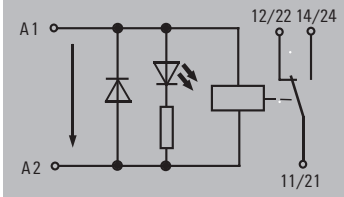
Note

RCI-KITP with PUSH IN connection

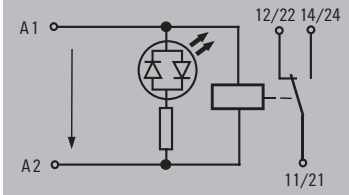
1 CO contact

- 4000 VA switching capacity
- Stable plug-in connections
- LED (AC red / DC green) integrated in relay
- Protective suppressor circuit for DC coil
- Optional test button with latching function and inspection window
- Identification of coils (AC red / DC blue)

DC-Version



AC-Version



Technical data

Output		
Rated switching voltage / Continuous current		250 V AC / 16 A[1]
Max. switching voltage, AC		400 V
Inrush current		30 A / 4 s
Min. switching power		100 mA / 5 V, 10 V / 10 mA, 24 V / 1 mA
DC / AC Switching capacity (resistive), max.		384 W @ 24 V / 4000 VA
Contact material		AgNi 90/10
Mechanical service life		AC coil 5 x 10^6 Switch. cycles, DC coil 10 x 10^8 Switch. cycles
Max. switching frequency at rated load		0.1 Hz
Rated data		
Ambient temperature (operational)		-40 °C...70 °C
Storage temperature		-40 °C...70 °C
Humidity		40 °C / 93 % rel. humidity, no condensation
Approvals		CE; EAC; GL
Insulation coordination (EN 50178)		
Rated voltage		250 V
Impulse withstand voltage		5 kV (1.2/50 µs)
Dielectric strength input – output		5 kV_{eff} / 1min
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		
Creepage and clearance distance input – output		≥ 8 mm
Overvoltage category		III
Pollution degree		2
Dimensions		**PUSH IN spring connection**
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.75 / 1.5
Depth x width x height	mm	70 / 15.5 / 98
Note		1) For full continuous current (16 A), relay connections 11 - 21, 12 - 22 and 14 - 24 must be bridged.

Ordering data

	24 V DC 1CO	24 V AC 1CO	115 V AC 1CO	230 V AC 1CO
Input				
Rated control voltage	24 V DC	24 V AC	115 V AC	230 V AC
Rated current AC / DC	/ 16.7 mA	31.6 mA /	7 mA /	3.5 mA /
Power rating	420 mW	0.75 VA	0.8 VA	0.8 VA
Pull-in/drop-out voltage, typ.	16.8 V / 2.4 V DC	18 V / 3.6 V AC	86.3 V / 17.3 V AC	172.5 V / 34.5 V AC
Status indicator	Green LED, Mechanical	red LED, Mechanical	red LED, Mechanical	red LED, Mechanical
Protective circuit	Integrated free-wheel diode			
Output				
Switch-on delay	≤ 8 ms	≤ 8 ms	≤ 8 ms	≤ 8 ms
Switch-off delay	≤ 6 ms	≤ 6 ms	≤ 6 ms	≤ 6 ms
Ordering data				
w. test button Type	RCIKITP 24VDC 1CO LD/PB	RCIKITP 24VAC 1CO LD/PB	RCIKITP115VAC 1CO LD/PB	RCIKITP230VAC 1CO LD/PB
w. test button Order No.	**8897190000**	**8897200000**	**8897210000**	**8897220000**
w.o. test button Type	RCIKITP 24VDC 1CO LD	RCIKITP 24VAC 1CO LD	RCIKITP 115VAC 1CO LD	RCIKITP 230VAC 1CO LD
w.o. test button Order No.	**8897110000**	**8897120000**	**8897130000**	**8897140000**

Ordering data Spare relay	w. test button	w.o. test button	w. test button	w.o. test button	w. test button	w.o. test button	w. test button	w.o. test button
Type	RCI374R24	RCI314R24	RCI374R24	RCI314R24	RCI374S15	RCI314S15	RCI374T30	RCI314T30
Order No.	**8870280000**	**8870130000**	**8870280000**	**8870130000**	**8870290000**	**8870140000**	**8870300000**	**8870150000**

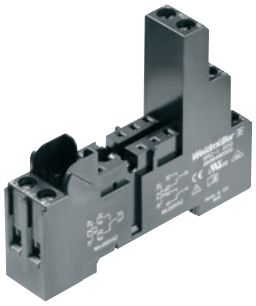
Note

Accessories for RCI KIT relay modules, 1 CO

Plug-in module with PUSH IN connection

Plug-in module with screw connection

Standard height



Plug-in module with screw connection

Low height

Technical data

Rated current	2 x 12 A*)	2 x 12 A*)	2 x 12 A*)
Rated voltage	240 V AC	240 V AC	240 V AC
Dielectric strength of coil contacts	4000 V_{eff}	> 3000 V_{eff}	> 3000 V_{eff}
Ambient temperature (operational)	-25 °C...+85 °C	-25 °C...+85 °C	-25 °C...+85 °C
Protection class (IEC 61810)	IP 20	IP 20	IP 20
Stripping length	12 mm	8 mm	8 mm
Approvals	VDE, cURus, CSA	VDE, cURus, CSA	VDE, cURus, CSA
Connection cross-section			
- Solid-core wire	1 x 1.5 mm^2 / 2 x 1.0 mm^2	2 x 2.5 mm^2	2 x 2.5 mm^2
- Stranded wire	1 x 1.5 mm^2 / 2 x 1.0 mm^2	2 x 2.5 mm^2	2 x 2.5 mm^2
- with ferrule	1 x 1.0 mm^2 / 2 x 0.75 mm^2	2 x 1.5 mm^2	2 x 1.5 mm^2
Rated torque acc. to IEC 61984 for screw connection		0.5 Nm / max. 0.7 Nm	0.5 Nm / max. 0.7 Nm

* For 1-pole relay modules (16 A), the following terminals must be connected: 11 with 21, 12 with 22, and 14 with 24.

Ordering data

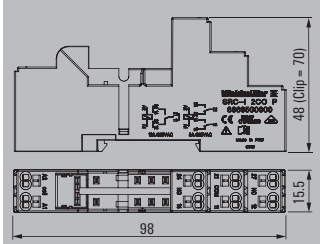
Description	Type	Qty.	Order No.
Plug-in module, snaps onto TS 35 DIN mounting rail, 2-pole	SRC-I 2CO P		**8869500000**
	SRC-I 2CO		**8869490000**
	SRC-I 2CO N		**8869480000**

Accessories

Description	Type	Qty.	Order No.
Plastic retaining clip	SRC-I CLIP HP	10	**8869510000**
Metal retaining clip	SRC-I CLIP HM RCI	20	**1132090000**
Label	SRC-I MARK	10	**8869530000**
MultiCard 6x15 mm	ESG 6/15 K MC NEUTR. WS	200	**1880100000**
 Cross-connector for PUSH IN base, 2-pole, 12 A	SRC-I QV P		**8870840000**
 Cross-connector for screw base, 8-pole	SRC-I QV S		**1132070000**

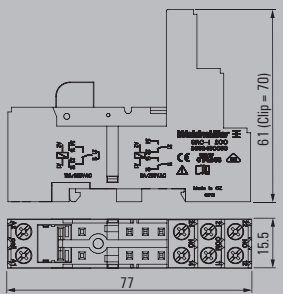
Dimensions

SRC-I 2 CO P



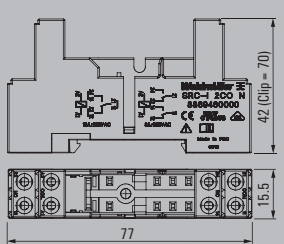
Dimensions

SRC-I 2 CO



Dimensions

SRC-I 2 CO N



Dimensions in mm

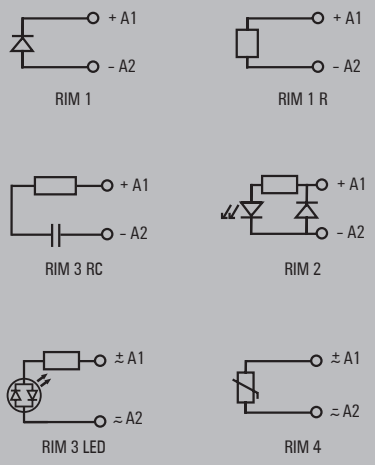
LED and protective modules for the SRC-I plug-in frame

Simply plug into the base module; reverse-connect protection. Connect parallel to coil.

Ordering data

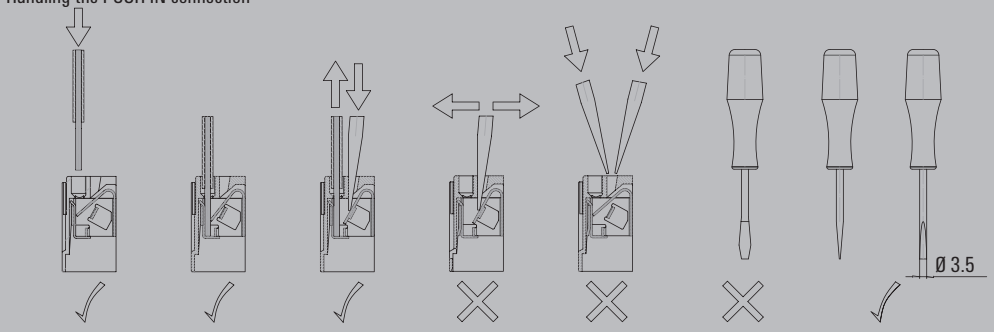
Description
Free Wheel diode 1N4007
Resistor 100 kΩ 1 Watt
RC-element 6 ... 60 V AC; 470 Ω / 220 nF
RC-element 110 ... 230 V AC; 4.7 Ω / 10 nF
Varistor protection 24 V; S07K30
Varistor protection 110 V; S07K130
Varistor protection 230 V; S07K275
LED
LED 6 ... 24 V DC with free wheel diode
LED 24 ... 60 V DC with free wheel diode
LED 110 ... 230 V DC with free wheel diode
LED 6 ... 24 V DC / V AC
LED 24 ... 60 V DC / V AC
LED 110 ... 230 V DC / V AC

Type	Qty.	Order No.	Order No.
RIM-I 1 6/230V	10	**8869580000**	
RIM-I 1 R 110/230V	10	**8870830000**	
RIM-I 3 6/60VAC	10	**8869770000**	
RIM-I 3 110/230VAC	10	**8869790000**	
RIM-I 4 24VUC	10	**8869710000**	
RIM-I 4 110VUC	10	**8869730000**	
RIM-I 4 230VUC	10	**8869750000**	
		red	**green**
RIM-I 2 6/24VDC	10	**8869590000**	**8869600000**
RIM-I 2 24/60VDC	10	**8869670000**	**8869680000**
RIM-I 2 110/230VDC	10	**8869690000**	**8869700000**
RIM-I 3 6/24VUC	10	**8869630000**	**8869640000**
RIM-I 3 24/60VUC	10	**8869610000**	**8869620000**
RIM-I 3 110/230VUC	10	**8869650000**	**8869660000**



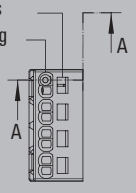
Warnings and notes on usage

Handling the PUSH IN connection

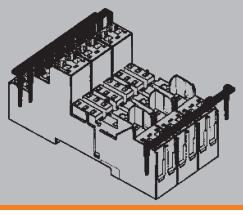


Screwdriver
SD 0.6 x 3.5 x 100
9008330000

Release openings
Wire-connection opening

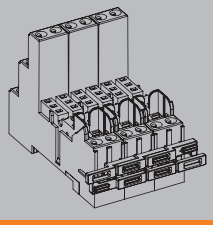


Cross-connector mounting for PUSH IN base



If more than two poles need to be connected with stacked cross-connector ridges, then the lower ridge must be stripped and shortened to the proper length so it will fit.

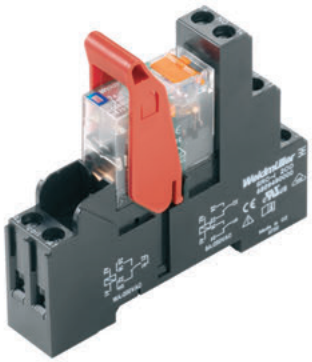
Cross-connector mounting for screw base



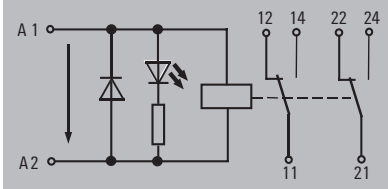
RCI KIT with screw connection

2 CO contacts

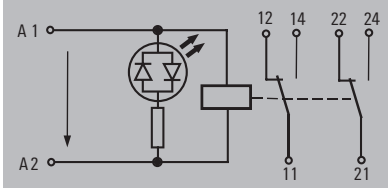
- 2000 VA switching capacity
- Stable plug-in connections
- LED (AC red / DC green) integrated in relay
- Protective suppressor circuit for DC coil
- Optional test button with latching function and inspection window
- Identification of coils (AC red / DC blue)



DC-Version



AC-Version



Technical data

Output		
Rated switching voltage / Continuous current		250 V AC / 8 A
Max. switching voltage, AC		400 V
Inrush current		15 A / 4 s
Min. switching power		100 mA / 5 V, 10 V / 10 mA, 24 V / 1 mA
DC / AC Switching capacity (resistive), max.		192 W @ 24 V / 2000 VA
Contact material		AgNi 90/10
Mechanical service life		AC coil 5 x 10^6 Switch. cycles, DC coil 10 x 10^6 Switch. cycles
Max. switching frequency at rated load		0.1 Hz
Rated data		
Ambient temperature (operational)		-40 °C...70 °C
Storage temperature		-40 °C...70 °C
Humidity		40 °C / 93 % rel. humidity, no condensation
Approvals		CE; EAC; GL
Insulation coordination (EN 50178)		
Rated voltage		250 V
Impulse withstand voltage		5 kV (1.2/50 µs)
Dielectric strength input – output		5 kV_{eff} / 1min
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		
Creepage and clearance distance input – output		≥ 8 mm
Overvoltage category		III
Pollution degree		2
Dimensions		**Screw connection**
Clamping range (nominal / min. / max.)	mm^2	2.5 / 0.5 / 2.5
Depth x width x height	mm	70 / 15.5 / 77
Note		

Ordering data

	24 V DC 2CO	24 V AC 2CO	115 V AC 2CO	230 V AC 2CO
Input				
Rated control voltage	24 V DC	24 V AC	115 V AC	230 V AC
Rated current AC / DC	/ 16.7 mA	31.6 mA /	7 mA /	3.5 mA /
Power rating	420 mW	0.75 VA	0.8 VA	0.8 VA
Pull-in/drop-out voltage, typ.	16.8 V / 2.4 V DC	18 V / 3.6 V AC	86.3 V / 17.3 V AC	172.5 V / 34.5 V AC
Status indicator	Green LED, Mechanical	red LED, Mechanical	red LED, Mechanical	red LED, Mechanical
Protective circuit	Integrated free-wheel diode			
Output				
Switch-on delay	≤ 10 ms	≤ 10 ms	≤ 10 ms	≤ 10 ms
Switch-off delay	≤ 6 ms	≤ 6 ms	≤ 6 ms	≤ 6 ms
Ordering data				
w. test button Type	RCIKIT 24VDC 2CO LD/PB	RCIKIT 24VAC 2CO LD/PB	RCIKIT 115VAC 2CO LD/PB	RCIKIT 230VAC 2CO LD/PB
Order No.	**8881610000**	**8881620000**	**8897080000**	**8881630000**
w.o. test button Type	RCIKIT 24VDC 2CO LED	RCIKIT 24VAC 2CO LED	RCIKIT 115VAC 2CO LD	RCIKIT 230VAC 2CO LED
Order No.	**8871030000**	**8871040000**	**8897100000**	**8871050000**

Ordering data Spare relay	w. test button	w.o. test button	w. test button	w.o. test button	w. test button	w.o. test button	w. test button	w.o. test button
Type	RCI484AC4	RCI424AC4	RCI484R24	RCI424R24	RCI484S15	RCI424S15	RCI484T30	RCI424T30
Order No.	**8870320000**	**8870180000**	**8870350000**	**8870210000**	**8870360000**	**8870220000**	**8870370000**	**8870230000**

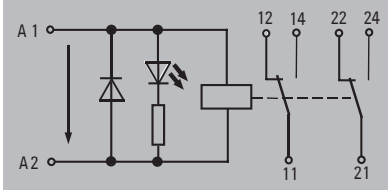
Note

RCI-KITP with PUSH IN connection

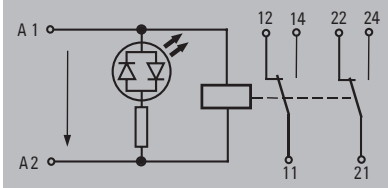
2 CO contacts

- 2000 VA switching capacity
- Stable plug-in connections
- LED (AC red / DC green) integrated in relay
- Protective suppressor circuit for DC coil
- Optional test button with latching function and inspection window
- Identification of coils (AC red / DC blue)

Version DC



Version AC



Technical data

Output		
Rated switching voltage / Continuous current		250 V AC / 8 A
Max. switching voltage, AC		400 V
Inrush current		15 A / 4 s
Min. switching power		100 mA / 5 V, 10 V / 10 mA, 24 V / 1 mA
DC / AC Switching capacity (resistive), max.		192 W @ 24 V / 2000 VA
Contact material		AgNi 90/10
Mechanical service life		AC coil 5 x 10^6 Switch. cycles, DC coil 10 x 10^6 Switch. cycles
Max. switching frequency at rated load		0.1 Hz
Rated data		
Ambient temperature (operational)		-40 °C...70 °C
Storage temperature		-40 °C...70 °C
Humidity		40 °C / 93 % rel. humidity, no condensation
Approvals		CE; EAC; GL
Insulation coordination (EN 50178)		
Rated voltage		250 V
Impulse withstand voltage		5 kV (1.2/50 µs)
Dielectric strength input – output		5 kV_{eff} / 1min
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		
Creepage and clearance distance input – output		≥ 8 mm
Overvoltage category		III
Pollution degree		2
Dimensions		**PUSH IN spring connection**
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.75 / 1.5
Depth x width x height	mm	70 / 15.5 / 98
Note		

Ordering data

	24 V DC 2CO	24 V AC 2CO	115 V AC 2CO	230 V AC 2CO
Input				
Rated control voltage	24 V DC	24 V AC	115 V AC	230 V AC
Rated current AC / DC	/ 16.7 mA	31.6 mA /	7 mA /	3.5 mA /
Power rating	420 mW	0.75 VA	0.8 VA	0.8 VA
Pull-in/drop-out voltage, typ.	16.8 V / 2.4 V DC	18 V / 3.6 V AC	86.3 V / 17.3 V AC	172.5 V / 34.5 V AC
Status indicator	Green LED, Mechanical	red LED, Mechanical	red LED, Mechanical	red LED, Mechanical
Protective circuit	Integrated free-wheel diode			
Output				
Switch-on delay	≤ 10 ms	≤ 10 ms	≤ 10 ms	≤ 10 ms
Switch-off delay	≤ 6 ms	≤ 6 ms	≤ 6 ms	≤ 6 ms
Ordering data				
w. test button Type	RCIKITP 24VDC 2CO LD/PB	RCIKITP 24VAC 2CO LD/PB	RCIKITP115VAC 2CO LD/PB	RCIKITP230VAC 2CO LD/PB
Order No.	**8897230000**	**8897240000**	**8897250000**	**8897260000**
w.o. test button Type	RCIKITP 24VDC 2CO LD	RCIKITP 24VAC 2CO LD	RCIKITP 115VAC 2CO LD	RCIKITP 230VAC 2CO LD
Order No.	**8897150000**	**8897160000**	**8897170000**	**8897180000**

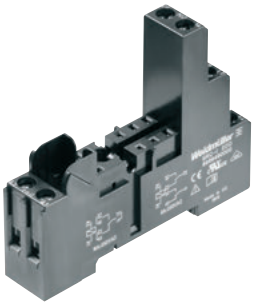
Ordering data Spare relay	w. test button	w.o. test button	w. test button	w.o. test button	w. test button	w.o. test button	w. test button	w.o. test button
Type	RCI484AC4	RCI424AC4	RCI484R24	RCI424R24	RCI484S15	RCI424S15	RCI484T30	RCI424T30
Order No.	**8870320000**	**8870180000**	**8870350000**	**8870210000**	**8870360000**	**8870220000**	**8870370000**	**8870230000**
Note								

Accessories for RCI KIT relay modules, 2 CO

Plug-in module with PUSH IN connection

Plug-in module with screw connection

Standard height



Plug-in module with screw connection

Low height

Technical data

Rated current	2 x 12 A	2 x 12 A	2 x 12 A
Rated voltage	240 V AC	240 V AC	240 V AC
Dielectric strength of coil contacts	4000 V_{eff}	> 3000 V_{eff}	> 3000 V_{eff}
Ambient temperature (operational)	-25 °C...+85 °C	-25 °C...+85 °C	-25 °C...+85 °C
Protection class (IEC 61810)	IP 20	IP 20	IP 20
Stripping length	12 mm	8 mm	8 mm
Approvals	VDE, cURus, CSA	VDE, cURus, CSA	VDE, cURus, CSA
Connection cross-section			
- Solid-core wire	1 x 1.5 mm² / 2 x 1.0 mm²	2 x 2.5 mm²	2 x 2.5 mm²
- Stranded wire	1 x 1.5 mm² / 2 x 1.0 mm²	2 x 2.5 mm²	2 x 2.5 mm²
- with ferrule	1 x 1.0 mm² / 2 x 0.75 mm²	2 x 1.5 mm²	2 x 1.5 mm²
Rated torque acc. to IEC 61984 for screw connection		0.5 Nm / max. 0.7 Nm	0.5 Nm / max. 0.7 Nm

Ordering data

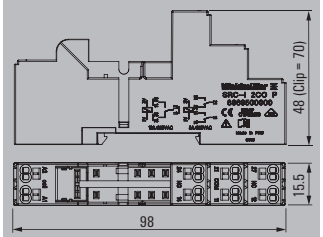
Description	Type	Qty.	Order No.
Plug-in module, snaps onto TS35 DIN mounting rail, 2-pole	SRC-I 2CO P		**8869500000**
	SRC-I 2CO		**8869490000**
	SRC-I 2CO N		**8869480000**

Accessories

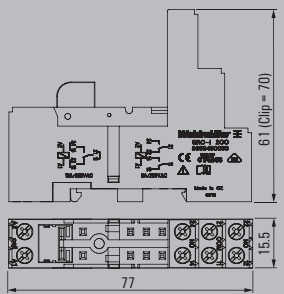
Description	Type	Qty.	Order No.
Plastic retaining clip	SRC-I CLIP HP	10	**8869510000**
Metal retaining clip	SRC-I CLIP HM RCI	20	**1132090000**
Label	SRC-I MARK	10	**8869530000**
MultiCard 6x15 mm	ESG 6/15 K MC NEUTR. WS	200	**1880100000**
 Cross-connector for PUSH IN base, 2-pole, 12 A	SRC-I QV P		**8870840000**
 Cross-connector for screw base, 8-pole	SRC-I QV S		**1132070000**

Dimensions

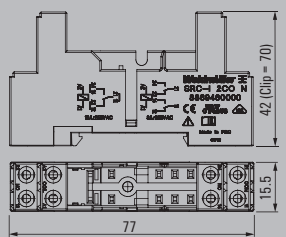
SRC-I 2 CO P



SRC-I 2 CO



SRC-I 2 CO N



Dimensions in mm

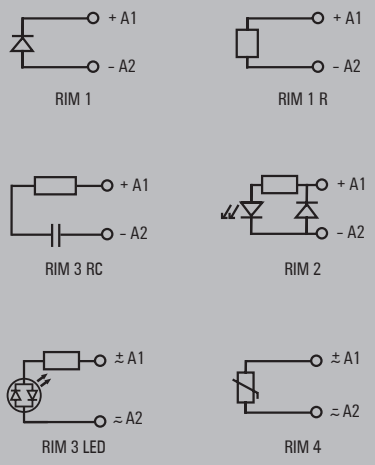
LED and protective modules for the SRC-I plug-in frame

Simply plug into the base module; reverse-connect protection. Connect parallel to coil.

Ordering data

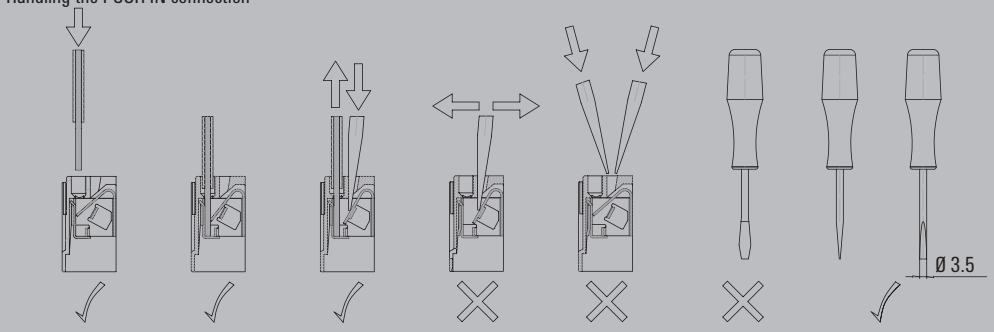
Description
Free Wheel diode 1N4007
Resistor 100 kΩ 1 Watt
RC-element 6 ... 60 V AC; 470 Ω / 220 nF
RC-element 110 ... 230 V AC; 4.7 Ω / 10 nF
Varistor protection 24 V; S07K30
Varistor protection 110 V; S07K130
Varistor protection 230 V; S07K275
LED
LED 6 ... 24 V DC with free wheel diode
LED 24 ... 60 V DC with free wheel diode
LED 110 ... 230 V DC with free wheel diode
LED 6 ... 24 V DC / V AC
LED 24 ... 60 V DC / V AC
LED 110 ... 230 V DC / V AC

Type	Qty.	Order No.	Order No.
RIM-I 1 6/230V	10	**8869580000**	
RIM-I 1 R 110/230V	10	**8870830000**	
RIM-I 3 6/60VAC	10	**8869770000**	
RIM-I 3 110/230VAC	10	**8869790000**	
RIM-I 4 24VUC	10	**8869710000**	
RIM-I 4 110VUC	10	**8869730000**	
RIM-I 4 230VUC	10	**8869750000**	
		red	**green**
RIM-I 2 6/24VDC	10	**8869590000**	**8869600000**
RIM-I 2 24/60VDC	10	**8869670000**	**8869680000**
RIM-I 2 110/230VDC	10	**8869690000**	**8869700000**
RIM-I 3 6/24VUC	10	**8869630000**	**8869640000**
RIM-I 3 24/60VUC	10	**8869610000**	**8869620000**
RIM-I 3 110/230VUC	10	**8869650000**	**8869660000**



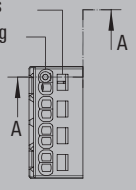
Warnings and notes on usage

Handling the PUSH IN connection

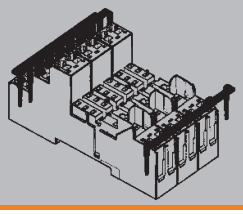


Screwdriver
SD 0.6 x 3.5 x 100
9008330000

Release openings
Wire-connection opening

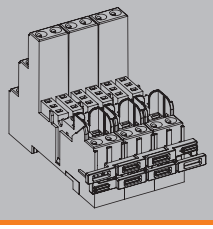


Cross-connector mounting for PUSH IN base



If more than two poles need to be connected with stacked cross-connector ridges, then the lower ridge must be stripped and shortened to the proper length so it will fit.

Cross-connector mounting for screw base



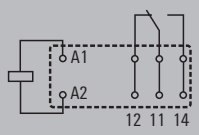
RCI relay

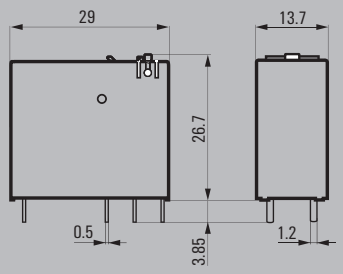
1 CO contact AC/DC coil

- 4000 VA switching capacity
- Stable plug-in connections
- Optional test button with latching function and inspection window
- Optional status indicator (AC red / DC green)
- Optional protective suppressor circuit
- Identification of coils (AC red / DC blue)

Circuit diagram
View on solder pins
dimensions in mm

1 C/O changeover contacts





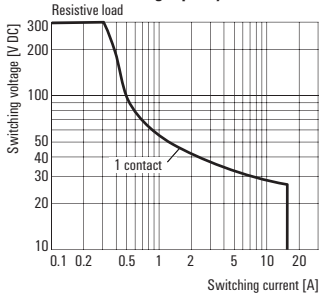
Technical data

Output		
Rated switching voltage / Continuous current		240 V AC / 16 A
Max. switching voltage, AC		400 V
Inrush current		30 A / 4 s
Min. switching power		100 mA / 5 V, 10 V / 10 mA, 24 V / 1 mA
DC / AC Switching capacity (resistive), max.		384 W @ 24 V / 4000 VA
Contact material		AgNi 90/10
Mechanical service life		AC coil 5 x 10^6 Switch. cycles, DC coil 10 x 10^6 Switch. cycles
Max. switching frequency at rated load		0.1 Hz
Rated data		
Ambient temperature (operational)		-40 °C...70 °C
Storage temperature		-40 °C...85 °C
Humidity		40 °C / 93 % rel. humidity, no condensation
Approvals		CSA; cURus; EAC; VDE
Insulation coordination (EN 50178)		
Rated voltage		250 V
Impulse withstand voltage		5 kV (1.2/50 µs)
Dielectric strength input – output		5 kV_{eff} / 1min
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		
Creepage and clearance distance input – output		≥ 8 mm
Overvoltage category		III
Pollution degree		2
Dimensions		**Plug-in connection**
Depth x width x height	mm	25.5 / 13 / 29

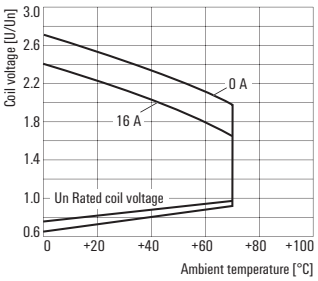
Note

Applications

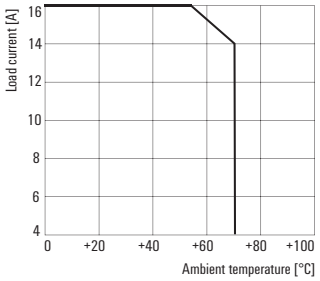
DC load breaking capacity
Resistive load



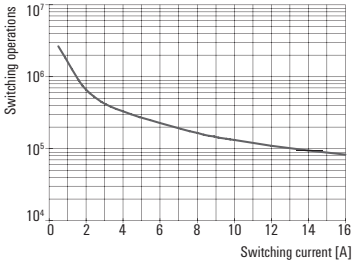
Operating voltage range DC



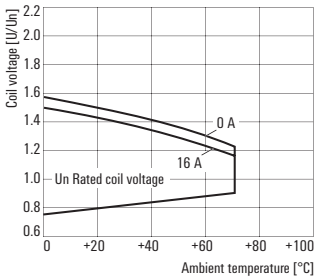
Derating curve
in combination with plug-in module



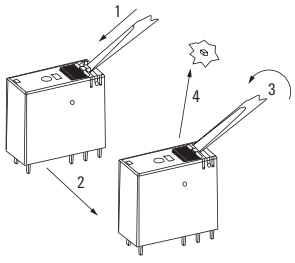
Electrical endurance
250 V AC Resistive load



Operating voltage range AC



Removal of snap lock



RCI relay

1 CO contact AC/DC coil

Type code RCI

Type RIDER Control Industrial

Type of construction
- 3 1-pole, 16 A
- 4 2-pole, 8 A

Type of contact
- 1 1 CO contact without test button
- 2 2 CO contacts without test button
- 7 1 CO contact with test button
- 8 2 CO contacts with test button

Contact material
- 4 AgNi 90/10

Coil

012	12 V DC
024	24 V DC
048	48 V DC
110	110 V DC
524	24 V AC
615	115 V AC
730	230 V AC
AB2	12 V DC+LED+diode
AC4	24 V DC+LED+diode
AE8	48 V DC+LED+diode
BB0	110 V DC+LED+diode
R24	24 V AC+LED
S15	115 V AC+LED
T30	230 V AC+LED

Ordering data

		12 V DC 1CO	24 V DC 1CO	48 V DC 1CO	110 V DC 1CO
Input					
Rated control voltage		12 V DC	24 V DC	48 V DC	110 V DC
Rated current AC / DC		/ 33.3 mA	/ 16.7 mA	/ 8.7 mA	/ 4.1 mA
Power rating		400 mW	400 mW	400 mW	400 mW
Pull-in/drop-out voltage, typ.		8.4 V / 1.2 V DC	16.8 V / 2.4 V DC	33.6 V / 4.8 V DC	77 V / 11 V DC
Output					
Switch-on delay		≤ 8 ms	≤ 8 ms	≤ 8 ms	≤ 8 ms
Switch-off delay		≤ 6 ms	≤ 6 ms	≤ 6 ms	≤ 6 ms
Ordering data					
Standard	Type	RCI314012	RCI314024	RCI314048	RCI314110
	Order No.	**8869800000**	**8869810000**	**8869820000**	**8869830000**
w. test button	Type	RCI374012	RCI374024		
	Order No.	**8869950000**	**8869960000**		
With LED + freewheel diode	Type	RCI314AB2	RCI314AC4	RCI314AE8	RCI314BB0
	Order No.	**8870090000**	**8870100000**	**8870110000**	**8870120000**
With test button + LED	Type	RCI374AB2	RCI374AC4	RCI374AE8	RCI374BB0
+ Free-wheel diode	Order No.	**8870240000**	**8870250000**	**8870260000**	**8870270000**
Note					

Ordering data

		24 V AC 1CO	115 V AC 1CO	230 V AC 1CO
Input				
Rated control voltage		24 V AC	115 V AC	230 V AC
Rated current AC / DC		31.6 mA /	6.6 mA /	3.2 mA /
Power rating		0.75 VA	0.75 VA	0.75 VA
Pull-in/drop-out voltage, typ.		18 V / 3.6 V AC	86.3 V / 17.3 V AC	172.5 V / 34.5 V AC
Output				
Switch-on delay		≤ 8 ms	≤ 8 ms	≤ 8 ms
Switch-off delay		≤ 6 ms	≤ 6 ms	≤ 6 ms
Ordering data				
Standard	Type	RCI314524	RCI314615	RCI314730
	Order No.	**8869840000**	**8869850000**	**8869860000**
w. test button	Type	RCI374524		RCI374730
	Order No.	**8869990000**		**8870010000**
with LED	Type	RCI314R24	RCI314S15	RCI314T30
	Order No.	**8870130000**	**8870140000**	**8870150000**
With test button + LED	Type	RCI374R24	RCI374S15	RCI374T30
	Order No.	**8870280000**	**8870290000**	**8870300000**
Note				

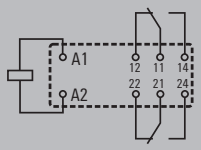
RCI relay

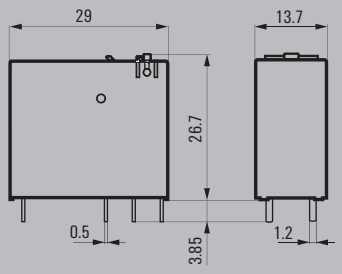
2 CO contact AC / DC coil

- 2000 VA switching capacity
- Stable plug-in connections
- Optional test button with latching function and inspection window
- Optional status indicator (AC red / DC green)
- Optional protective suppressor circuit
- Identification of coils (AC red / DC blue)

Circuit diagram
View on solder pins
dimensions in mm

2 C/O changeover contacts



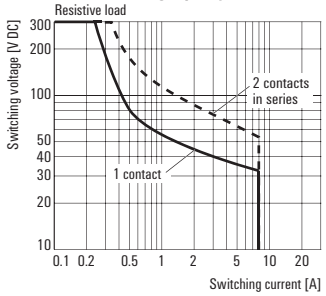


Technical data

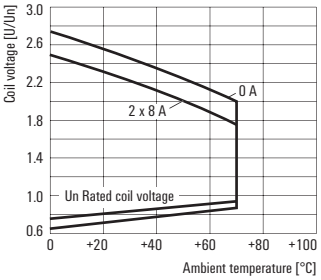
Output		
Rated switching voltage / Continuous current		240 V AC / 8 A
Max. switching voltage, AC		400 V
Inrush current		15 A / 4 s
Min. switching power		100 mA / 5 V, 10 V / 10 mA, 24 V / 1 mA
DC / AC Switching capacity (resistive), max.		192 W @ 24 V / 2000 VA
Contact material		AgNi 90/10
Mechanical service life		AC coil 5 x 10^6 Switch. cycles, DC coil 10 x 10^6 Switch. cycles
Max. switching frequency at rated load		0.1 Hz
Rated data		
Ambient temperature (operational)		-40 °C...70 °C
Storage temperature		-40 °C...85 °C
Humidity		40 °C / 93 % rel. humidity, no condensation
Approvals		CSA; cURus; EAC; VDE
Insulation coordination (EN 50178)		
Rated voltage		250 V
Impulse withstand voltage		5 kV (1.2/50 µs)
Dielectric strength input – output		5 kV_{eff} / 1min
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		
Creepage and clearance distance input – output		≥ 8 mm
Overvoltage category		III
Pollution degree		2
Dimensions		**Plug-in connection**
Depth x width x height	mm	25.5 / 13 / 29
Note		x = 25.5 without test button / 26.7 with test button

Applications

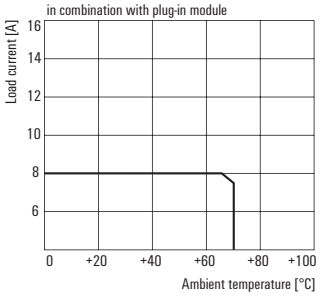
DC load breaking capacity
Resistive load



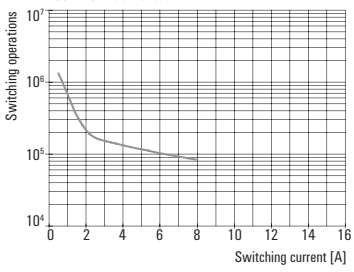
Operating voltage range DC



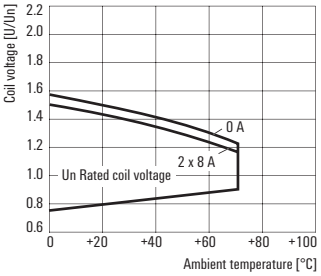
Derating curve
in combination with plug-in module



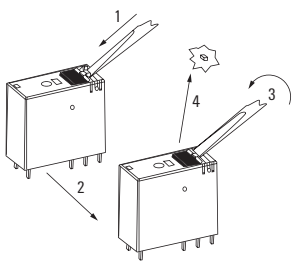
Electrical endurance
250 V AC Resistive load



Operating voltage range AC



Removal of snap lock



RCI relay
2 CO contact AC / DC coil

Type code RCI [ ] [ ] [ ] [ ]

Type RIDER Control Industrial

Type of construction
- 3 1-pole, 16 A
- 4 2-pole, 8 A

Type of contact
- 1 1 CO contact without test button
- 2 2 CO contacts without test button
- 7 1 CO contact with test button
- 8 2 CO contacts with test button

Contact material
- 4 AgNi 90/10

Coil

012	12 V DC
024	24 V DC
048	48 V DC
110	110 V DC
524	24 V AC
615	115 V AC
730	230 V AC
AB2	12 V DC+LED+diode
AC4	24 V DC+LED+diode
AE8	48 V DC+LED+diode
BB0	110 V DC+LED+diode
R24	24 V AC+LED
S15	115 V AC+LED
T30	230 V AC+LED

Ordering data

		12 V DC 2CO	24 V DC 2CO	48 V DC 2CO	110 V DC 2CO
Input					
Rated control voltage		12 V DC	24 V DC	48 V DC	110 V DC
Rated current AC / DC		/ 33.3 mA	/ 16.7 mA	/ 8.7 mA	/ 4.1 mA
Power rating		400 mW	400 mW	400 mW	400 mW
Pull-in/drop-out voltage, typ.		8.4 V / 1.2 V DC	16.8 V / 2.4 V DC	33.6 V / 4.8 V DC	77 V / 11 V DC
Output					
Switch-on delay		≤ 10 ms	≤ 10 ms	≤ 10 ms	≤ 10 ms
Switch-off delay		≤ 6 ms	≤ 6 ms	≤ 6 ms	≤ 6 ms
Ordering data					
Standard	Type	RCI424012	RCI424024	RCI424048	RCI424110
	Order No.	**8869870000**	**8869890000**	**8869900000**	**8869910000**
w. test button	Type	RCI484012	RCI484024	RCI484048	RCI484110
	Order No.	**8870020000**	**8870030000**	**8870040000**	**8870050000**
With LED + freewheel diode	Type	RCI424AB2	RCI424AC4	RCI424AE8	RCI424BB0
	Order No.	**8870170000**	**8870180000**	**8870190000**	**8870200000**
With test button + LED	Type	RCI484AB2	RCI484AC4	RCI484AE8	RCI484BB0
+ Free-wheel diode	Order No.	**8870310000**	**8870320000**	**8870330000**	**8870340000**
Note					

Ordering data

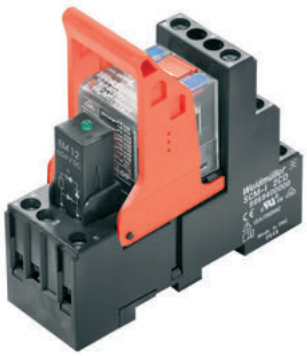
		24 V AC 2CO	115 V AC 2CO	230 V AC 2CO
Input				
Rated control voltage		24 V AC	115 V AC	230 V AC
Rated current AC / DC		31.6 mA /	6.6 mA /	3.2 mA /
Power rating		0.75 VA	0.75 VA	0.75 VA
Pull-in/drop-out voltage, typ.		18 V / 3.6 V AC	86.3 V / 17.3 V AC	172.5 V / 34.5 V AC
Output				
Switch-on delay		≤ 10 ms	≤ 10 ms	≤ 10 ms
Switch-off delay		≤ 6 ms	≤ 6 ms	≤ 6 ms
Ordering data				
Standard	Type	RCI424524	RCI424615	RCI424730
	Order No.	**8869920000**	**8869930000**	**8869940000**
w. test button	Type	RCI484524	RCI484615	RCI484730
	Order No.	**8870060000**	**8870070000**	**8870080000**
with LED	Type	RCI424R24	RCI424S15	RCI424T30
	Order No.	**8870210000**	**8870220000**	**8870230000**
With test button + LED	Type	RCI484R24	RCI484S15	RCI484T30
	Order No.	**8870350000**	**8870360000**	**8870370000**
Note				

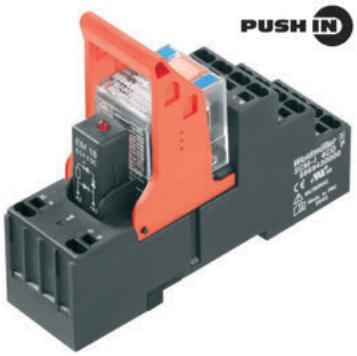
RCM KIT

2 CO contacts, AC/ DC coil

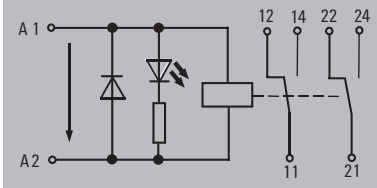
Modular system comprising of:
- Relay socket for rail mounting
- LED display unit (AC red / DC green)
- Retaining clip
- Pluggable relays with coil identification (AC red / DC blue)
- Markers

Independent of connection system:
- Screw or PUSH IN connection system

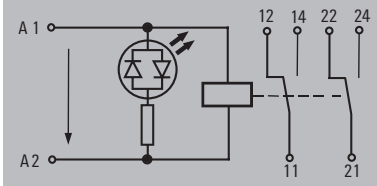




DC-Version



AC-Version



Technical data

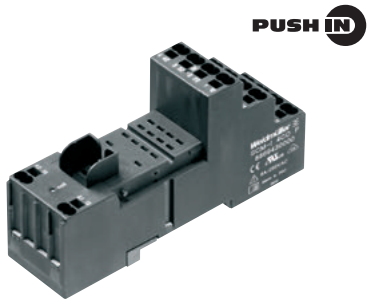
Output			
Rated switching voltage / Continuous current		250 V AC / 12 A	
Max. switching voltage, AC		400 V	
Inrush current		24 A / 20 ms	
Min. switching power		100 mA / 5 V, 10 V / 10 mA, 24 V / 1 mA	
DC / AC Switching capacity (resistive), max.		288 W @ 24 V / 3000 VA	
Contact material		AgNi 90/10	
Mechanical service life		AC coil 20 x 10^6 Switch. cycles, DC coil 30 x 10^6 Switch. cycles	
Max. switching frequency at rated load		0.1 Hz	
Rated data			
Ambient temperature (operational)		-40 °C...70 °C	
Storage temperature		-40 °C...70 °C	
Humidity		40 °C / 93 % rel. humidity, no condensation	
Approvals		CE; EAC; GL	
Insulation coordination (EN 50178)			
Rated voltage		250 V	
Impulse withstand voltage		5 kV (1.2/50 µs)	
Dielectric strength input – output		2.5 KV_{eff} / 1 min.	
Dielectric strength, contact / contact			
Dielectric strength to mounting rail			
Creepage and clearance distance input – output		≥ 4 mm	
Overvoltage category		III	
Pollution degree		2	
Dimensions		**Screw connection**	**PUSH IN spring connection**
Clamping range (nominal / min. / max.)	mm^2	2.5 / 0.5 / 2.5	1.5 / 0.75 / 1.5
Depth x width x height	mm	79 / 28 / 77	79 / 28 / 98
Note			

Ordering data

	24 V DC 2CO LED	24 V AC 2CO LED	115 V AC 2CO LED	230 V AC 2CO LED
Input				
Rated control voltage	24 V DC	24 V AC	115 V AC	230 V AC
Rated current AC / DC	/ 31.3 mA	41.6 mA /	8.8 mA /	4.3 mA /
Power rating	740 mW	1.0 VA	1.0 VA	1.0 VA
Pull-in/drop-out voltage, typ.	18 V / 2.4 V DC	19.2 V / 7.2 V AC	92 V / 34.5 V AC	184 V / 69 V AC
Status indicator	Green LED, Mechanical	red LED, Mechanical	red LED, Mechanical	red LED, Mechanical
Protective circuit	Integrated free-wheel diode			
Output				
Switch-on delay	≤ 15 ms	≤ 15 ms	≤ 15 ms	≤ 15 ms
Switch-off delay	≤ 10 ms	≤ 10 ms	≤ 10 ms	≤ 10 ms
Ordering data				
Screw connection Type	RCMKIT-I 24VDC 2CO LD	RCMKIT-I 24VAC 2CO LD	RCMKIT-I 115VAC 2CO LD	RCMKIT-I 230VAC 2CO LD
Order No.	**8920940000**	**8920950000**	**8920960000**	**8920970000**
PUSH IN connection Type	RCMKITP-I 24VDC 2CO LD	RCMKITP-I 24VAC 2CO LD	RCMKITP-I 115VAC 2CO LD	RCMKITP-I 230VAC 2CO LD
Order No.	**8921080000**	**8921090000**	**8921100000**	**8921110000**
Ordering data Spare relay (pluggable)				
Type	RCM270024	RCM270524	RCM270615	RCM270730
Order No.	**8689860000**	**8689760000**	**8689800000**	**8689820000**
Note				

Accessories for RCM KIT relay modules, 2 CO

Plug-in module with PUSH IN connection



Plug-in module with screw connection

Technical data

Rated current	12 A	12 A
Rated voltage	240 V AC	240 V AC
Dielectric strength of coil contacts	> 2500 V_{eff}	> 2500 V_{eff}
Ambient temperature (operational)	-45 °C ...+70 °C	-45 °C ...+70 °C
Insulation group (VDE 0110b)	C / 250 V AC	C / 250 V AC
Protection class (IEC 61810)	IP 20	IP 20
Stripping length	12 mm	8 mm
Approvals	VDE, cURus, CSA	VDE, cURus, CSA
Connection cross-section		
- Solid-core wire	1 x 0.75/1/1.5 mm^2 / 2 x 0.75/1 mm^2	2 x 2.5 mm^2
- Stranded wire	1 x 0.75/1/1.5 mm^2 / 2 x 0.75/1 mm^2	2 x 2.5 mm^2
- with ferrule	1 x 0.75/1 mm^2 / 2 x 0.75 mm^2	2 x 1.5 mm^2
Rated torque acc. to IEC 61984 for screw connection		0.5 Nm / max. 0.7 Nm
Plug-in cycles	A (10)	A (10)

Ordering data

Description	Type	Qty.	Order No.
Plug-in module, snaps onto TS35 DIN mounting rail, 2-pole	SCM-I 2CO P		**8876220000**

Description	Type	Qty.	Order No.
Plug-in module, snaps onto TS35 DIN mounting rail, 2-pole	SCM-I 2CO		**8869400000**

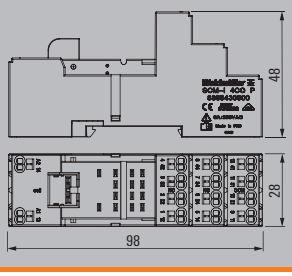
Accessories

Description	Type	Qty.	Order No.
Plastic retaining clip	SCM-I CLIP P	10	**8869440000**
Metal retaining clip	SCM-I CLIP M	10	**8869450000**
Marker	SCM-I MARK	10	**8869460000**
Marker, Multicard	ESG 9/11 K MC neutral	200	**1857440000**
 Cross-connector for PUSH IN base, 2-pole, 12 A	SCM-I QV P	10	**8870850000**
 Cross-connector for screw base, 6-pole			

Description	Type	Qty.	Order No.
Plastic retaining clip	SCM-I CLIP P	10	**8869440000**
Metal retaining clip	SCM-I CLIP M	10	**8869450000**
Marker	SCM-I MARK	10	**8869460000**
Marker, Multicard	ESG 9/11 K MC neutral	200	**1857440000**
	SCM-I QV S	10	**1132080000**

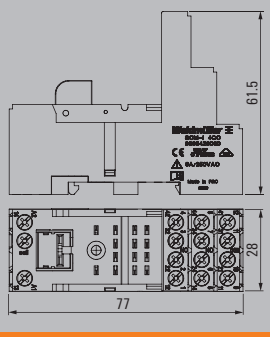
Dimensions

SCM-I 2CO P



Dimensions

SCM-I 2CO



Dimensions in mm

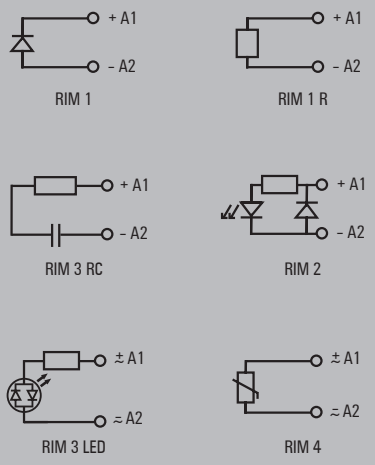
LED and protective modules for the SCM-I plug-in frame

Plug simply into the base module; reverse-connect protection. Connect parallel to coil.

Ordering data

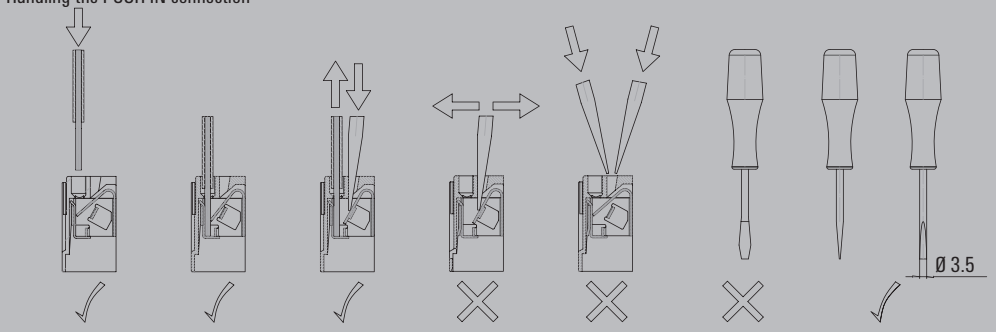
Description
Free Wheel diode 1N4007
Resistor 100 kΩ 1 Watt
RC element 6 ... 60 V AC; 470 Ω / 220 nF
RC element 110 ... 230 V AC; 4.7 Ω / 10 nF
Varistor protection 24 V; S07K30
Varistor protection 110 V; S07K130
Varistor protection 230 V; S07K275
LED
LED 6 ... 24 V DC with free wheel diode
LED 24 ... 60 V DC with free wheel diode
LED 110 ... 230 V DC with free wheel diode
LED 6 ... 24 V DC / V AC
LED 24 ... 60 V DC / V AC
LED 110 ... 230 V DC / V AC

Type	Qty.	Order No.	Order No.
RIM-I 1 6/230V	10	**8869580000**	
RIM-I 1 R 110/230V	10	**8870830000**	
RIM-I 3 6/60VAC	10	**8869770000**	
RIM-I 3 110/230VAC	10	**8869790000**	
RIM-I 4 24VUC	10	**8869710000**	
RIM-I 4 110VUC	10	**8869730000**	
RIM-I 4 230VUC	10	**8869750000**	
		red	**green**
RIM-I 2 6/24VDC	10	**8869590000**	**8869600000**
RIM-I 2 24/60VDC	10	**8869670000**	**8869680000**
RIM-I 2 110/230VDC	10	**8869690000**	**8869700000**
RIM-I 3 6/24VUC	10	**8869630000**	**8869640000**
RIM-I 3 24/60VUC	10	**8869610000**	**8869620000**
RIM-I 3 110/230VUC	10	**8869650000**	**8869660000**



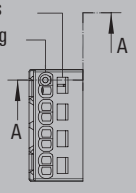
Warnings and notes on usage

Handling the PUSH IN connection

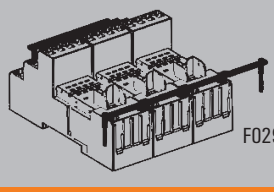


Screwdriver
SD 0.6 x 3.5 x 100
9008330000

Release openings
Wire-connection opening



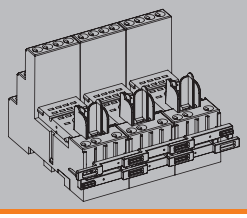
Cross-connector mounting for PUSH IN base



F0295-A

If more than two poles need to be connected with stacked cross-connector ridges, then the lower ridge must be stripped and shortened to the proper length so it will fit.

Cross-connector mounting for screw base

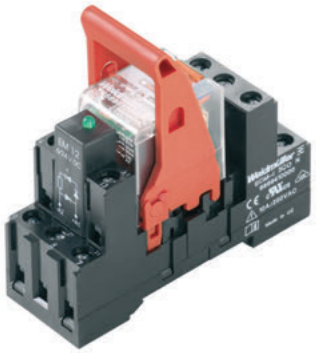


RCM KIT

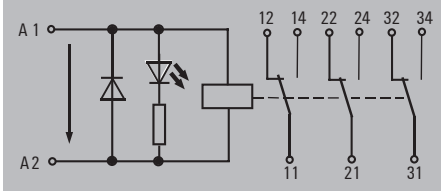
3 CO contacts, AC/ DC coil

Modular system comprising of:

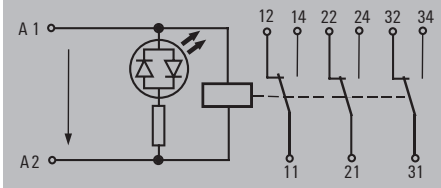
- Relay socket for rail mounting
- LED display unit (AC red / DC green)
- Retaining clip
- Pluggable relay modules
- Identification of coils (AC red / DC blue)
- Markers



DC-Version



AC-Version



Technical data

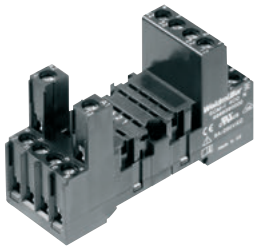
Output		
Rated switching voltage / Continuous current		250 V AC / 10 A
Max. switching voltage, AC		400 V
Inrush current		20 A / 20 ms
Min. switching power		100 mA / 5 V, 10 V / 10 mA, 24 V / 1 mA
DC / AC Switching capacity (resistive), max.		240 W @ 24 V / 2500 VA
Contact material		AgNi 90/10
Mechanical service life		AC coil 20 x 10^6 Switch. cycles, DC coil 30 x 10^6 Switch. cycles
Max. switching frequency at rated load		0.1 Hz
Rated data		
Ambient temperature (operational)		-40 °C...70 °C
Storage temperature		-40 °C...70 °C
Humidity		40 °C / 93 % rel. humidity, no condensation
Approvals		CE; EAC; GL
Insulation coordination (EN 50178)		
Rated voltage		250 V
Impulse withstand voltage		5 kV (1.2/50 µs)
Dielectric strength input – output		2.5 KV_{eff} / 1 min.
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		
Creepage and clearance distance input – output		≥ 4 mm
Overvoltage category		III
Pollution degree		2
Dimensions		**Screw connection**
Clamping range (nominal / min. / max.)	mm^2	2.5 / 0.5 / 2.5
Depth x width x height	mm	72 / 28 / 74
Note		

Ordering data

		24 V DC 3CO LED	24 V AC 3CO LED	115 V AC 3CO LED	230 V AC 3CO LED
Input					
Rated control voltage		24 V DC	24 V AC	115 V AC	230 V AC
Rated current AC / DC		/ 31.3 mA	41.6 mA /	8.8 mA /	4.3 mA /
Power rating		740 mW	1.0 VA	1.0 VA	1.0 VA
Pull-in/drop-out voltage, typ.		18 V / 2.4 V DC	19.2 V / 7.2 V AC	92 V / 34.5 V AC	184 V / 69 V AC
Status indicator		Green LED, Mechanical	red LED, Mechanical	red LED, Mechanical	red LED, Mechanical
Protective circuit		Integrated free-wheel diode			
Output					
Switch-on delay		≤ 15 ms	≤ 15 ms	≤ 15 ms	≤ 15 ms
Switch-off delay		≤ 10 ms	≤ 10 ms	≤ 10 ms	≤ 10 ms
Ordering data					
Screw connection	Type	RCMKIT-I 24VDC 3CO LD	RCMKIT-I 24VAC 3CO LD	RCMKIT-I 115VAC 3CO LD	RCMKIT-I 230VAC 3CO LD
	Order No.	**8920980000**	**8920990000**	**8921010000**	**8921020000**
	Type				
	Order No.				
Ordering data Spare relay (pluggable)					
	Type	RCM370024	RCM370524	RCM370615	RCM370730
	Order No.	**8690040000**	**8690030000**	**8689980000**	**8690000000**
Note					

Accessories for RCM KIT relay modules, 3 CO

Plug-in module with screw connection



Technical data

Rated current	10 A
Rated voltage	240 V AC
Dielectric strength of coil contacts	> 2500 V_{eff}
Ambient temperature (operational)	-45 °C ...+70 °C
Insulation group (VDE 0110b)	C / 250 V AC
Protection class (IEC 61810)	IP 20
Approvals	VDE, cURus, CSA
Connection cross-section	
- Solid-core wire	2 x 2.5 mm^2
- Stranded wire	2 x 2.5 mm^2
- with ferrule	2 x 1.5 mm^2
Rated torque acc. to IEC 61984 for screw connection	0.5 Nm / max. 0.7 Nm
Plug-in cycles	A (10)

Ordering data

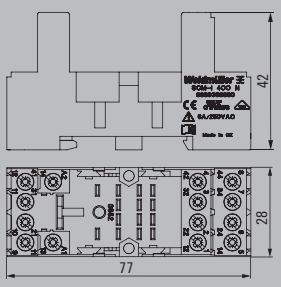
Description	Type	Qty.	Order No.
Plug-in module, snaps onto TS35 DIN mounting rail, 3-pole	SCM-I 3CO N		**8869410000**

Accessories

Description	Type	Qty.	Order No.
Plastic retaining clip	SCM-I CLIP N	10	**8875620000**
Metal retaining clip	SCM-I CLIP M	10	**8869450000**
Marker	SCM-I MARK	10	**8869460000**
Marker, Multicard	ESG 9/11 K MC neutral	200	**1857440000**
 Cross-connector for screw base, 6-pole	SCM-I QV S	10	**1132080000**

Dimensions

SCM-I 3 CO N



Dimensions in mm

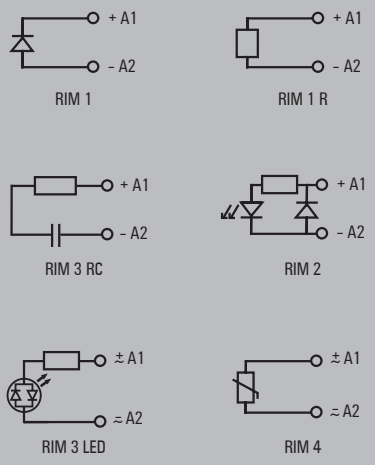
LED and protective modules for the SCM-I plug-in frame

Simply plug into the base module; reverse-connect protection. Connect parallel to coil.

Ordering data

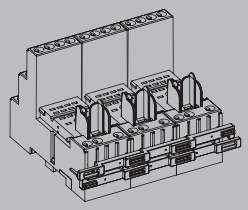
Description
Free Wheel diode 1N4007
Resistor 100 kΩ 1 Watt
RC element 6 ... 60 V AC; 470 Ω / 220 nF
RC element 110 ... 230 V AC; 4.7 Ω / 10 nF
Varistor protection 24 V; S07K30
Varistor protection 110 V; S07K130
Varistor protection 230 V; S07K275
LED
LED 6 ... 24 V DC with free wheel diode
LED 24 ... 60 V DC with free wheel diode
LED 110 ... 230 V DC with free wheel diode
LED 6 ... 24 V DC / V AC
LED 24 ... 60 V DC / V AC
LED 110 ... 230 V DC / V AC

Type	Qty.	Order No.	Order No.
RIM-I 1 6/230V	10	**8869580000**	
RIM-I 1 R 110/230V	10	**8870830000**	
RIM-I 3 6/60VAC	10	**8869770000**	
RIM-I 3 110/230VAC	10	**8869790000**	
RIM-I 4 24VUC	10	**8869710000**	
RIM-I 4 110VUC	10	**8869730000**	
RIM-I 4 230VUC	10	**8869750000**	
		red	**green**
RIM-I 2 6/24VDC	10	**8869590000**	**8869600000**
RIM-I 2 24/60VDC	10	**8869670000**	**8869680000**
RIM-I 2 110/230VDC	10	**8869690000**	**8869700000**
RIM-I 3 6/24VUC	10	**8869630000**	**8869640000**
RIM-I 3 24/60VUC	10	**8869610000**	**8869620000**
RIM-I 3 110/230VUC	10	**8869650000**	**8869660000**



Warnings and notes on usage

Cross-connector mounting for screw base

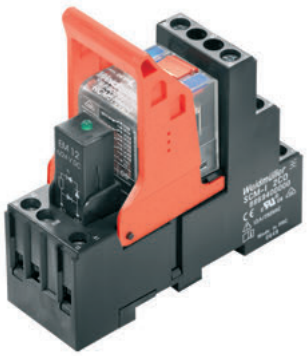


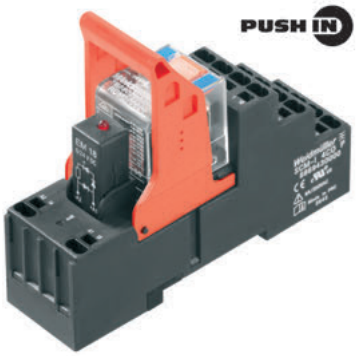
RCM KIT

4 CO contacts, AC/ DC coil

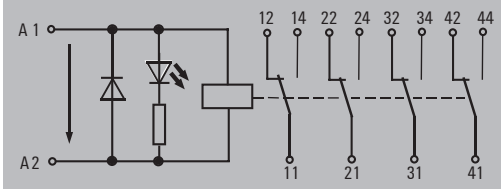
Modular system comprising of:
- relay socket for rail mounting
- LED display unit (AC red / DC green)
- retaining clip
- pluggable relays with coil identification (AC red / DC blue)
- Markers

Independent of connection system:
- Screw or PUSH IN connection system

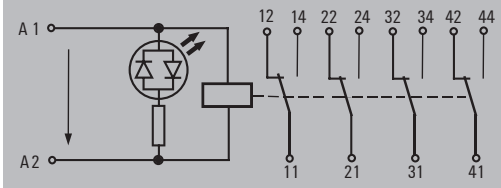




DC-Version



AC-Version



Technical data

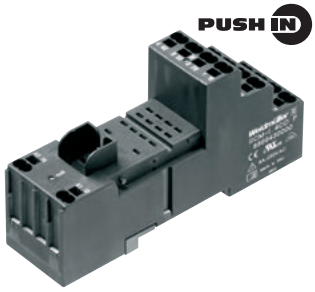
Output			
Rated switching voltage / Continuous current		250 V AC / 6 A	
Max. switching voltage, AC		240 V	
Inrush current		12 A / 20 ms	
Min. switching power		100 mA / 5 V, 10 V / 10 mA, 24 V / 1 mA	
DC / AC Switching capacity (resistive), max.		144 W @ 24 V / 1500 VA	
Contact material		AgNi 90/10	
Mechanical service life		AC coil 20 x 10^6 Switch. cycles, DC coil 30 x 10^6 Switch. cycles	
Max. switching frequency at rated load		0.1 Hz	
Rated data			
Ambient temperature (operational)		-40 °C...70 °C	
Storage temperature		-40 °C...70 °C	
Humidity		40 °C / 93 % rel. humidity, no condensation	
Approvals		CE; EAC; GL	
Insulation coordination (EN 50178)			
Rated voltage		250 V	
Impulse withstand voltage		5 kV (1.2/50 µs)	
Dielectric strength input – output		2.5 KV_{eff} / 1 min.	
Dielectric strength, contact / contact			
Dielectric strength to mounting rail			
Creepage and clearance distance input – output		≥ 4 mm	
Overvoltage category		III	
Pollution degree		2	
Dimensions		**Screw connection**	**PUSH IN spring connection**
Clamping range (nominal / min. / max.)	mm^2	2.5 / 0.5 / 2.5	1.5 / 0.75 / 1.5
Depth x width x height	mm	79 / 28 / 77	79 / 28 / 98
Note			

Ordering data

		24 V DC 4CO LED	24 V AC 4CO LED	115 V AC 4CO LED	230 V AC 4CO LED
Input					
Rated control voltage		24 V DC	24 V AC	115 V AC	230 V AC
Rated current AC / DC		/ 31.3 mA	41.6 mA /	8.8 mA /	4.3 mA /
Power rating		740 mW	1.0 VA	1.0 VA	1.0 VA
Pull-in/drop-out voltage, typ.		18 V / 2.4 V DC	19.2 V / 7.2 V AC	92 V / 34.5 V AC	184 V / 69 V AC
Status indicator		Green LED, Mechanical	red LED, Mechanical	red LED, Mechanical	red LED, Mechanical
Protective circuit		Integrated free-wheel diode			
Output					
Switch-on delay		≤ 15 ms	≤ 15 ms	≤ 15 ms	≤ 15 ms
Switch-off delay		≤ 10 ms	≤ 10 ms	≤ 10 ms	≤ 10 ms
Ordering data					
Screw connection	Type	RCMKIT-I 24VDC 4CO LD	RCMKIT-I 24VAC 4CO LD	RCMKIT-I 115VAC 4CO LD	RCMKIT-I 230VAC 4CO LD
	Order No.	**8921030000**	**8921040000**	**8921050000**	**8921060000**
PUSH IN connection	Type	RCMKITP-I 24VDC 4CO LD	RCMKITP-I 24VAC 4CO LD	RCMKITP-I 115VAC 4CO LD	RCMKITP-I 230VAC 4CO LD
	Order No.	**8921120000**	**8921130000**	**8921140000**	**8921150000**
Ordering data Spare relay (pluggable)					
	Type	RCM570024	RCM570524	RCM570615	RCM570730
	Order No.	**8690200000**	**8690110000**	**1180800000**	**1181100000**
Note					

Accessories for RCM KIT relay modules, 4 CO

Plug-in module with PUSH IN connection

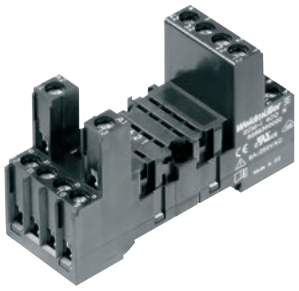


Plug-in module with screw connection

Standard height

Plug-in module with screw connection

Low height



Technical data

Rated current	6 A	6 A	6 A
Rated voltage	240 V AC	240 V AC	240 V AC
Dielectric strength of coil contacts	> 2500 V_{eff}	> 2500 V_{eff}	> 2500 V_{eff}
Ambient temperature (operational)	-45 °C ...+70 °C	-45 °C ...+70 °C	-45 °C ...+70 °C
Insulation group (VDE 0110b)	C / 250 V AC	C / 250 V AC	C / 250 V AC
Protection class (IEC 61810)	IP 20	IP 20	IP 20
Stripping length	12 mm	8 mm	8 mm
Approvals	VDE, cURus, CSA	VDE, cURus, CSA	VDE, cURus, CSA
Connection cross-section			
- Solid-core wire	1 x 0.75/1/1.5 mm^2 / 2 x 0.75/1 mm^2	2 x 2.5 mm^2	2 x 2.5 mm^2
- Stranded wire	1 x 0.75/1/1.5 mm^2 / 2 x 0.75/1 mm^2	2 x 2.5 mm^2	2 x 2.5 mm^2
- with ferrule	1 x 0.75/1 mm^2 / 2 x 0.75 mm^2	2 x 1.5 mm^2	2 x 1.5 mm^2
Rated torque acc. to IEC 61984 for screw connection		0.5 Nm / max. 0.7 Nm	0.5 Nm / max. 0.7 Nm
Plug-in cycles	A (10)	A (10)	A (10)

Ordering data

Description	Type	Qty.	Order No.
Plug-in module, snaps onto TS35 DIN mounting rail, 4-pole	SCM-I 4CO P		**8869430000**
	SCM-I 4CO		**8869420000**
	SCM-I 4CO N		**8869390000**

Accessories

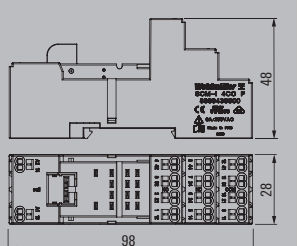
Description	Type	Qty.	Order No.
Plastic retaining clip	SCM-I CLIP P	10	**8869440000**
Plastic retaining clip			
Metal retaining clip	SCM-I CLIP M	10	**8869450000**
Marker	SCM-I MARK	10	**8869460000**
Marker, Multicard	ESG 9/11 K MC neutral	200	**1857440000**
 Cross-connector for PUSH IN base, 2-pole, 12 A	SCM-I QV P		**8870850000**
 Cross-connector for screw base, 6-pole	SCM-I QV S		**1132080000**

Description	Type	Qty.	Order No.
Plastic retaining clip	SCM-I CLIP P	10	**8869440000**
Plastic retaining clip			
Metal retaining clip	SCM-I CLIP M	10	**8869450000**
Marker	SCM-I MARK	10	**8869460000**
Marker, Multicard	ESG 9/11 K MC neutral	200	**1857440000**
Cross-connector for PUSH IN base, 2-pole, 12 A			
Cross-connector for screw base, 6-pole	SCM-I QV S		**1132080000**

Description	Type	Qty.	Order No.
Plastic retaining clip			
Plastic retaining clip	SCM-I CLIP N	10	**8875620000**
Metal retaining clip	SCM-I CLIP M	10	**8869450000**
Marker	SCM-I MARK	10	**8869460000**
Marker, Multicard	ESG 9/11 K MC neutral	200	**1857440000**
Cross-connector for PUSH IN base, 2-pole, 12 A			
Cross-connector for screw base, 6-pole	SCM-I QV S		**1132080000**

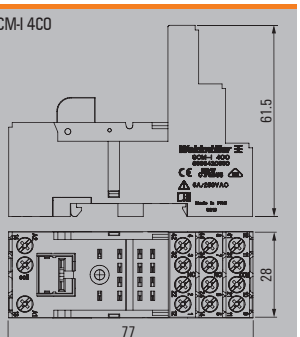
Dimensions

SCM-I 4CO P



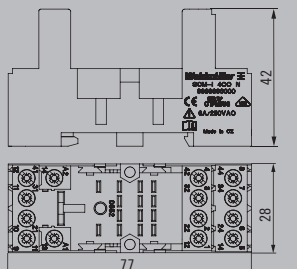
Dimensions

SCM-I 4CO



Dimensions

SCM-I 4CO N



Dimensions in mm

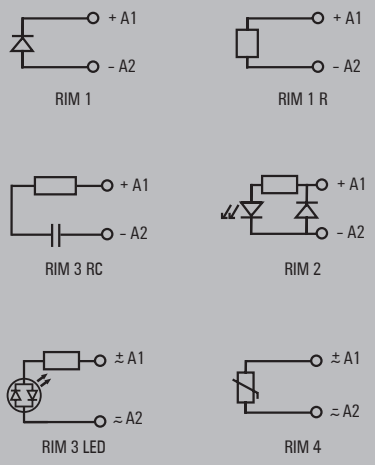
LED and protective modules for the SCM-I plug-in frame

Simply plug into the base module; reverse-connect protection. Connect parallel to coil.

Ordering data

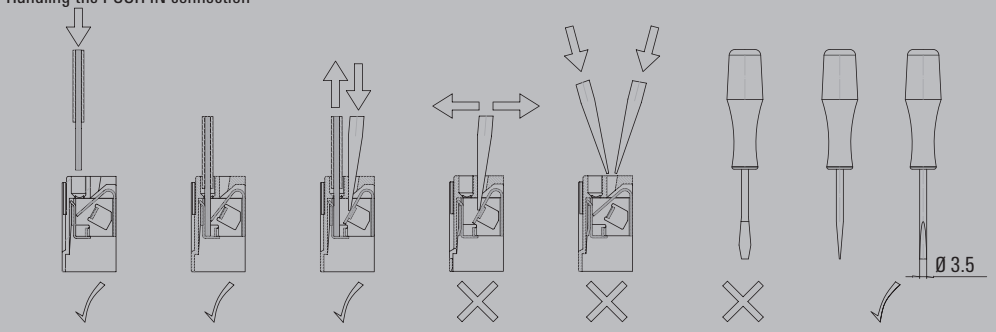
Description
Free Wheel diode 1N4007
Resistor 100 kΩ 1 Watt
RC element 6 ... 60 V AC; 470 Ω / 220 nF
RC element 110 ... 230 V AC; 4.7 Ω / 10 nF
Varistor protection 24 V; S07K30
Varistor protection 110 V; S07K130
Varistor protection 230 V; S07K275
LED
LED 6 ... 24 V DC with free wheel diode
LED 24 ... 60 V DC with free wheel diode
LED 110 ... 230 V DC with free wheel diode
LED 6 ... 24 V DC / V AC
LED 24 ... 60 V DC / V AC
LED 110 ... 230 V DC / V AC

Type	Qty.	Order No.	Order No.
RIM-I 1 6/230V	10	**8869580000**	
RIM-I 1 R 110/230V	10	**8870830000**	
RIM-I 3 6/60VAC	10	**8869770000**	
RIM-I 3 110/230VAC	10	**8869790000**	
RIM-I 4 24VUC	10	**8869710000**	
RIM-I 4 110VUC	10	**8869730000**	
RIM-I 4 230VUC	10	**8869750000**	
		red	**green**
RIM-I 2 6/24VDC	10	**8869590000**	**8869600000**
RIM-I 2 24/60VDC	10	**8869670000**	**8869680000**
RIM-I 2 110/230VDC	10	**8869690000**	**8869700000**
RIM-I 3 6/24VUC	10	**8869630000**	**8869640000**
RIM-I 3 24/60VUC	10	**8869610000**	**8869620000**
RIM-I 3 110/230VUC	10	**8869650000**	**8869660000**



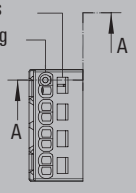
Warnings and notes on usage

Handling the PUSH IN connection

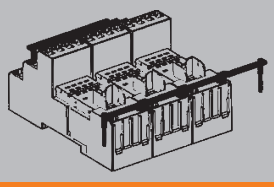


Screwdriver
SD 0.6 x 3.5 x 100
9008330000

Release openings
Wire-connection opening

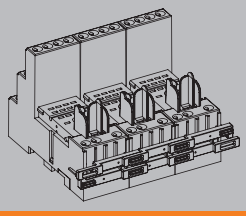


Cross-connector mounting for PUSH IN base



If more than two poles need to be connected with stacked cross-connector ridges, then the lower ridge must be stripped and shortened to the proper length so it will fit.

Cross-connector mounting for screw base

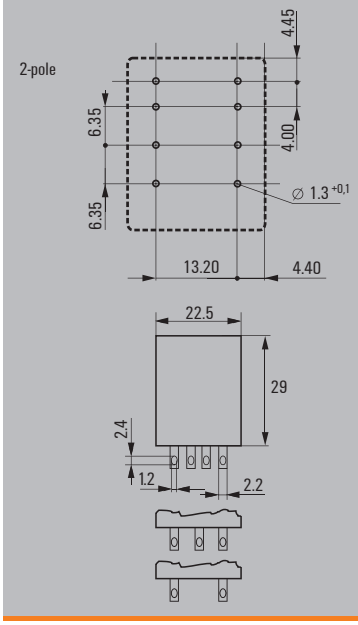


RCM relay

2 CO contacts, AC/DC coil

- 3000 VA switching capacity
- Solder and plug connection
- Safe-to-touch test button, selectable locking
- White labelling panel
- Identification of coils (AC red / DC blue)

Circuit diagram
Dimensions in mm



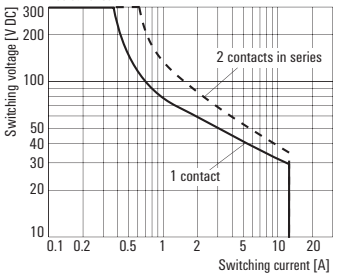
Technical data

Output		
Rated switching voltage / Continuous current		240 V AC / 12 A
Max. switching voltage, AC		400 V
Inrush current		24 A / 20 ms
Min. switching power		100 mA / 5 V, 10 V / 10 mA, 24 V / 1 mA
DC / AC Switching capacity (resistive), max.		288 W @ 24 V / 3000 VA
Contact material		AgNi 90/10
Mechanical service life		AC coil 20 x 10^6 Switch. cycles, DC coil 30 x 10^6 Switch. cycles
Max. switching frequency at rated load		0.1 Hz
Rated data		
Ambient temperature (operational)		-40 °C...70 °C
Storage temperature		-40 °C...85 °C
Humidity		40 °C / 93 % rel. humidity, no condensation
Approvals		CSA; cURus; EAC; VDE
Insulation coordination (EN 50178)		
Rated voltage		250 V
Impulse withstand voltage		5 kV (1.2/50 µs)
Dielectric strength input – output		2.5 KV_{eff} / 1 min.
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		
Creepage and clearance distance input – output		≥ 4 mm
Overvoltage category		III
Pollution degree		2
Dimensions		**Plug-in connection**
Depth x width x height	mm	29 / 22.5 / 28

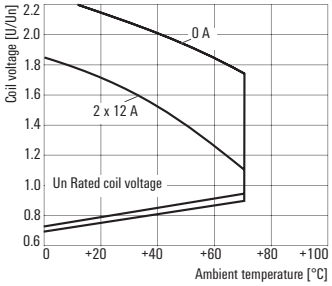
Note

Applications

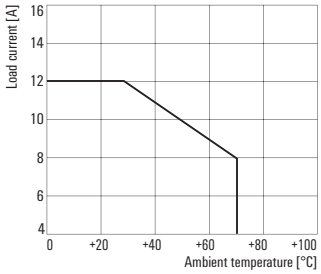
DC load breaking capacity
Resistive load



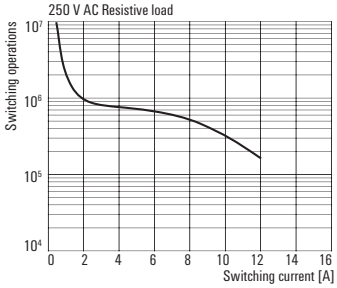
Operating voltage range DC



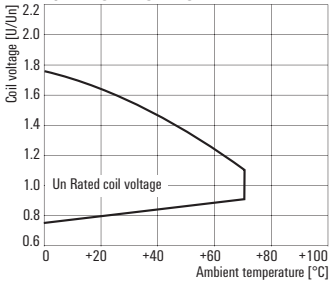
Derating curve
in combination with plug-in module



Electrical endurance
250 V AC Resistive load



Operating voltage range AC



RCM relay
2 CO contacts, AC/DC coil

Type code RCM [ ] [ ] [ ] [ ]

Type RIDER Control Multiple

Contacts
- 2 2 CO contacts
- 3 3 CO contacts
- 5 4 CO contacts

Contact material
- 7 AgNi 90/10, with test button
- 8 AgNi 90/10 hgp, with test button

Type of construction
- 0 Standard, 2.8 mm Faston

		with LED	with LED +diode
DC coil			
006	6 V DC	L06	
012	12 V DC	L12	AB2
024	24 V DC	L24	AC4
048	48 V DC	L48	AE8
060	60 V DC	L60	
110	110 V DC	M10	BB0
220	220 V DC	N20	
AC coil			
506	6 V AC	R06	
512	12 V AC	R12	
524	24 V AC	R24	
548	48 V AC	R48	
615	115 V AC	S15	
730	230 V AC	T30	

Ordering data

		12 V DC 2CO	24 V DC 2CO	48 V DC 2CO	110 V DC 2CO
Input					
Rated control voltage		12 V DC	24 V DC	48 V DC	110 V DC
Rated current AC / DC		/ 62.5 mA	/ 31.3 mA	/ 15.6 mA	/ 6.8 mA
Power rating		750 mW	750 mW	750 mW	750 mW
Pull-in/drop-out voltage, typ.		9 V / 1.2 V DC	18 V / 2.4 V DC	36 V / 4.8 V DC	82.5 V / 11.5 V DC
Output					
Switch-on delay		≤ 15 ms	≤ 15 ms	≤ 15 ms	≤ 15 ms
Switch-off delay		≤ 10 ms	≤ 10 ms	≤ 10 ms	≤ 10 ms
Ordering data					
Without LED	Type	RCM270012	RCM270024	RCM270048	RCM270110
AgNi 90/10	Order No.	**8689840000**	**8689860000**	**8689880000**	**8689900000**
with LED	Type	RCM270L12	RCM270L24	RCM270L48	
AgNi 90/10	Order No.	**8689850000**	**8689870000**	**8689890000**	
With LED + freewheel diode	Type	RCM270AB2	RCM270AC4		
AgNi 90/10	Order No.	**8957020000**	**8957030000**		
	Type				
	Order No.				
Note					

Ordering data

		24 V AC 2CO	48 V AC 2CO	115 V AC 2CO	230 V AC 2CO
Input					
Rated control voltage		24 V AC	48 V AC	115 V AC	230 V AC
Rated current AC / DC		41.6 mA /	21.3 mA /	8.8 mA /	4.3 mA /
Power rating		1.0 VA	1.0 VA	1.0 VA	1.0 VA
Pull-in/drop-out voltage, typ.		38.4 V / 14.4 V AC	48 V / 18 V AC	92 V / 34.5 V AC	184 V / 69 V AC
Output					
Switch-on delay		≤ 15 ms	≤ 15 ms	≤ 15 ms	≤ 15 ms
Switch-off delay		≤ 10 ms	≤ 10 ms	≤ 10 ms	≤ 10 ms
Ordering data					
Without LED	Type	RCM270524	RCM270548	RCM270615	RCM270730
AgNi 90/10	Order No.	**8689760000**	**8689780000**	**8689800000**	**8689820000**
with LED	Type	RCM270R24		RCM270S15	RCM270T30
AgNi 90/10	Order No.	**8689770000**		**8689810000**	**8689830000**
	Type				
	Order No.				
	Type				
	Order No.				
Note					

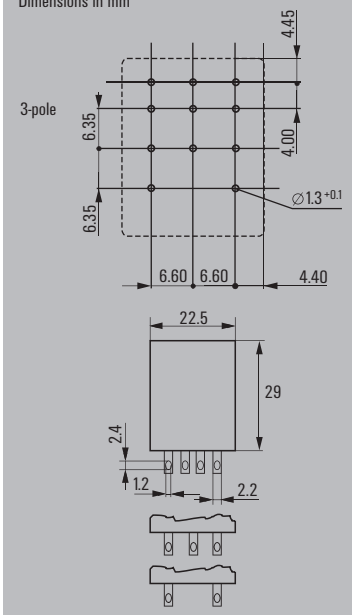
RCM relay

3 CO contacts, AC/DC coil

- 2500 VA switching capacity
- Solder and plug connection
- Safe-to-touch test button, selectable locking
- White labelling panel
- Identification of coils (AC red / DC blue)

Circuit diagram

Dimensions in mm



Technical data

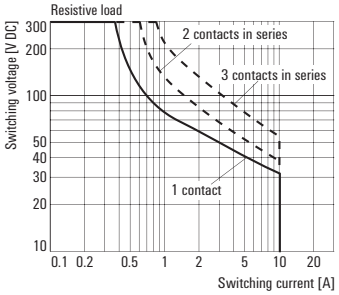
Output		
Rated switching voltage / Continuous current		240 V AC / 10 A
Max. switching voltage, AC		400 V
Inrush current		20 A / 20 ms
Min. switching power		100 mA / 5 V, 10 V / 10 mA, 24 V / 1 mA
DC / AC Switching capacity (resistive), max.		240 W @ 24 V / 2500 VA
Contact material		AgNi 90/10
Mechanical service life		AC coil 20 x 10^6 Switch. cycles, DC coil 30 x 10^6 Switch. cycles
Max. switching frequency at rated load		0.1 Hz
Rated data		
Ambient temperature (operational)		-40 °C...70 °C
Storage temperature		-40 °C...85 °C
Humidity		40 °C / 93 % rel. humidity, no condensation
Approvals		CSA; cURus; EAC; VDE
Insulation coordination (EN 50178)		
Rated voltage		250 V
Impulse withstand voltage		5 kV (1.2/50 µs)
Dielectric strength input – output		2.5 KV_{eff} / 1 min.
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		
Creepage and clearance distance input – output		≥ 4 mm
Overvoltage category		III
Pollution degree		2
Dimensions		**Plug-in connection**
Depth x width x height	mm	29 / 22.5 / 28

Note

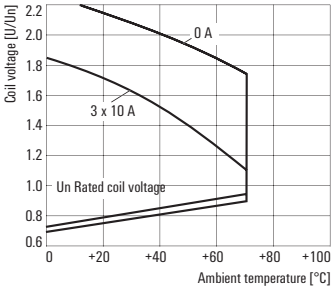
Applications

DC load breaking capacity

Resistive load

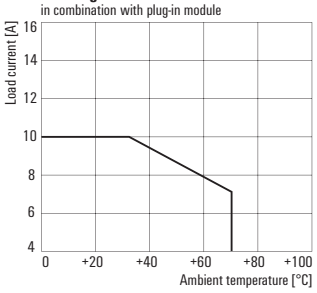


Operating voltage range DC



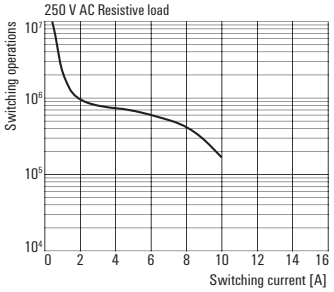
Derating curve

in combination with plug-in module

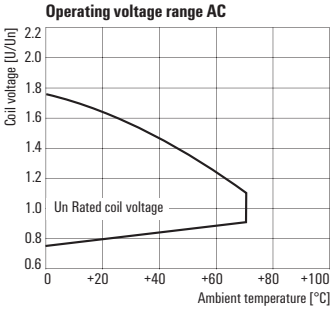


Electrical endurance

250 V AC Resistive load



Operating voltage range AC



RCM relay
3 CO contacts, AC/DC coil

Type code RCM ☐ ☐ ☐ ☐ ☐

Type RIDER Control Multiple

Contacts
- 2 2 CO contacts
- 3 3 CO contacts
- 5 4 CO contacts

Contact material
- 7 AgNi 90/10, with test button
- 8 AgNi 90/10 hgp, with test button

Type of construction
- 0 Standard, 2.8 mm Faston

		with LED	with LED +diode
DC coil			
006	6 V DC	L06	
012	12 V DC	L12	AB2
024	24 V DC	L24	AC4
048	48 V DC	L48	AE8
060	60 V DC	L60	
110	110 V DC	M10	BB0
220	220 V DC	N20	
AC coil			
506	6 V AC	R06	
512	12 V AC	R12	
524	24 V AC	R24	
548	48 V AC	R48	
615	115 V AC	S15	
730	230 V AC	T30	

Ordering data

		12 V DC 3CO	24 V DC 3CO	48 V DC 3CO	110 V DC 3CO
Input					
Rated control voltage		12 V DC	24 V DC	48 V DC	110 V DC
Rated current AC / DC		/ 62.5 mA	/ 31.3 mA	/ 15.6 mA	/ 6.8 mA
Power rating		750 mW	750 mW	750 mW	750 mW
Pull-in/drop-out voltage, typ.		9 V / 1.2 V DC	18 V / 2.4 V DC	36 V / 4.8 V DC	82.5 V / 11.5 V DC
Output					
Switch-on delay		≤ 15 ms	≤ 15 ms	≤ 15 ms	≤ 15 ms
Switch-off delay		≤ 10 ms	≤ 10 ms	≤ 10 ms	≤ 10 ms
Ordering data					
Without LED	Type	RCM370012	RCM370024	RCM370048	RCM370110
AgNi 90/10	Order No.	**8690020000**	**8690040000**	**8690060000**	**8690080000**
With LED + freewheel diode	Type	RCM370AB2	RCM370AC4		RCM370BB0
AgNi 90/10	Order No.	**8957090000**	**8957100000**		**8957120000**
	Type				
	Order No.				
	Type				
	Order No.				
Note					

Ordering data

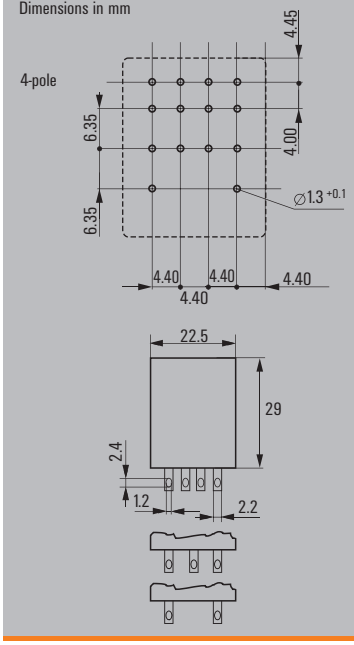
		24 V AC 3CO	48 V AC 3CO	115 V AC 3CO	230 V AC 3CO
Input					
Rated control voltage		24 V AC	48 V AC	115 V AC	230 V AC
Rated current AC / DC		41.6 mA /	21.3 mA /	8.8 mA /	4.3 mA /
Power rating		1.0 VA	1.0 VA	1.0 VA	1.0 VA
Pull-in/drop-out voltage, typ.		19.2 V / 7.2 V AC		92 V / 34.5 V AC	184 V / 69 V AC
Output					
Switch-on delay		≤ 15 ms	≤ 15 ms	≤ 15 ms	≤ 15 ms
Switch-off delay		≤ 10 ms	≤ 10 ms	≤ 10 ms	≤ 10 ms
Ordering data					
Without LED	Type	RCM370524		RCM370615	RCM370730
AgNi 90/10	Order No.	**8690030000**		**8689980000**	**8690000000**
with LED	Type	RCM370R24	RCM370R48	RCM370S15	RCM370T30
AgNi 90/10	Order No.	**8689950000**	**8689970000**	**8689990000**	**8690010000**
	Type				
	Order No.				
	Type				
	Order No.				
Note					

RCM relay

4 CO contacts, AC/DC coil

- 1500 VA switching capacity
- Solder and plug connection
- AC/DC versions also with gold-plated contacts
- Safe-to-touch test button, selectable locking
- White labelling panel
- Identification of coils (AC red / DC blue)

Circuit diagram
Dimensions in mm



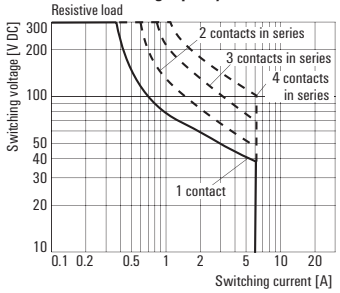
Technical data

Output		
Rated switching voltage / Continuous current		240 V AC / 6 A
Max. switching voltage, AC		240 V
Inrush current		12 A / 20 ms
Min. switching power		100 mA / 5 V, 10 V / 10 mA, 24 V / 1 mA
DC / AC Switching capacity (resistive), max.		144 W @ 24 V / 1500 VA
Contact material		AgNi 90/10
Mechanical service life		AC coil 20 x 10^6 Switch. cycles, DC coil 30 x 10^6 Switch. cycles
Max. switching frequency at rated load		0.1 Hz
Rated data		
Ambient temperature (operational)		-40 °C...70 °C
Storage temperature		-40 °C...85 °C
Humidity		40 °C / 93 % rel. humidity, no condensation
Approvals		CSA; cURus; EAC; VDE
Insulation coordination (EN 50178)		
Rated voltage		250 V
Impulse withstand voltage		5 kV (1.2/50 µs)
Dielectric strength input – output		2.5 KV_{eff} / 1 min.
Dielectric strength, contact / contact		
Dielectric strength to mounting rail		
Creepage and clearance distance input – output		≥ 4 mm
Overvoltage category		III
Pollution degree		2
Dimensions		**Plug-in connection**
Depth x width x height	mm	29 / 22.5 / 28

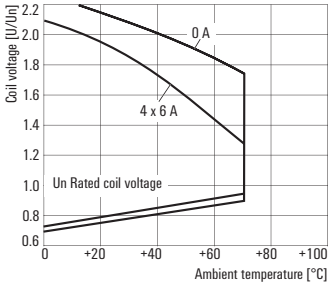
Note

Applications

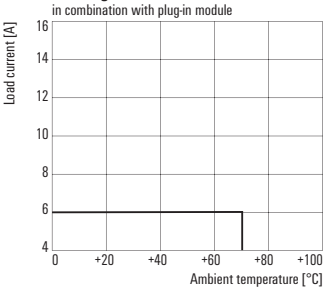
DC load breaking capacity
Resistive load



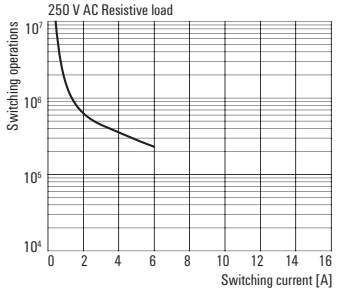
Operating voltage range DC



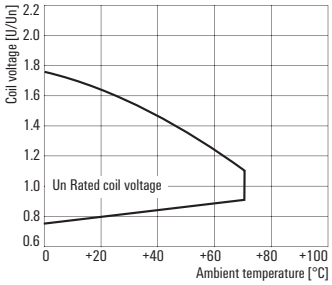
Derating curve
in combination with plug-in module



Electrical endurance
250 V AC Resistive load



Operating voltage range AC



RCM relay
4 CO contacts, AC/DC coil

Type code RCM [ ] [ ] [ ] [ ]

Type RIDER Control Multiple

Contacts
- 2 2 CO contacts
- 3 3 CO contacts
- 5 4 CO contacts

Contact material
- 7 AgNi 90/10, with test button
- 8 AgNi 90/10 hgp, with test button

Type of construction
- 0 Standard, 2.8 mm Faston

		with LED	with LED +diode
DC coil			
006	6 V DC	L06	
012	12 V DC	L12	AB2
024	24 V DC	L24	AC4
048	48 V DC	L48	AE8
060	60 V DC	L60	
110	110 V DC	M10	BB0
220	220 V DC	N20	
AC coil			
506	6 V AC	R06	
512	12 V AC	R12	
524	24 V AC	R24	
548	48 V AC	R48	
615	115 V AC	S15	
730	230 V AC	T30	

Ordering data

		12 V DC 4CO	24 V DC 4CO	48 V DC 4CO	110 V DC 4CO
Input					
Rated control voltage		12 V DC	24 V DC	48 V DC	110 V DC
Rated current AC / DC		/ 62.5 mA	/ 31.3 mA	/ 15.6 mA	/ 6.8 mA
Power rating		750 mW	750 mW	750 mW	750 mW
Pull-in/drop-out voltage, typ.		9 V / 1.2 V DC	18 V / 2.4 V DC	36 V / 4.8 V DC	82.5 V / 11.5 V DC
Output					
Switch-on delay		≤ 15 ms	≤ 15 ms	≤ 15 ms	≤ 15 ms
Switch-off delay		≤ 10 ms	≤ 10 ms	≤ 10 ms	≤ 10 ms
Ordering data					
Without LED	Type	RCM570012	RCM570024	RCM570048	RCM570110
AgNi 90/10	Order No.	**8054360000**	**8690200000**	**8074670000**	**8074700000**
with LED	Type	RCM570L12	RCM570L24	RCM570L48	RCM570M10
AgNi 90/10	Order No.	**8690180000**	**8690220000**	**8690230000**	**8690240000**
Without LED	Type	RCM580012	RCM580024	RCM580048	
AgNi 5µm Au	Order No.	**on request**	**8694460000**	**on request**	
With LED + freewheel diode	Type	RCM570AB2	RCM570AC4	RCM570AE8	RCM570BB0
AgNi 90/10	Order No.	**8957160000**	**8957170000**	**8957180000**	**8957190000**
Note					

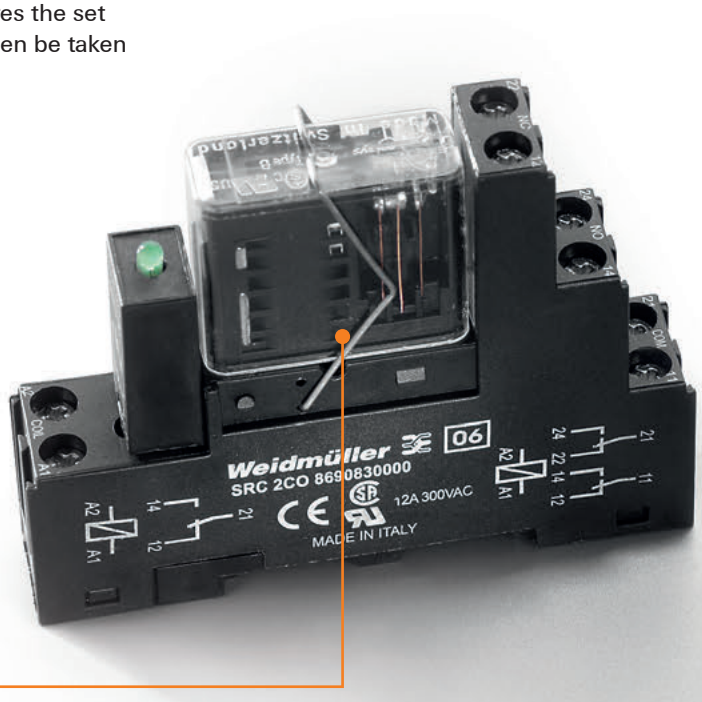
Ordering data

		24 V AC 4CO	48 V AC 4CO	115 V AC 4CO	230 V AC 4CO
Input					
Rated control voltage		24 V AC	48 V AC	115 V AC	230 V AC
Rated current AC / DC		41.6 mA /	21.3 mA /	8.8 mA /	4.3 mA /
Power rating		1.0 VA	1.0 VA	1.0 VA	1.0 VA
Pull-in/drop-out voltage, typ.		19.2 V / 7.2 V AC	38.4 V / 14.4 V AC	92 V / 34.5 V AC	184 V / 69 V AC
Output					
Switch-on delay		≤ 15 ms	≤ 15 ms	≤ 15 ms	≤ 15 ms
Switch-off delay		≤ 10 ms	≤ 10 ms	≤ 10 ms	≤ 10 ms
Ordering data					
Without LED	Type	RCM570524	RCM570548	RCM570615	RCM570730
AgNi 90/10	Order No.	**8690110000**	**1180900000**	**1180800000**	**1181100000**
with LED	Type	RCM570R24	RCM570R48	RCM570S15	RCM570T30
AgNi 90/10	Order No.	**8690120000**	**8690130000**	**8690150000**	**8690160000**
Without LED	Type			RCM580615	RCM580730
AgNi 5µm Au	Order No.			**8824860000**	**7940007637**
	Type				
	Order No.				
Note					

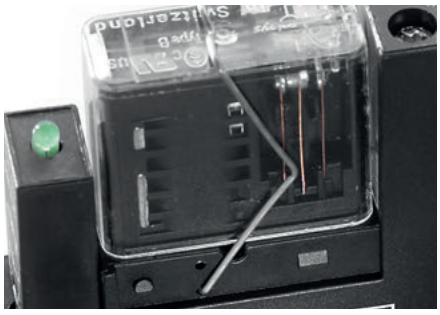
Signal monitoring in safety-critical circuits

Coupling relays with positively driven contacts

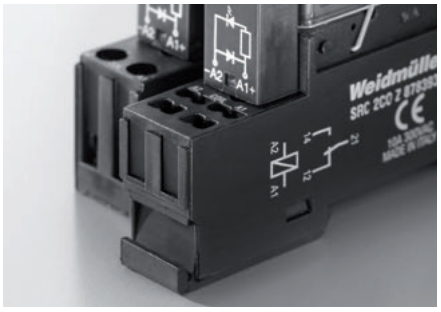
Weidmüller has expanded the RIDERSERIES to include a relay variant with force-guided contacts. Relays with force-guided contacts have a 99 % diagnostics coverage and an excellent reputation for use in safety systems. The contacts interlock mechanically with each other in order to ensure a synchronous switching status of both contacts. This guarantees that the alert contact will maintain the same switching status in the event of an error (for example, if the working contact melts from an overload). The controller (or safety controller) detects the alert contact and then compares the set point and actual values. If a difference occurs, measures can then be taken to protect equipment and human life.



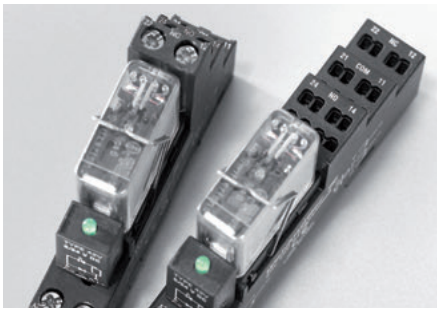
Resistant to vibration
A metal clip ensures that the relay module remains secure even under vibration / mechanical shock conditions.



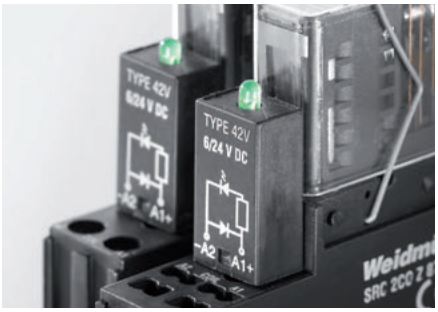
A variety of connection options
The base is available either with the proven screw clamp connection or the time saving tension clamp connection.



Convenient
Relay modules can be replaced quickly in the event of a fault without removing the connecting cable.

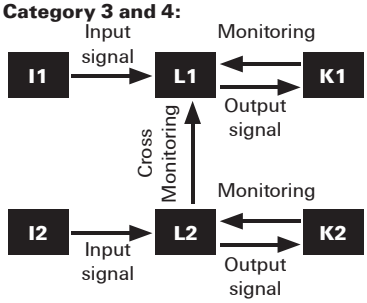


On site diagnostics
An easy to view LED display module with an integrated free wheeling diode is used to protect the series connected electronics.



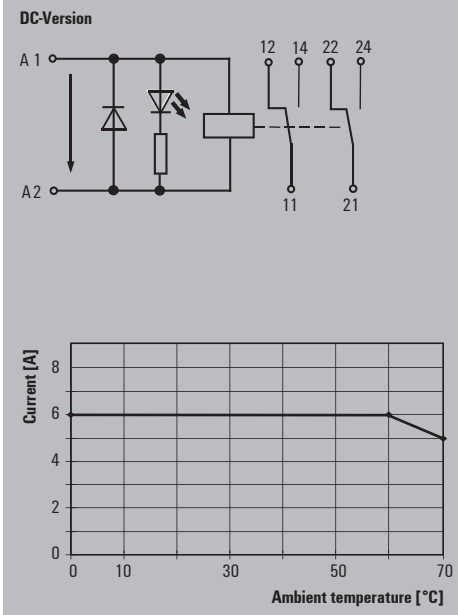
Safety-based output relay controls
By connecting two coupling relays together with a safety based controller or safety switching devices, it is possible to set up a safe and efficient control mechanism that complies with the structure specified in EN ISO 13849-1 (Category 3 and 4).

Category 3 and 4:



RCI KIT with forcibly guided contacts
2 CO DC coil

Modular system comprising of:
- Relay socket for rail mounting
- LED indicator unit
- Retaining clip
- Pluggable relay modules
- Markers



Technical data

Output			
Rated switching voltage / Continuous current		250 V AC / 6 A	
Max. switching voltage, AC		250 V	
Inrush current		15 A / 20 ms	
Min. switching power		100 mA / 5 V, 10 V / 10 mA, 24 V / 1 mA	
DC / AC Switching capacity (resistive), max.		144 W @ 24 V / 1500 VA	
Contact material		AgCuNi	
Mechanical service life		> 50 x 10^6 switching cycles	
Max. switching frequency at rated load		0.1 Hz	
Rated data			
Ambient temperature (operational)		-40 °C...70 °C	
Storage temperature		-40 °C...85 °C	
Humidity		40 °C / 95 % rel. humidity, no condensation	
Approvals		CE; EAC	
Insulation coordination (EN 50178)			
Rated voltage		250 V	
Impulse withstand voltage			
Dielectric strength input – output		2.5 KV_{eff} / 1 min.	
Dielectric strength, contact / contact			
Dielectric strength to mounting rail			
Creepage and clearance distance input – output		≥ 10 mm	
Overvoltage category		III	
Pollution degree		3	
Dimensions		**Screw connection**	**Tension clamp connection**
Clamping range (nominal / min. / max.)	mm^2	2.5 / 0.5 / 2.5	1.5 / 0.5 / 1.5
Depth x width x height	mm	62 / 15.5 / 77	63.2 / 16 / 97
Note			

Ordering data

	24 V DC 2CO LED
Input	
Rated control voltage	24 V DC
Rated current AC / DC	/ 31.6 mA
Power rating	700 mW
Pull-in/drop-out voltage, typ.	18 V / 2.4 V DC
Status indicator	Green LED
Protective circuit	Integrated free-wheel diode
Output	
Switch-on delay	≤ 12 ms
Switch-off delay	≤ 6 ms

Ordering data		
Screw connection	Type	RCIKIT 24VDC 2CO LD/FG
	Order No.	**1218410000**
Tension clamp conn.	Type	RCIKITZ 24VDC 2CO LD/FG
	Order No.	**1218390000**

Ordering data **Spare relay**		
	Type	RCI42424FG
	Order No.	**1218380000**

Note	

Power electronics

Power solid state relays

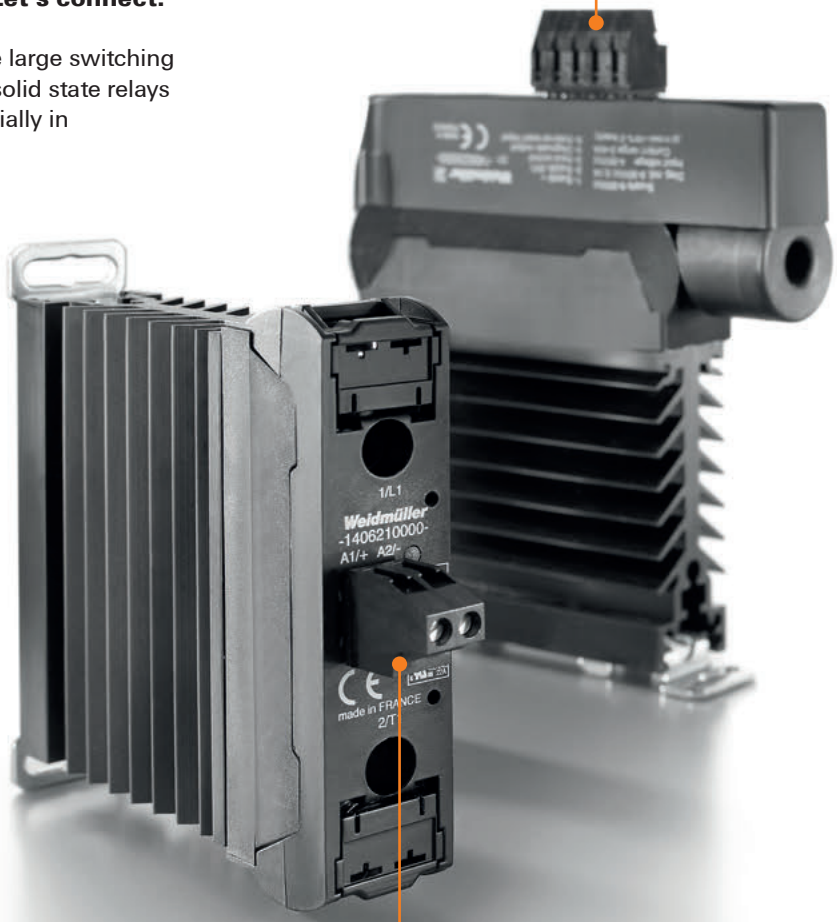
Switch high AC loads up to 75 A completely wear-free and noiseless

Your applications require switching capacities that conventional relays cannot handle? Our power solid state relays have an unrestricted service life – even in extreme environments. Let's connect.

Due to their high shock and vibration resistance, the large switching current and the option of simple fusing, our power solid state relays outperform by far any electromagnetic relays, especially in the process industry.

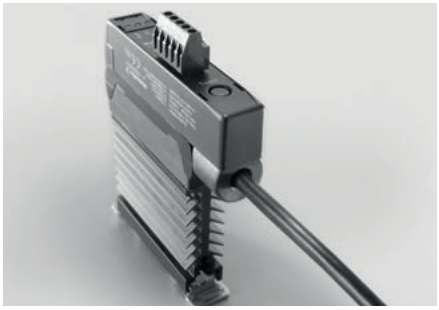
The compact modules have low power drive requirements, fast response times and operate odourless. The optional 1PH-Control-Unit allows the current monitoring of up to five parallel connected loads.

Our new power solid state relays are ideally suited for a multitude of diverse tasks: switching pipe trace heating, phase controls for motors and infrared heating, and permanent current monitoring.

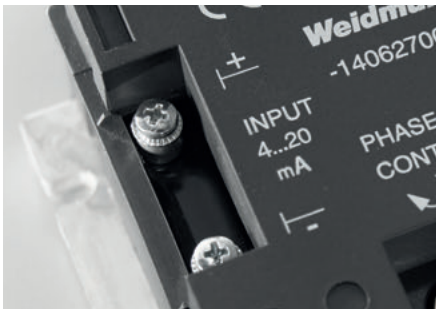


High current load integral
The high current load integral I^2t of 6,000 A^2s allows affordable conductor protection using standard circuit breakers for variants with 35 A load current.

Simple current monitoring
The optional, plug-on monitoring module warns when current drops by 16 % or more. Short-circuit, line-break and defective loads are detected.



Simple current control
The 70 A phase control with analog input (4 – 20 mA) allows you to set up heating controls or the power control of single-phase motors.

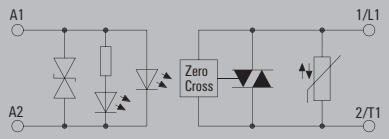


High output current
Ideal for controlling pipe trace heating due to the high output current of 50 or 75 A.
The compact design allows directing mounting at application site.

PSSR - 1-phase

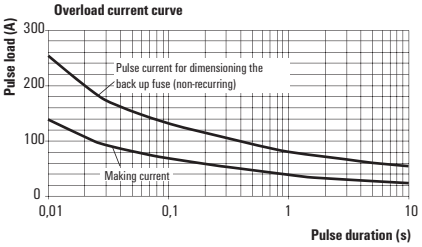
PSSR 24 V DC / 1 PH AC 25 A

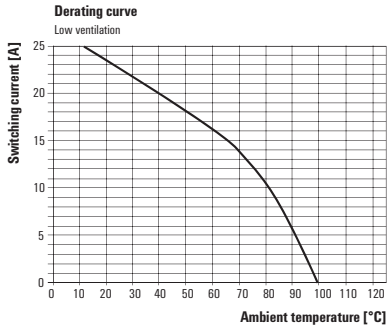
- Single-phase load circuit: 12–275 V AC / 25 A
- Ready-to-use: simply clip on and connect
- Zero-cross switch
- Noiseless, wear-free switching
- Attachable monitoring module



Technical data

Control side	
Rated control voltage	3.5...32 V DC
Power rating	≤ 280 mW
Cut-in / dropout voltage	3 V / 2 V DC
Input frequency	10 Hz
Status indicator	LED yellow
Protective circuit	Suppressor diode
Load side	
Solid-state type	Triac (zero-cross switch)
Rated switching voltage	12...275 V AC
Continuous current	20 A (AC 51) @ 40 °C, 3.5 A (AC 53)
Min. switching current	5 mA
Max. switching current	25 A
Voltage drop at max. load	0.85 V
Leakage current	< 1 mA
Short-circuit-proof / Protective circuit, load side	No / Varistor
Switch-on delay / Switch-off delay	≤ 10 ms / ≤ 10 ms
Output voltage frequency range	50 / 60 Hz
Pulse load, max. current	140 A (10 ms)
Load category	AC 51, AC 53
Load limit integral (I^2t) <10 ms	340 A^2s
General data	
Ambient temperature (operational)	-55 °C...100 °C
Storage temperature	-55 °C...125 °C
Humidity	40...85 % (indoor) no condensation
Approvals	CE; cURus; EAC
Standards	EN 60947-4-3, EN 60950, IEC 60335-1
Insulation coordination (EN 50178)	
Impulse withstand voltage	4 kV (1.2/50 µs)
Clearance and creepage distances for control side - load side	≥ 8 mm
Overvoltage category	III
Pollution degree	2





Dimensions		
Clamping range (rated / min. / max.) control side	mm^2	1.5 / 0.13 / 3.3
Clamping range (rated / min. / max.) load side	mm^2	10 / 1.5 / 10
Depth x width x height	mm	119.5 / 22.5 / 97
Note		

Ordering data

	Type	Qty.	Order No.
Screw connection	PSSR 24VDC/1PH AC 25A	1	1406200000

Note	Accessories and dimensioned drawings: refer to the Power Solid-state Relay Accessories page.

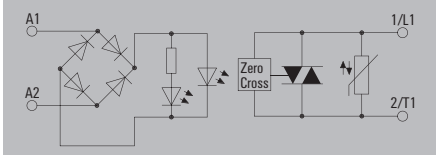
Accessories

Note	

PSSR - 1-phase

- Single-phase load circuit: 12–275 V AC / 25 A
- Ready-to-use: simply clip on and connect
- Zero-cross switch
- Noiseless, wear-free switching
- Attachable monitoring module

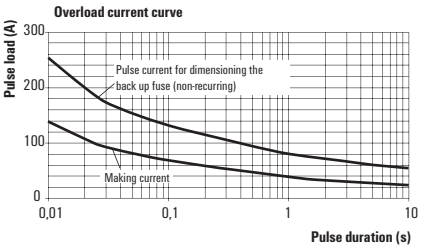
PSSR 230 V AC / 1 PH AC 25 A

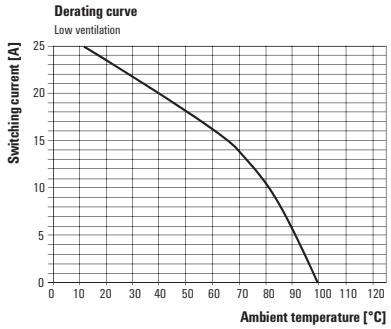


Technical data

Control side	
Rated control voltage	160...240 V AC/DC
Power rating	≤ 1.38 VA
Cut-in / dropout voltage	160 V / 5 V AC 160 V / 5 V DC
Input frequency	10 Hz
Status indicator	LED yellow
Protective circuit	Rectifier
Load side	
Solid-state type	Triac (zero-cross switch)
Rated switching voltage	12...275 V AC
Continuous current	20 A (AC 51) @ 40 °C, 3.5 A (AC 53)
Min. switching current	5 mA
Max. switching current	25 A
Voltage drop at max. load	0.85 V
Leakage current	< 1 mA
Short-circuit-proof / Protective circuit, load side	No / Varistor
Switch-on delay / Switch-off delay	≤ 30 ms / ≤ 30 ms
Output voltage frequency range	50 / 60 Hz
Pulse load, max. current	140 A (10 ms)
Load category	AC 51, AC 53
Load limit integral (I^2t) <10 ms	340 A^2s
General data	
Ambient temperature (operational)	-55 °C...100 °C
Storage temperature	-55 °C...125 °C
Humidity	40...85 % (indoor) no condensation
Approvals	CE; cURus; EAC
Standards	EN 60947-4-3, EN 60950, IEC 60335-1
Insulation coordination (EN 50178)	
Impulse withstand voltage	4 kV (1.2/50 µs)
Clearance and creepage distances for control side - load side	≥ 8 mm
Overvoltage category	III
Pollution degree	2

Dimensions		
Clamping range (rated / min. / max.) control side	mm^2	1.5 / 0.13 / 3.3
Clamping range (rated / min. / max.) load side	mm^2	10 / 1.5 / 10
Depth x width x height	mm	119.5 / 22.5 / 97
Note		





Ordering data

	Type	Qty.	Order No.
Screw connection	PSSR 230VAC/1PH AC 25A	1	1406220000

Note	Accessories and dimensioned drawings: refer to the Power Solid-state Relay Accessories page.

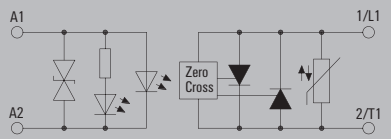
Accessories

Note	

PSSR - 1-phase

PSSR 24 V DC / 1 PH AC 35 A

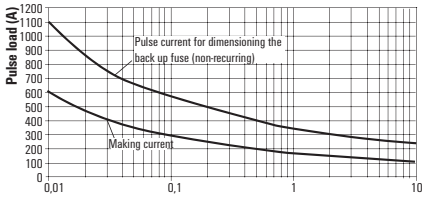
- Single-phase load circuit: 24–600 V AC / 35 A
- Ready-to-use: simply clip on and connect
- Zero-cross switch
- Noiseless, wear-free switching
- Attachable monitoring module
- High capacity for handling surge currents I^2t = 6000 A^2s (10 ms)
- Fusing with B circuit breaker possible



Technical data

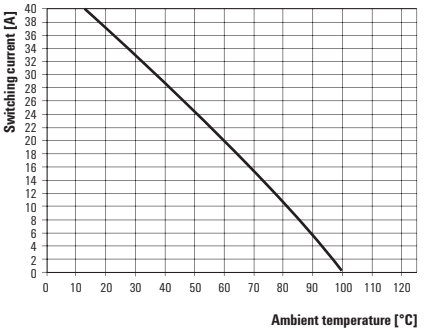
Control side	
Rated control voltage	3.5...32 V DC
Power rating	≤ 280 mW
Cut-in / dropout voltage	3 V / 2 V DC
Input frequency	10 Hz
Status indicator	LED yellow
Protective circuit	Suppressor diode
Load side	
Solid-state type	Thyristor (zero-cross switch)
Rated switching voltage	24...600 V AC
Continuous current	24 A (AC 51) @ 40°C, 7 A (AC 53)
Min. switching current	5 mA
Max. switching current	50 A
Voltage drop at max. load	< 1 V
Leakage current	< 1 mA
Short-circuit-proof / Protective circuit, load side	No / Varistor
Switch-on delay / Switch-off delay	≤ 10 ms / ≤ 10 ms
Output voltage frequency range	50 / 60 Hz
Pulse load, max. current	600 A (10 ms)
Load category	AC 51, AC 53
Load limit integral (I^2t) <10 ms	6000 A^2s
General data	
Ambient temperature (operational)	-55 °C...100 °C
Storage temperature	-55 °C...125 °C
Humidity	40...85 % (indoor) no condensation
Approvals	CE; cURus; EAC
Standards	EN 60947-4-3, EN 60950, IEC 60335-1
Insulation coordination (EN 50178)	
Impulse withstand voltage	4 kV (1.2/50 µs)
Clearance and creepage distances for control side - load side	≥ 8 mm
Overvoltage category	III
Pollution degree	2

Overload current curve



Derating curve

Low ventilation



Dimensions		
Clamping range (rated / min. / max.) control side	mm^2	1.5 / 0.13 / 3.3
Clamping range (rated / min. / max.) load side	mm^2	10 / 1.5 / 10
Depth x width x height	mm	119.5 / 22.5 / 97
Note		

Ordering data

	Type	Qty.	Order No.
Screw connection	PSSR 24VDC/1PH AC 35A	1	1406210000

Note

Accessories and dimensioned drawings: refer to the Power Solid-state Relay Accessories page.

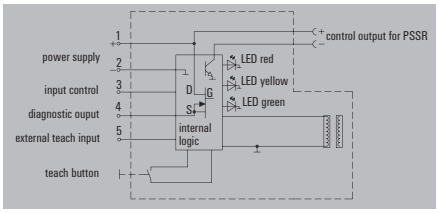
Accessories

Note

PSSR control unit

- Monitoring of up to 5 consumers connected in parallel
- Can be attached to the single-phase PSSRs
- Error message feedback output
- Undercurrent switching threshold: 0.84 x I_{teach}
- Teach button on the module and external teach input

PSSR 1 PH CONTROL UNIT



Technical data

Control side		
Rated control voltage		4...30 V DC
Nominal control current		≤ 2.5 mA
Cut-in / dropout voltage		2 V DC
Rated control voltage (external teach input)		4...30 V DC
Nominal control current (external teach input)		≤ 2.5 mA
Supply		
Supply voltage		8...30 V DC
Current consumption		≤ 150 mA
Feedback output		
Solid-state type		MOS-FET
Nominal switching voltage		8...30 V DC
Continuous current		0.1 A
Undercurrent switching threshold		0,84 x I_{teach}
Current measurement range AC, min.		2 A
Current measurement range AC, max.		40 A
Switch-on delay		≤ 100 ms
Switch-off delay		≤ 100 ms
Control output to the PSSR		
Rated switching voltage		
Solid-state type		
Switch-on delay		
Switch-off delay		
General data		
Ambient temperature (operational)		-40 °C...80 °C
Storage temperature		-40 °C...125 °C
Humidity		40...85 % (indoor) no condensation
Current sensor hole diameter		9 mm
Approvals		CE; EAC
Standards		EN 60947-4-3, EN 60950
Insulation coordination (EN 50178)		
Impulse withstand voltage		4 kV (1.2/50 µs)
Clearance and creepage distances for control side - load side		≥ 8 mm
Overvoltage category		III
Pollution degree		2
Dimensions		**Screw connection**
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.15 / 2.5
Depth x width x height	mm	65 / 25 / 112
Note		

Ordering data

	Type	Qty.	Order No.
Screw connection	PSSR 1PH CONTROL UNIT	1	**1406230000**

Note	Accessories and dimensioned drawings: refer to the Power Solid-state Relay Accessories page.

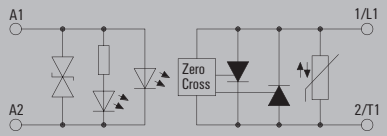
Accessories

Note	

PSSR - 1-phase

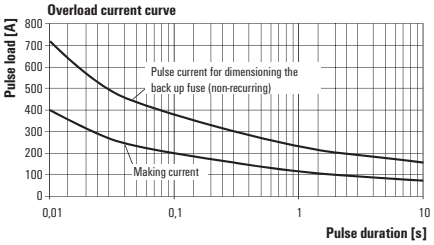
- Single-phase load circuit: 24–600 V AC / 50 A
- Compact design
- Zero-cross switch
- Noiseless, wear-free switching

PSSR 24 V DC / 1 PH AC 50 A HP



Technical data

Control side	
Rated control voltage	3.5...32 V DC
Power rating	≤ 280 mW
Cut-in / dropout voltage	3 V / 2 V DC
Input frequency	10 Hz
Status indicator	Green LED
Protective circuit	Suppressor diode
Load side	
Solid-state type	Thyristor (zero-cross switch)
Rated switching voltage	24...600 V AC
Continuous current	50 A (AC 51)
Min. switching current	5 mA
Max. switching current	60 A
Voltage drop at max. load	< 1 V
Leakage current	< 1 mA
Short-circuit-proof / Protective circuit, load side	No / Varistor
Switch-on delay / Switch-off delay	≤ 10 ms / ≤ 10 ms
Output voltage frequency range	50 / 60 Hz
Pulse load, max. current	400 A (10 ms)
Load category	AC 51
Load limit integral (I^2t) <10 ms	2450 A^2s
General data	
Ambient temperature (operational)	-55 °C...100 °C
Storage temperature	-55 °C...125 °C
Humidity	40...85 % (indoor) no condensation
Approvals	CE; cURus; EAC
Standards	EN 60947-4-3, EN 60950, IEC 60335-1
Insulation coordination (EN 50178)	
Impulse withstand voltage	4 kV (1.2/50 µs)
Clearance and creepage distances for control side - load side	≥ 8 mm
Overvoltage category	III
Pollution degree	2



Dimensions		
Clamping range (rated / min. / max.) control side	mm^2	1.5 / 0.75 / 2.5
Clamping range (rated / min. / max.) load side	mm^2	10 / 1.5 / 10
Depth x width x height	mm	29 / 45 / 58.5
Note		

Ordering data

	Type	**Qty.**	**Order No.**
Screw connection	PSSR 24VDC/1PH AC50A HP	2	**1406240000**

Note	Accessories and dimensioned drawings: refer to the Power Solid-state Relay Accessories page.

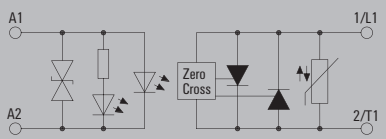
Accessories

Note	

PSSR - 1-phase

- Single-phase load circuit: 24–600 V AC / 75 A
- Compact design
- Zero-cross switch
- Noiseless, wear-free switching
- High capacity for handling surge currents I^2t = 6000 A^2s (10 ms)
- Fusing with B circuit breaker possible

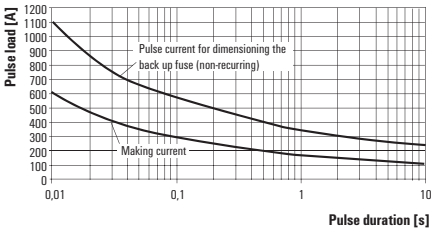
PSSR 24 V DC / 1 PH AC 75 A HP



Technical data

Control side	
Rated control voltage	3.5...32 V DC
Power rating	≤ 280 mW
Cut-in / dropout voltage	3 V / 2 V DC
Input frequency	10 Hz
Status indicator	Green LED
Protective circuit	Suppressor diode
Load side	
Solid-state type	Thyristor (zero-cross switch)
Rated switching voltage	24...600 V AC
Continuous current	75 A (AC 51)
Min. switching current	5 mA
Max. switching current	90 A
Voltage drop at max. load	< 1 V
Leakage current	< 1 mA
Short-circuit-proof / Protective circuit, load side	No / Varistor
Switch-on delay / Switch-off delay	≤ 10 ms / ≤ 10 ms
Output voltage frequency range	50 / 60 Hz
Pulse load, max. current	600 A (10 ms)
Load category	AC 51
Load limit integral (I^2t) <10 ms	6000 A^2s
General data	
Ambient temperature (operational)	-55 °C...100 °C
Storage temperature	-55 °C...125 °C
Humidity	40...85 % (indoor) no condensation
Approvals	CE; cURus; EAC
Standards	EN 60947-4-3, EN 60950, IEC 60335-1
Insulation coordination (EN 50178)	
Impulse withstand voltage	4 kV (1.2/50 µs)
Clearance and creepage distances for control side - load side	≥ 8 mm
Overvoltage category	III
Pollution degree	2

Overload current curve



Dimensions		
Clamping range (rated / min. / max.) control side	mm^2	1.5 / 0.75 / 2.5
Clamping range (rated / min. / max.) load side	mm^2	10 / 1.5 / 10
Depth x width x height	mm	29 / 45 / 58.5
Note		

Ordering data

	Type	Qty.	Order No.
Screw connection	PSSR 24VDC/1PH AC75A HP	2	**1406250000**

Note	Accessories and dimensioned drawings: refer to the Power Solid-state Relay Accessories page.

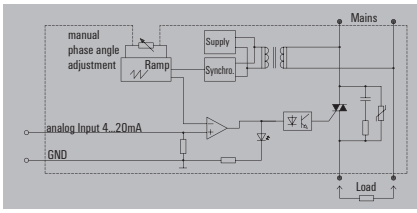
Accessories

Note	

PSSR - 1-phase

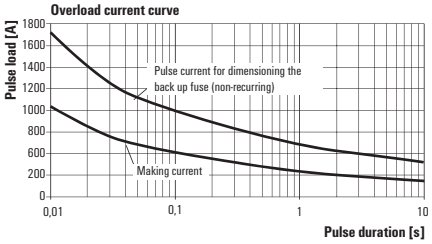
- Single-phase load circuit: 200–460 VAC / 70 A
- 4–20 mA control input
- Manual phase angle adjustment
- Noiseless, wear-free switching

PSSR 20 MA / 1 PH AC 70 A PC



Technical data

Control side	
Nominal control current	4...20 mA ±15 %
Load side	
Solid-state type	Triac
Rated switching voltage	200...460 V AC
Continuous current	70 A
Min. switching current	10 mA
Max. switching current	
Voltage drop at max. load	≤ 1.6 V
Leakage current	< 5 mA
Short-circuit-proof / Protective circuit, load side	No / RC combination with varistor
Switch-on delay / Switch-off delay	≤ 10 ms / ≤ 50 ms
Output voltage frequency range	47–100 Hz (manual phase angle adjustment necessary)
Pulse load, max. current	870 A (10 ms)
Load category	AC 51
Load limit integral (I^2t) <10 ms	5000 A^2s
General data	
Ambient temperature (operational)	-40 °C...85 °C
Storage temperature	-40 °C...85 °C
Humidity	40...85 % (indoor) no condensation
Approvals	CE; EAC
Standards	EN 60947-4-3, EN 60950
Insulation coordination	
Impulse withstand voltage	4 kV (1.2/50 µs)
Clearance and creepage distances for control side - load side	≥ 8 mm
Overvoltage category	III
Pollution degree	2



Dimensions	
Conductor connection (control side)	M3 ring cable lug (insulated)
Conductor connection (load side)	M5 ring cable lug (insulated)
Depth x width x height mm	39.5 / 100 / 73.5
Note	

Ordering data

	Type	Qty.	Order No.
Screw connection	PSSR 20MA/1PH AC70A PC	1	1406270000

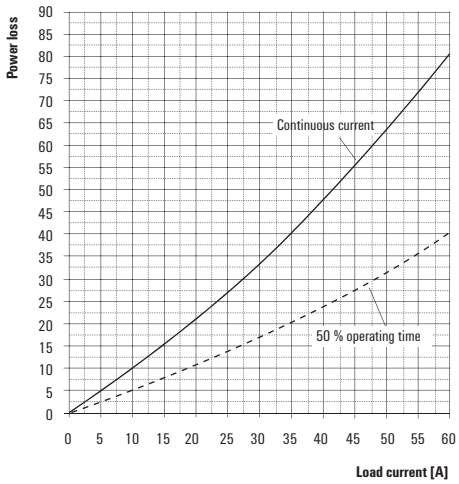
Note	Accessories and dimensioned drawings: refer to the Power Solid-state Relay Accessories page.

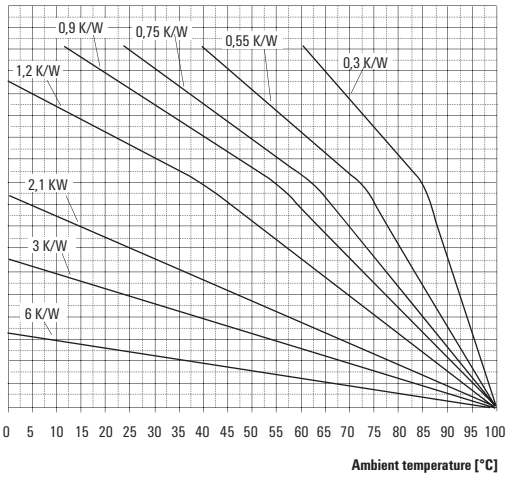
Accessories

Note	

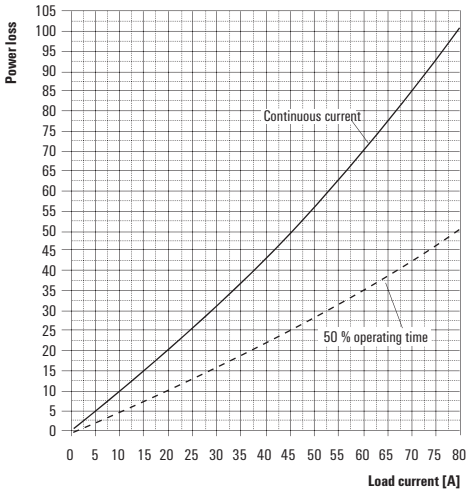
Power loss and selection of heat sink

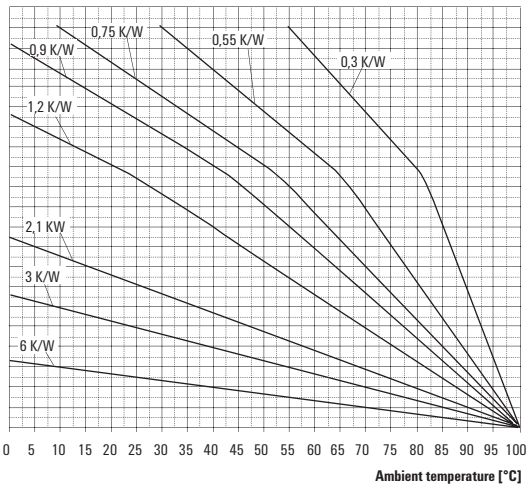
Order No. 1406240000



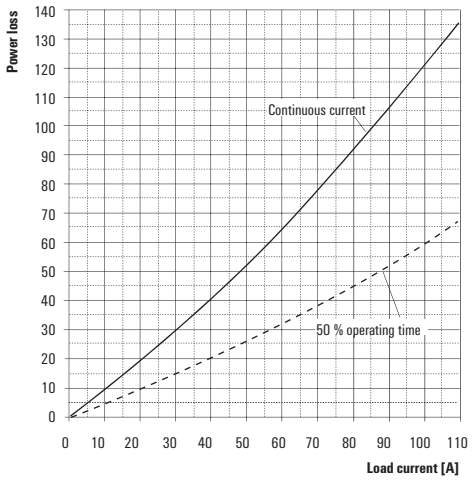


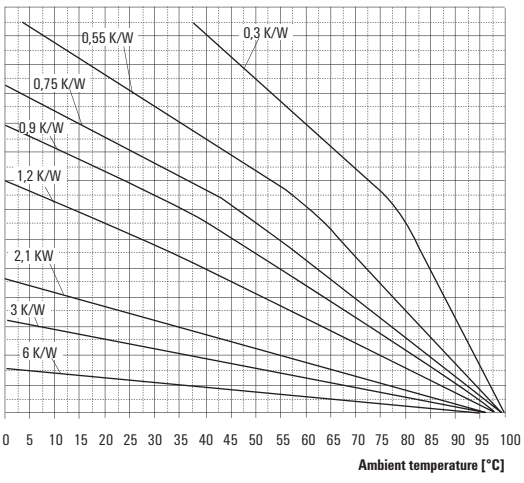
Order No. 1406250000





Order No. 1406270000

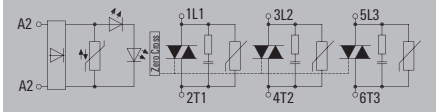




PSSR - 3-phase

- Three-phase load circuit 24...520 V AC / 20 A at 55°C
- Ready-to-use: snap on - connect - ready
- Zero-cross switch
- Wear-free and noiseless switching

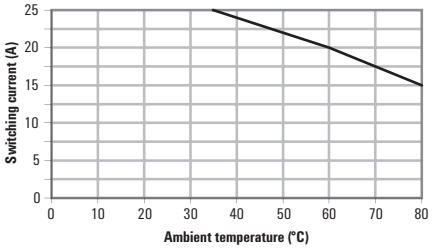
PSSR 24 V DC / 3 PH AC 20 A



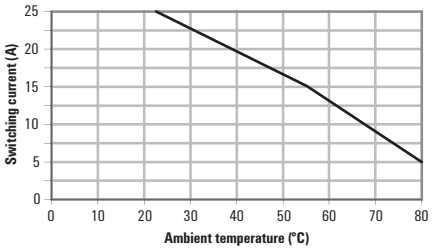
Technical data

Control side		
Rated control voltage		8...30 V DC / 10...30 V AC
Power rating		0.1...2 W
Cut-in / dropout voltage		10 V / 4 V AC 8 V / 4 V DC
Input frequency		10 Hz
Status indicator		Green LED
Protective circuit		RC element, Varistor
Load side		
Solid-state type		Triac (zero-cross switch)
Rated switching voltage		24...520 V AC
Continuous current		20 A
Min. switching current		5 mA
Max. switching current		
Voltage drop at max. load		1.4 V
Leakage current		< 1 mA
Short-circuit-proof / Protective circuit		No / RC element, Varistor
Switch-on delay / Switch-off delay		30 ms / 30 ms
Output voltage frequency range		50 / 60 Hz
Pulse load, max. current / Cartridge fuse		300 A (10 ms / FERRAZ gRC 63 A 22x58 1353 A^2s
Load category		AC 53: 3 x 12 A
Load limit integral (I^2t) <10 ms		1500 A^2s
General data		
Ambient temperature (operational)		-40 °C...80 °C
Storage temperature		-40 °C...100 °C
Humidity		40...85 % (indoor) no condensation
Approvals		cURus; EAC
Standards		DIN EN 60950, IEC 60947-4-3
Insulation coordination		
Rated voltage		300 V
Impulse withstand voltage		4 kV
Clearance and creepage distances for control side - load side		≥ 6.4 mm
Overvoltage category		III
Pollution degree		2
Dimensions		
Clamping range (rated / min. / max.) control side	mm^2	1.5 / 0.75 / 2.5
Clamping range (rated / min. / max.) load side	mm^2	10 / 10 / 1.5
Depth x width x height	mm	126.2 / 89.6 / 98
Note		

Derating curve with moderate ventilation and 50 % operational running time



Derating curve without ventilation and in continual operation



Ordering data

Type	Qty.	Order No.
PSSR 24VDC/3PH AC 20A	1	**8952130000**

Note

Accessories and dimensioned drawings: refer to the Power Solid-state Relay Accessories page.

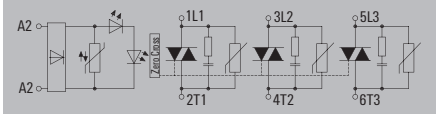
Accessories

Note

PSSR - 3-phase

PSSR 230 V AC / 3 PH AC 20 A

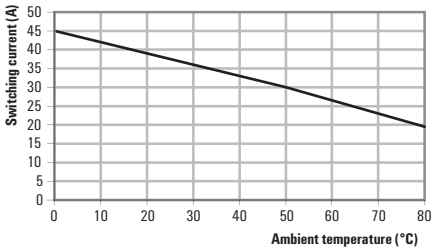
- Three-phase load circuit 24...520 V AC / 20 A at 55°C
- Ready-to-use: snap on - connect - ready
- Zero-cross switch
- Wear-free and noiseless switching



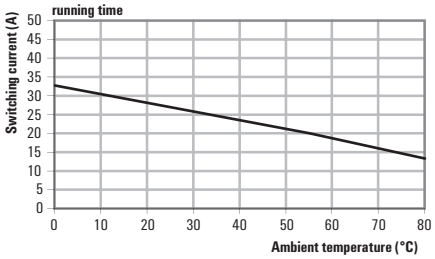
Technical data

Control side		
Rated control voltage		90...240 V AC / DC
Power rating		0.4...2.6 W
Cut-in / dropout voltage		90 V / 15 V AC 90 V / 15 V DC
Input frequency		10 Hz
Status indicator		Green LED
Protective circuit		RC element, Varistor
Load side		
Solid-state type		Triac (zero-cross switch)
Rated switching voltage		24...520 V AC
Continuous current		20 A
Min. switching current		5 mA
Max. switching current		
Voltage drop at max. load		1.4 V
Leakage current		< 1 mA
Short-circuit-proof / Protective circuit		No / RC element, Varistor
Switch-on delay / Switch-off delay		30 ms / 30 ms
Output voltage frequency range		50 / 60 Hz
Pulse load, max. current / Cartridge fuse		300 A (10 ms / FERRAZ gRC 63 A 22x58 1353 A^2s
Load category		AC 53: 3 x 12 A
Load limit integral (I^2t) <10 ms		1500 A^2s
General data		
Ambient temperature (operational)		-40 °C...80 °C
Storage temperature		-40 °C...100 °C
Humidity		40...85 % (indoor) no condensation
Approvals		cURus; EAC
Standards		DIN EN 60950, IEC 60947-4-3
Insulation coordination		
Rated voltage		300 V
Impulse withstand voltage		4 kV
Clearance and creepage distances for control side - load side		≥ 6.4 mm
Overvoltage category		III
Pollution degree		2
Dimensions		
Clamping range (rated / min. / max.) control side	mm^2	1.5 / 0.75 / 2.5
Clamping range (rated / min. / max.) load side	mm^2	10 / 1.5 / 10
Depth x width x height	mm	126.2 / 89.6 / 98
Note		

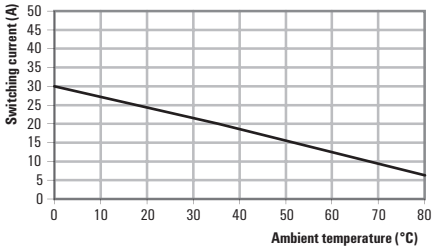
Derating curve with maximum ventilation



Derating curve with moderate ventilation and 50% operational running time



Derating curve without ventilation and in continual operation



Ordering data

Type	Qty.	Order No.
PSSR 230VAC/3PH AC 20A	1	**8952140000**

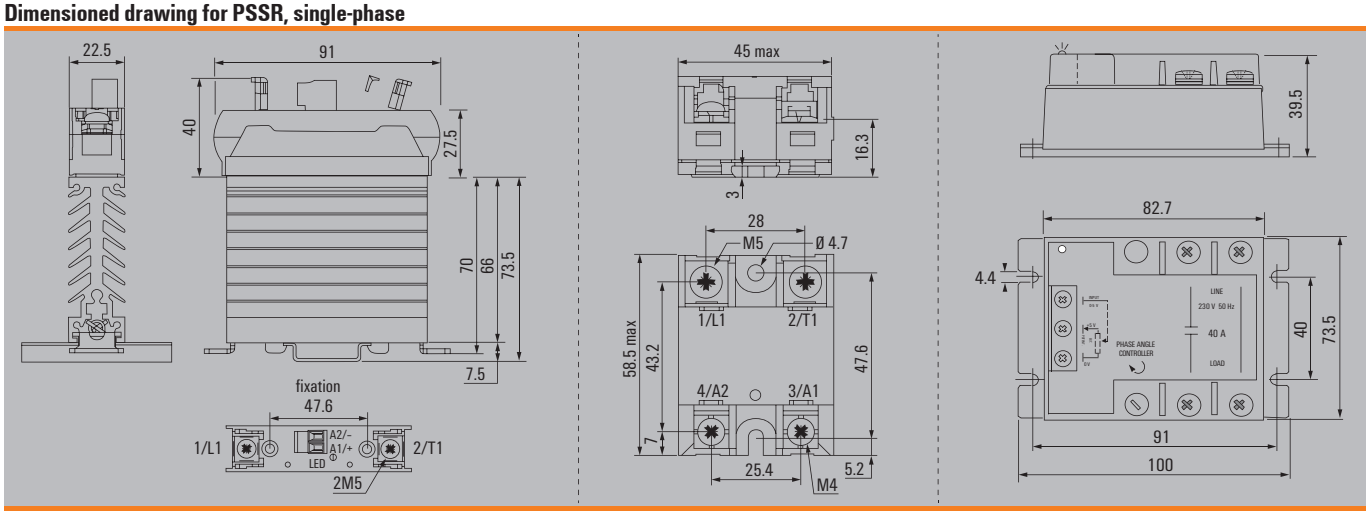
Note

Accessories and dimensioned drawings: refer to the Power Solid-state Relay Accessories page.

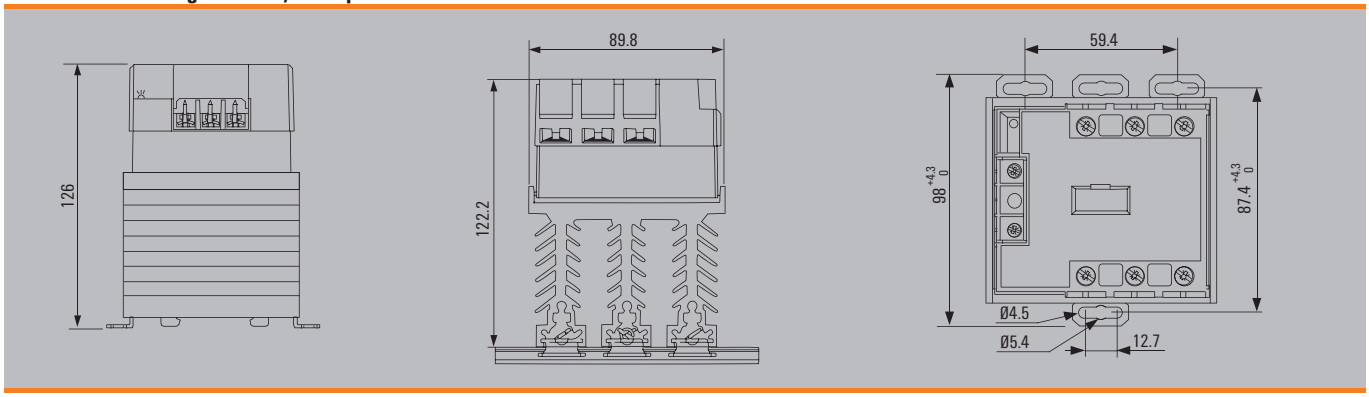
Accessories

Note

Dimensioned drawing for PSSR, single-phase

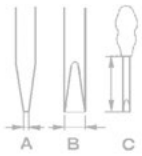


Dimensioned drawing for PSSR, three-phase



Uninsulated screwdriver

Weidmüller SoftFinish screwdriver for general uses.
Blade made from fully hardened, high-alloy chromium-vanadium-molybdenum steel, matt chrome finish.



Type	Size / AF	A	B	C	Order No.
SD S					
Slotted screwdriver with rounded blade SD DIN 5265, ISO 2380/2, output to DIN 5264, ISO 2380/1. ChromTop tip, SoftFinish® grip					
SD 0.5x3.0x80		0.5	3.0	80	**9008320000**
SDK PZ					
Crosshead screwdriver, Pozidriv, SDK PZ DIN 5262, ISO 8764/2-PZ, ouput to ISO 8764/1-PZ, ChromTop tip, SoftFinish® grip					
SDK PZ2	2			100	**9008540000**

Safety relay

SAFESERIES SIL relays
Functional safety for process applications

When dealing with the core elements of a system with a large risk potential, it is especially critical to have the best system solution in place. Our SIL relays reliably switch off your systems in critical situations – and they have all been accredited. Let's connect.

Whether for a burner control system, secure emergency shut down or, for example, for pump controllers – our safety relay guarantees safe conditions and encompasses highly superior and significant features.

Their integration into distributed control systems (DCSs) is even better, with an input filter which makes the SIL circuit immune to the test impulse which is typically used by a DCS. You will also benefit from simple maintenance: the fuses are accessible from the outside and can easily be changed. You can see the status of the safety and the monitoring devices clearly on the displays mounted directly to the device.

All devices are accredited though certification by the internationally recognised TÜV-NORD group – for secure process applications around the globe. Let's connect.

Safe control of back-up systems
Equipped with wide range input voltages in the monitoring circuit from 24 V AC/DC to 230 V AC/DC, the relay is designed for individual use, e.g. in back-up systems or the overfill prevention devices of tank farms.

Safe monitoring of furnace firing systems
The feed-in of fuel must be interrupted as soon as a boiler plant reaches any safety criterion limits. The SAFESERIES offers you a safety switch-off for the feed-in of fuel to furnace firing systems up to safety integrity level (SIL) 3.

Safe use in corrosive environments
The SIL3 relay is also available with a G3 coating, which makes it especially suitable for use in aggressive environmental conditions.

Check out our Weidmüller customer magazine WIN! for more information. No. 11 (pages 11–13)

Signals under optimal protection

The VARITECTOR SPC series of surge protection devices with SIL certification by TÜV Nord provides the best protection of signals in safety circuits for the process industry.

Safe activation and deactivation
This universal device can be used for either the energise-to-safe or de-energise-to-safe operation modes, as you wish. This makes it suitable, e.g. for pump controllers or extinguishing systems.

You have strict requirements for the functional reliability of your systems
We connect your safety-related applications reliably
Let's connect.

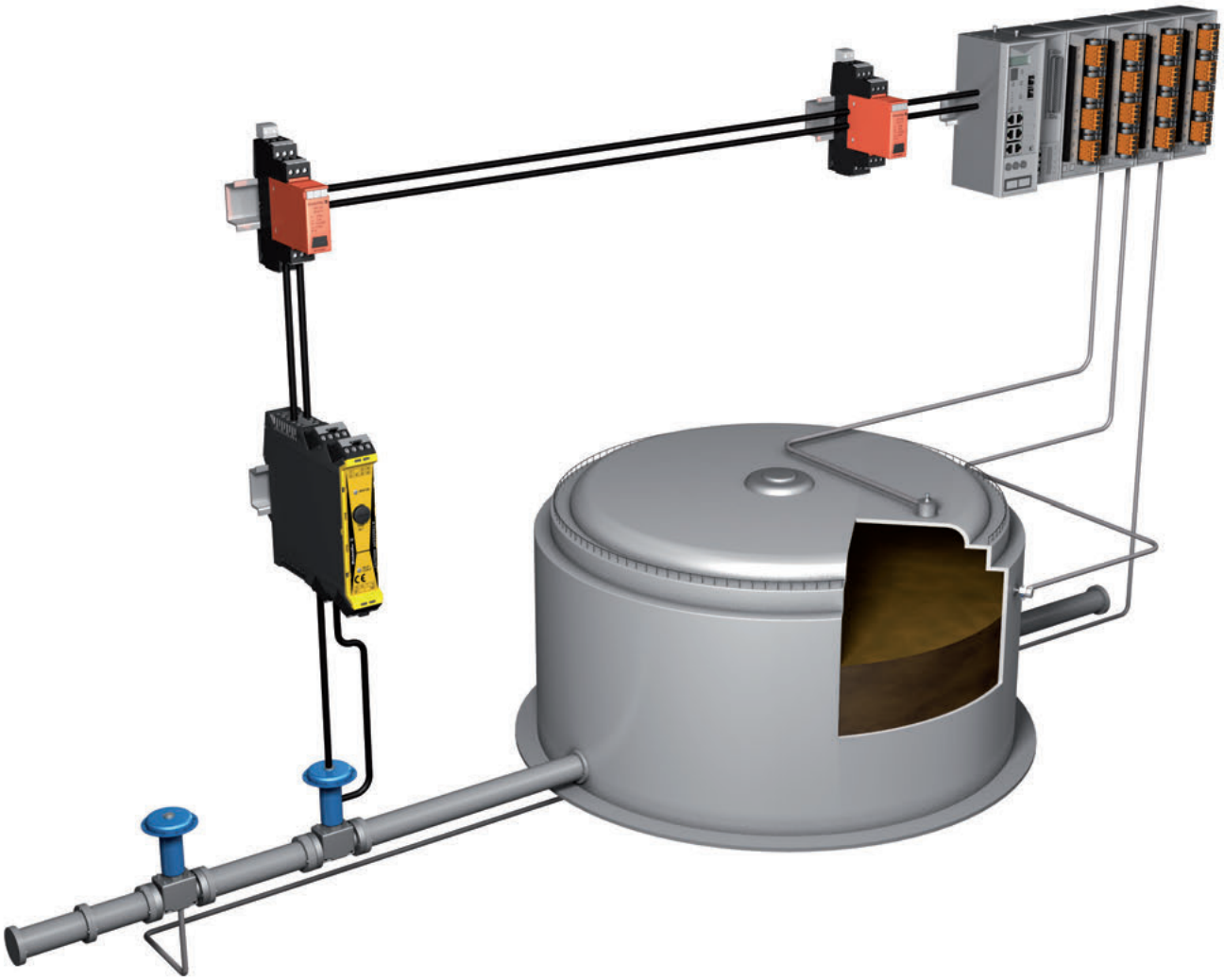
Safe process and power technology is a top priority for you. For example, a reliable emergency shutdown, which initiates appropriate countermeasures in hazardous situations, is indispensable. These might extend to the automatic shutdown of the system or subsystems within it.

As a specialist in industrial connectivity, we offer a comprehensive solution for safety-sensitive areas, from the control room through to the field.

The SAFESERIES SIL relay is ideally suited for use in safety-related applications. It is designed for low and high demand modes.

With the wide range input voltage in the protective circuit of 24 V UC to 230 V UC, for example, you can control back-up systems with high DC voltage. You get additional flexibility for your applications with the optional "G3" coating for use in harsh environments.

The safe and reliable coupling of measuring instruments, actuators and sub-assemblies to the safety-relevant signal circuit is handled by our VARITECTOR SPC, the lightning and surge protection for signal circuits. Certified for safety requirement level SIL 3 according to EN 61508, and accredited by TÜV NORD, it can easily be incorporated into your safety calculations.



SAFESERIES

- Certified to EN 61508 for SIL3
- Wide voltage input from 24 to 230 V AC/DC for the monitoring of field signals
- Variant with G3 protection for extreme conditions
- Other variants for burner management or on/off switching

VARITECTOR SPC

- 2 analogue or 4 digital signals on a width of just 17.8 mm
- Monitoring with status indicator and message function
- Testable with V-TEST according to IEC62305
- Variants with SIL certification or EX approval

SIL3 relays

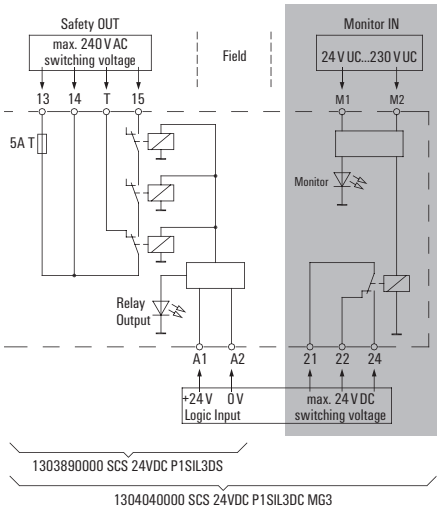
- With and without monitoring circuit
- Wide-range input voltage in the monitoring circuit
- Externally accessible fuse
- TÜV certified „Safety Approved“

SCS 24 V DC P1SIL3DS

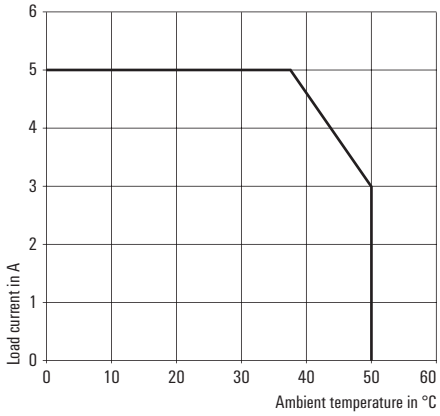
The SCS 24VDC P1SIL3DS safety relay is used in areas that require a functionally safe shutdown. This component fulfils the requirements of EN 61508, SIL 3.

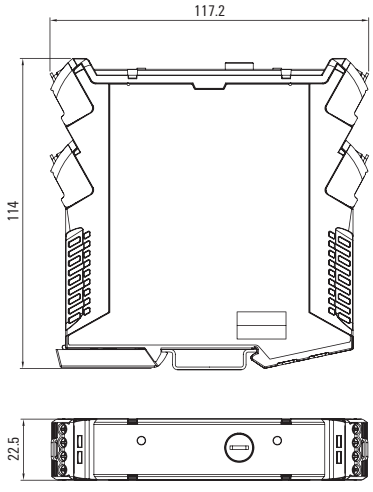
Technical data

Temperatures		
Ambient temperature (operational)		-25...50 °C
Storage temperature		-40...85 °C
General data		
Noxious gas resistance to EN 60068-2-60		Yes (art. No.: 1304040000 only)
Input (safety circuit)		
Rated control voltage		24 V DC ± 20%
Guaranteed current consumption of 24 VDC -10%		35 mA
Power consumption		42 mA
Status indicator		LED yellow
Input (monitor circuit)		
Rated control voltage		24 V UC...230 V UC ±10 %
Current consumption		23 mA @ 24 V DC, 4,4 mA @ 230 V AC
Status indicator		LED yellow
Output (safety circuit)		
Contact design		NO contact
max. switching current, internal fuse		5 A (refer to derating curve)
max. switching current, external fuse		5 A (refer to derating curve)
max. permitted switching voltage		250 V AC / 30 V DC
max. permitted switching current		8 A
min. switching power		12 V / 10 mA
max. switching power		2000 VA
Switch-on time		typ. 7 ms
Base material of the contact		AgNi 0.15 gold flashed
Internal fuse		5 A time-lag
External back-up fuse		
Short-circuit-proof		No
Output (monitor circuit)		
Contact design		CO contact
max. permitted switching voltage		24 V DC
max. permitted switching current		30 mA
min. switching power		1 V / 1 mA
Base material of the contact		AgNi 5µm Au
Switch-on time		typ. 17 ms
Short-circuit-proof		No
Insulation coordination (EN 50178)		
Rated voltage		300 V
Creepage and clearance distance input – output		≥ 5.5 mm
Creepage and clearance distance output – output		≥ 5.5 mm
Dielectric strength input – output		1.2 kV_{eff} / 1 min.
Dielectric strength output – output		1.2 kV_{eff} / 1 min.
Dielectric strength to mounting rail		1.2 kV_{eff} / 1 min.
Impulse withstand voltage		6 kV (1.2/50 µs)
Overvoltage category		III
Pollution degree		2
Further details of approvals / standards		
Standards		EN 50178, EN 61000, EN 61326-3-2
Dimensions		
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.13 / 2.5
Depth x width x height	mm	114 / 22.5 / 117.2
Note		



Derating curve





Ordering data

Type	Qty.	Order No.
with monitoring		
SCS 24VDC P1SIL3DS M	1	**1303760000**
without monitoring		
SCS 24VDC P1SIL3DS	1	**1303890000**
with monitoring and G3 gas-corrosion resistant		
SCS 24VDC P1SIL3DS MG3	1	**1304040000**
Note		

SIL3 relays

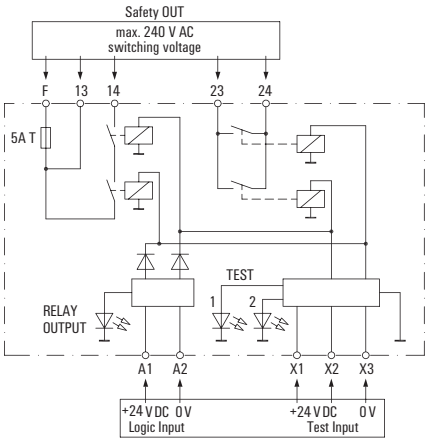
- Energised / de-energised to safe
- All pins can be disconnected
- Test inputs for testing the relay contacts
- Externally accessible fuse
- TÜV certified „Safety Approved“

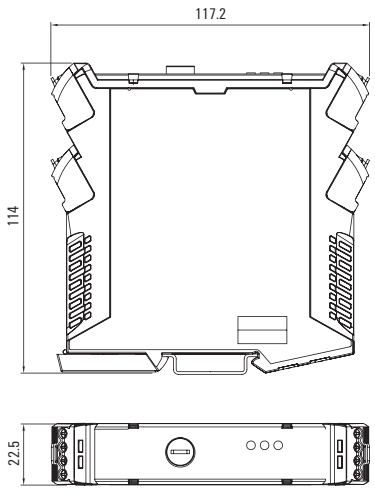
SCS 24 V DC P2SIL3DSES

The safety relay SCS 24VDC P2SIL3DSES is used in areas that require functionally safe deactivation or activation. The requirements according to EN 61508, SIL3 can be fulfilled with this module.

Technical data

Temperatures	
Ambient temperature (operational)	-25 °C...50 °C
Storage temperature	-40 °C...85 °C
Input (safety circuit)	
Rated control voltage	24 V DC -15 / +20%
Guaranteed current consumption of 24 VDC -10%	35 mA
Power consumption	45 mA
Status indicator	LED yellow
Test inputs	
Rated control voltage	24 V DC
Status indicator	LED red flashing: test input is triggered
Number of test inputs	2
Output (safety circuit)	
Contact design	1 x de-energised to safe (NO contact), 1 x energised to safe (NO contact)
max. switching current, internal fuse	5 A (refer to derating curve)
max. switching current, external fuse	5 A (refer to derating curve)
max. permitted switching voltage	250 V AC
max. permitted switching current	8 A
min. switching power	12 V / 10 mA
max. switching power	2000 VA
Switch-on time	< 5.5 ms (DTS), < 5 ms (ETS)
Base material of the contact	Ag Ni 0.15
Internal fuse	5 A time-lag
External back-up fuse	5 A time lag
Short-circuit-proof	No
Insulation coordination (EN 50178)	
Rated voltage	300 V
Creepage and clearance distance input – output	≥ 5.5 mm
Creepage and clearance distance output – output	≥ 5.5 mm
Dielectric strength input – output	1.2 kV_{eff} / 1 min.
Dielectric strength output – output	1.2 kV_{eff} / 1 min.
Dielectric strength to mounting rail	1.2 kV_{eff} / 1 min.
Impulse withstand voltage	6 kV (1.2/50 µs)
Overvoltage category	III
Pollution degree	2
Further details of approvals / standards	
Standards	EN 50178, EN 61000, EN 61326-3-2





Dimensions		
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.13 / 2.5
Depth x width x height	mm	114 / 22.5 / 117.2
Note		DTS (de-energised to safe) ETS (energised to safe)

Ordering data

Type	Qty.	Order No.
SCS 24VDC P2SIL3DSES	1	1319270000

Note	

SIL3 relays

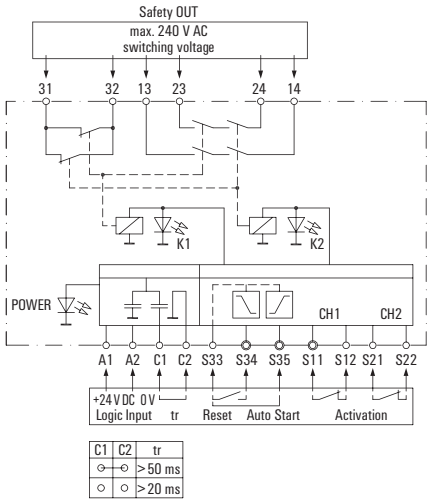
- Positively-driven contacts
- 2-channel design
- Insert according to EN 50156
- TÜV certified „Safety Approved“

SCS 24 V DC P2SIL3ES

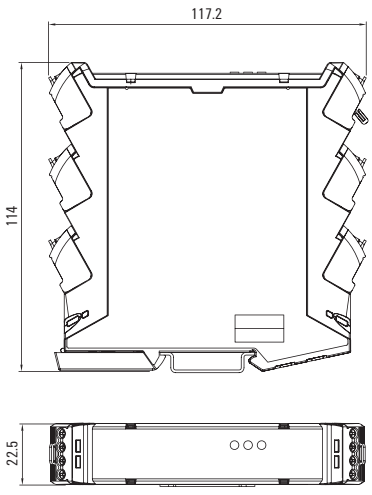
The feed-in of fuel must be interrupted as soon as a boiler plant reaches any safety criterion limits. The safety relay SCS 24VDC P2SIL3ES enables you to carry out a safety shutdown of the fuel supply, to safety level SIL 3.

Technical data

Temperatures		
Ambient temperature (operational)		-25 °C...55 °C
Storage temperature		-40 °C...85 °C
Start circuit		
Operating voltage		22 V DC, from internal power supply
Function		falling edge (button via S33/S34), rising edge (permanent bridge via S33/S35)
Input (supply)		
Rated control voltage		24 V DC ±15 %
Current consumption		55 mA (release circuit enabled), 6 mA (release circuit not enabled)
Guaranteed current consumption at 24 V DC -10%		35 mA
Response time		with bridge via C1/C2: typ. 50 ms, without bridge via C1/C2: typ. 20 ms
Status display		LED green, power, LED yellow, signal
Short-circuit detection		Yes, max 4 s up to switch-off (Polyfuse)
Monitoring circuit		
Operating voltage		22 V DC, from internal power supply
Input		2, each externally bridgeable
Output (release circuit)		
Contact version		2 NO positively-driven (EN 50205)
Switching voltage AC, max.		250.000000 V
max. permitted switching current		6 A
min. switching power		12 V / 10 mA
max. switching power		2000 VA
Switch-on time		55 ms (C1/C2 bridged, switched via A1/A2), 30 ms (opening/closing of monitoring circuit)
Switch-off time		20 ms (C1/C2 bridged, switched via A1/A2), 15 ms (opening/closing of monitoring circuit)
Contact base material		AgSnO
max. switching current, external fuse		5 A
external back-up fuse		5 A time lag
Feedback output		
Contact version		1 NC positively-driven (EN 50205 type B)
Switching voltage AC, max.		250 V
Max. switching current		1 A
Insulation coordination (EN 50178)		
Rated voltage		300 V
Creepage and clearance distance input – output		≥ 5.5 mm
Creepage and clearance distance output – output		≥ 5.5 mm
Dielectric strength input – output		1.2 kV_{eff} / 1 min.
Dielectric strength output – output		1.2 kV_{eff} / 1 min.
Dielectric strength to mounting rail		1.2 kV_{eff} / 1 min.
Impulse withstand voltage		6 kV (1.2/50 µs)
Overvoltage category		III
Pollution degree		2
Further details of approvals / standards		
Standards		EN 50178, EN 61000, EN 61326-3-2, EN ISO 13849-1 (PLe)
Dimensions		
Clamping range (nominal / min. / max.)	mm^2	1.5 / 0.13 / 2.5
Depth x width x height	mm	114 / 22.5 / 117.2
Note		



C1	C2	tr
○	○	> 50 ms
○	○	> 20 ms



Ordering data

Type	Qty.	Order No.
SCS 24VDC P2SIL3ES	1	1319280000

Note

Timer

Installation timer

The electronic timer from the BT product range offers ideal solutions for industrial applications.

The BT product range provides the following functions:

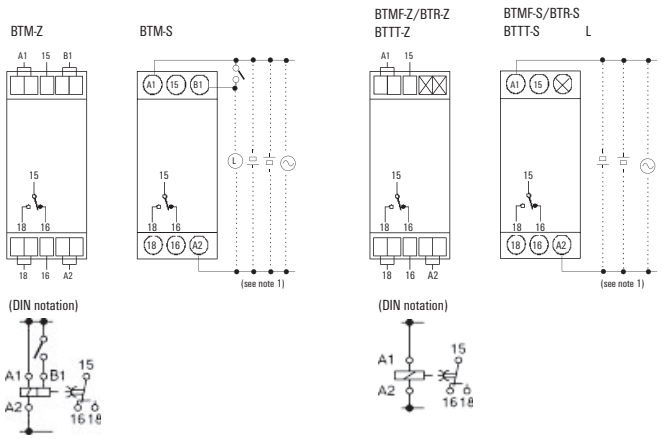
- Pick-up delay (BTR)
- Pulse emitter (BTTT)
- Multifunction with control input (BTM)
- Multifunction without control input (BTMF)
- Star-delta change-over

Time ranges and power supplies for timer

Using the central button, you can select the functions of the modules over either 4 or 8 time ranges.

The multi-voltage supply range offers a wide bandwidth for industrial use (see technical data).

Connection of the timer



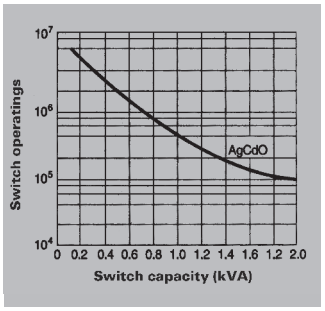
Note: 1. Pole numbers are not necessary for DC voltage supply.

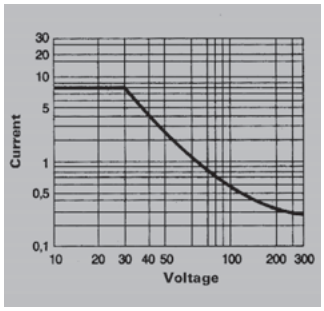
2. The contact symbol of BTM is marked with as it provides serveral operating modes and differs from the delayed contacts of conventional timer.

Time ranges

Display of time scale	Time ranges
0.1 s	0.1 to 1.2 s
1 s	1 to 12 s
0.1 min	0.1 to 1.2 min
1 min	1 to 12 min
0.1 h	0.1 to 1.2 h
1 h	1 to 12 h
10 h	10 to 120 h

Note:
If the rotary button for time adjustment is set to "0", the output will be switched without delay.





Choosing the time range

The time range is chosen by turning the rotary switch for the ON-time scale and OFF-time scale. The time scales are visible in the display to the left of the rotary switch in the following order: 0.1 s, 1 s, 0.1 m, 1 m, 0.1 h, 1 h.

Note:
The time scales "1 s" and "0.1 h" are given twice.
Both adjustments represent the same time scale.

Locking/unlocking of selectors and time setting dial

The rotary switches for the ON/OFF time adjustment and the option selector for the time scale can be locked with the locking key.
This pen-style special tool is available separately. To lock either rotary switches or the option selector, simply insert the locking key into the keyhole bottom right of the rotary switch/option selector and turn it clockwise until the button/switch is totally covered by the red cover. To unlock, simply turn the key in the opposite direction.

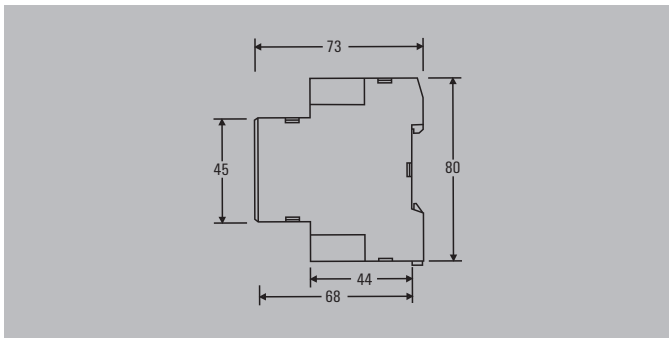
Connection system

The units offers the following connection technologies:

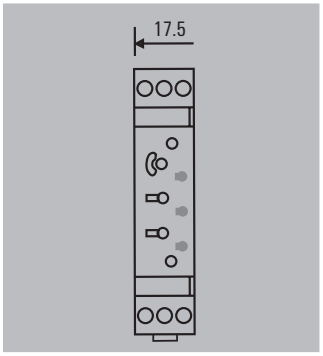
Screw connection
- 2 x 1.5 mm² with wire end ferrule,
- 2 x 2.5 mm² without wire end ferrule

Tension clamp connection
- 2 x 1.5 mm² with wire end ferrule,
- 2 x 1.5 mm² without wire end ferrule

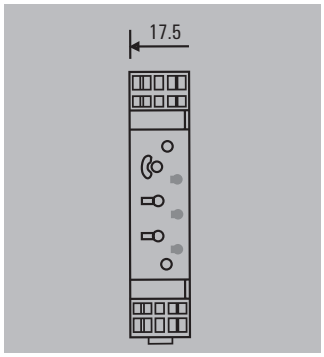
Dimensions



Screw connection



Tension clamp connection



Timer

Installation timer

- Screw or tension clamp connection
- LED status indicator Input: voltage present
  Output: output active
- Approvals UL 508 / CSA 22.2 Nr. 14
  EN 61812-1 / IEC 60664-1
  IEC 60947-5-1 / EN 61812-1
  IEC 60664-1 / IEC 60947-5-1
  EN 55011 / EN 50082-2

E

Type designation:

B = **Building**
T = **Timer**
R = **R**esponse Delay
TT = **T**wo **T**imes
M = **M**ultifunction, 8 ranges
MF = **M**ultifunction, 4 ranges
DS = **D**elta, **S**tar
S = **S**crew
Z = **T**ension

Input		**Contacts hard gold plated**
Rated voltage		24 ... 230 V AC, 50/60 Hz, 24 ... 48 V DC
Voltage tolerance		85 ... 110 % of rated voltage
Breaking voltage		Max. 2.4 V AC/DC
Power consumption per type	V AC	21...33 VA at 230 V
	V DC	0.6...1.3 W at 24 V
Reset time		Min. 0.1 s (BTDS: 0.5 s)
Insulation		
Insulation resistance		100 MΩ min., at 500 V DC
Insulation test voltage		
between input and output, to enclosure		2000 V AC, 50/60 Hz, 1 min
between non-adjacent contacts		1000 V AC, 50/60 Hz, 1 min
Ingress protection class		IP30, terminal block IP20
Output		
Contact/contact material		1 change-over contact (BTDS 2 NOC) / AgNi 90/10
Switch output		5 A at 250 V AC, resistive load (cos φ=1)
Service life	mechanical min.	10^7 switching cycles (no load, 1800/h)
	electrical min.	10^5 switching cycles (5A at 250 V AC, resistive load at 1800/h)
Time range		0,10 s...120 h
Repetition accuracy		± 1 %
Other data		
Flammability class as per UL94		V-2
Ambient temperature/storage temperature		–10...+55 °C / –25...+65 °C (without condensation)
Humidity		35...85 % rel. humidity, no condensation
Clamping range (nominal/min/max)	mm^2	
Depth x Width x Height	mm	73.0 x 17.5 x 80.0

Accessories

Designation	**Type**	**Qty.**	**Order No.**
Locking and adjusting key	BT Lock Pen	1	**8659840000**

Multifunction relay with control input (BTM)

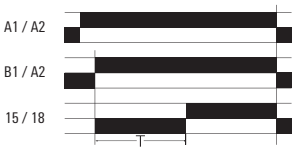
Ordering data

Connection system	Type	Qty.	Order No.
Screw connection	BTM-S	1	**8647700000**
Tension clamp	BTM-Z	1	**8647710000**

Functions

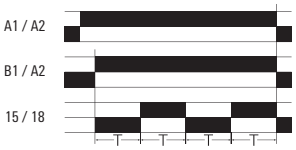
Function A – on-delay

Connect power supply (A1/A2). When the input signal (B1/A2) is applied, the set time T begins to delay. After the time has expired, the output R (15/18) disconnects the load. To reset, the input signal needs to be switched off.



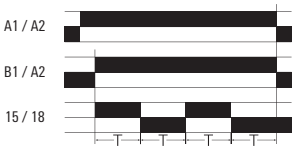
Function B – pulse emitter (starting at normal position)

Connect power supply (A1/A2). After applying the input signal (B1/A2), output R (15/18) switches the load synchronously and alternately between the normal and operated positions within the set time T. In this function, the cycle starts at the normal position.



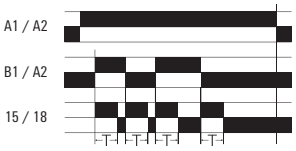
Function B2 – pulse emitter (starting at operated position)

Connect power supply (A1/A2). After applying the input signal (B1/A2), output R (15/18) switches the load synchronously and alternately between the normal and operated positions within the set time T. In this function, the cycle starts at the operated position.



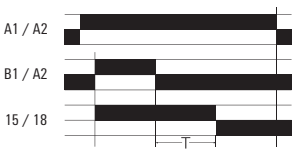
Function C – interval time-delay

Connect power supply (A1/A2). After applying the input signal (B1/A2), output R (15/18) connects the load for the set time T. Output R (15/18) switches the load off again at the end of time T.
After switching off the input signal (B1/A2), output R (15/18) connects the load again for the set time T. Output R (15/18) switches the load off again at the end of time T.



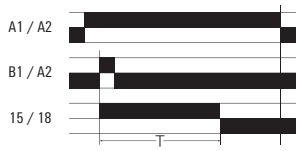
Function D – off-delay function

Connect power supply (A1/A2). After applying the input signal (B1/A2), output R (15/18) connects the load.
The time delay T begins after the input signal (B1/A2) has been switched off. At the end of time T, output R (15/18) switches the load off again.



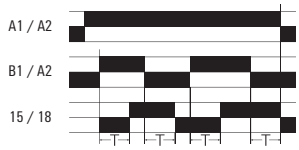
Function E – passing make function

Connect power supply (A1/A2). After applying the input signal (B1/A2), output R (15/18) connects the load immediately. At the end of the set delay time T, output R (15/18) switches the load off again.



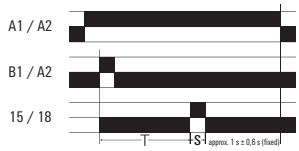
Function G – on and off-delay function

Connect power supply (A1/A2). Time delay T begins after applying the input signal (B1/A2). At the end of this time, output R (15/18) connects the load (on-delayed). After the input signal (B1/A2) has been switched off again, the output switches the load off again after the set time (off-delayed).



Function J – on-delay with pulse

Connect power supply (A1/A2). Time delay T begins after applying the input signal (B1/A2). At the end of this time, the output R (15/18) connects the load for 1 second.



Multi-function relay without control input (BTMF)

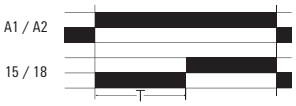
Ordering data

Connection system	Type	Qty.	Order No.
Screw connection	BTMF-S	1	**8647680000**
Tension clamp	BTMF-Z	1	**8647690000**

Functions

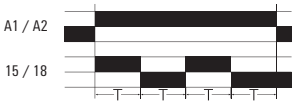
Function A – on-delay

When the input signal (A1/A2) is applied, the on-delay lasting for the set time T starts. The output R (15/18) connects the load at the end of the set time. To reset, the power supply has to be switched off.



Function B2 – pulse emitter (starting at operated condition)

After applying the input signal (A1/A2), output R (15/18) switches the load synchronously and alternately between the normal and operated positions within the set time T. In this function, the cycle starts at the operated position.



Function E – passing make function

After applying the input signal (A1/A2), output R (15/18) connects the load immediately. At the end of the set delay time T, output R (15/18) switches the load off again.

Function J – on-delay with pulse

Time delay T begins after applying the input signal (A1/A2). At the end of this time, the output R (15/18) connects the load for 1 second.

Timer (BTR)

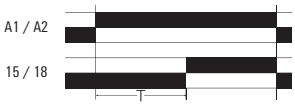
Ordering data

Connection system	Type	Qty.	Order No.
Screw connection	BTR-S	1	**8647720000**
Tension clamp	BTR-Z	1	**8647730000**

Functions

Function A – on-delay

When the power supply is connected (A1/A2), the on-delay lasting for the set time T starts. The output R (15/18) connects the load at the end of the set time.



Timer (BTTT)

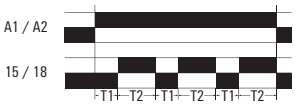
Ordering data

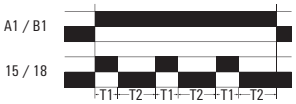
Connection system	Type	Qty.	Order No.
Screw connection	BTTT-S	1	**8647740000**

Functions

Function BTTT – pulse emitter

When the power supply is connected (A1/A2), the repeat cycle begins with two independently adjustable times. The standard setting is to start at the normal position. A bridge between connections A1 and A2 allows the module to start at the operated position.

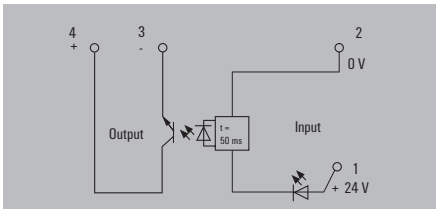




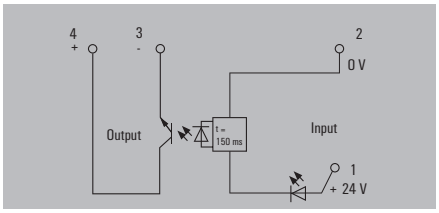
Miniconditioner MCZ TO

- Components for lengthening short pulses for the PLC
- Fixed switch-off delay
- Low input power
- Screw connection system
- Width 6 mm
- For mounting on TS 35

24 V DC 50 ms



24 V DC 150 ms



Technical data

Input		
Rated control voltage	24 V DC ±10 %	24 V DC ±10 %
Rated current AC / DC	/ 6.7 mA ±10 %	/ 6.7 mA ±10 %
Power rating	160 mW	160 mW
Min. pulse duration	2 ms	2.5 ms
Status indicator	Green LED	Green LED
Output		
Max. switching voltage, DC	48 V	48 V
Continuous current	0.1 A	0.1 A
Switch-off delay	50 ms	150 ms
Max. switching frequency at rated load	20 Hz	5 Hz
Rated data		
Ambient temperature (operational)	-25 °C...50 °C	-25 °C...50 °C
Storage temperature	-40 °C...85 °C	-40 °C...85 °C
Humidity	40 °C / 93 % rel. humidity, no condensation	40 °C / 93 % rel. humidity, no condensation
Approvals	CE; CSA; cURus; EAC	CE; CSA; cURus; EAC
Insulation coordination (EN 50178)		
Rated voltage	300 V	300 V
Overvoltage category	III	III
Dielectric strength for control side - load side		
Dielectric strength input – output	1.2 kV_{eff} / 5 s	1.2 kV_{eff} / 5 s
Dielectric strength to mounting rail	4 kV_{eff} / 1 min.	4 kV_{eff} / 1 min.
Clearance and creepage distances for control side - load side		
Creepage and clearance distance input – output	≥ 5.5 mm	≥ 5.5 mm
Impulse withstand voltage	6 kV (1.2/50 µs)	6 kV (1.2/50 µs)
Pollution degree	2	2

Dimensions			
Clamping range (nominal / min. / max.)	mm²	1.5 / 0.5 / 2.5	1.5 / 0.5 / 2.5
Depth x width x height	mm	63.2 / 6 / 91	63.2 / 6 / 91
Note		For mounting on TS 35 rail	For mounting on TS 35 rail

Ordering data

	Type	Qty.	Order No.
Tension-clamp connection	MCZ TO 24VDC/50MS	10	**8324590000**
Tension-clamp connection	MCZ TO 24VDC/150MS	10	**8286410000**

Note

Accessories

Note	
	AP MCZ end plate 8389030000
	AP MCZ end plate 8389030000

Technical appendix/Glossary

Relay modules and solid-state relays – Comparison

Advantages of electromechanical relay modules (EMR)

+ AC and DC operation in load circuit possible
  Versatile (advantage as interface between different plant equipment)

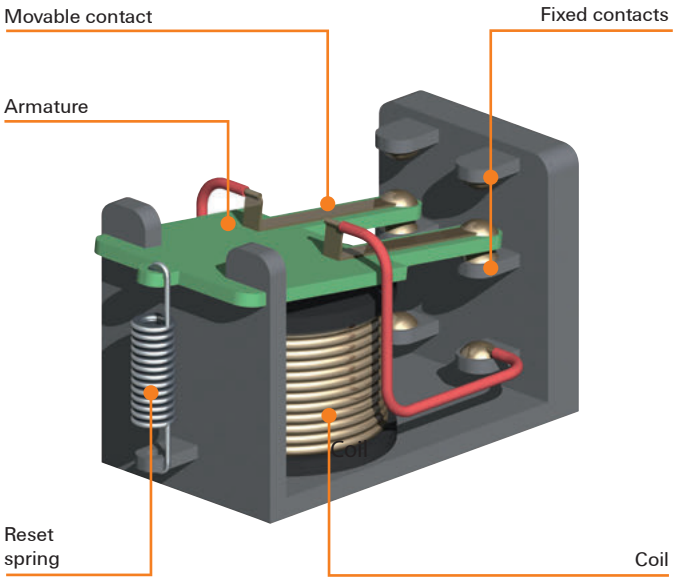
+ No leakage current in the load circuit
  A semi-conductor does not achieve 100 % isolation

+ Low residual voltage in the load circuit
  Low voltage drop

+ No power loss in the load circuit
  In contrast to the semi-conductor in opto modules there is no electrical resistance in the contacts of the electromechanical relay modules that can lead to a rise in temperature when under load. Therefore, heat sinks are not necessary.

+ Multiple contacts possible
  A single control signal can switch several load circuits.

+ Control circuit less sensitive to *transients*)*
  Unwanted switching operations caused by voltage fluctuations are prevented by the make capacity of the magnetic coil.



W

**) Refer to page W.8 in the Glossary for a detailed explanation of this term.*

Depending on the requirements, the choice between electromechanical and solid-state relays is made based on the different advantages that the different versions offer:

Advantages of solid-state relays (SSR)

+ Long operational lifetime and reliability
  No moving parts or contact wear

+ Small dimensions
  Saves space on the PCB and mounting rail

+ Low control power
  An LED is activated - no mechanical parts are moved

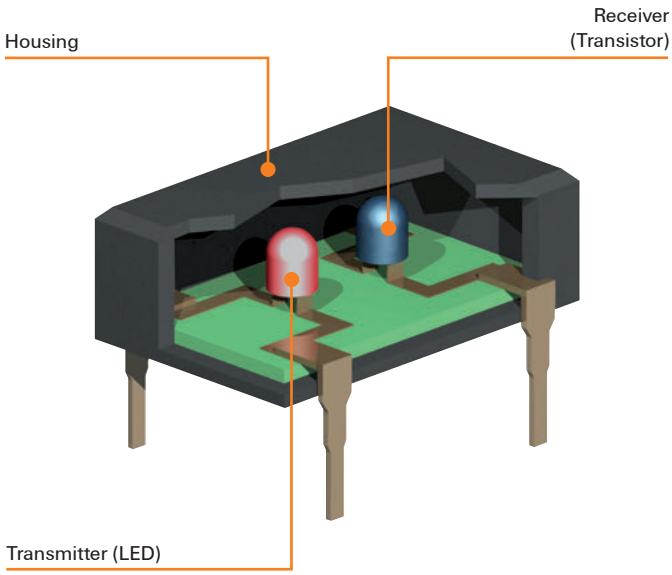
+ Fast response times
  Fast switching, which allows high frequencies to be achieved

+ No contact bounce
  Reduces switching delays

+ No switching noise
  Suitable for use in noise-sensitive environments

+ Not susceptible to shock and vibration
  Prevents unwanted switching statuses

+ No electromagnetic radiation due to switching sparks or coils
  No interference of adjacent assemblies or electronics components



Relay modules – an overview

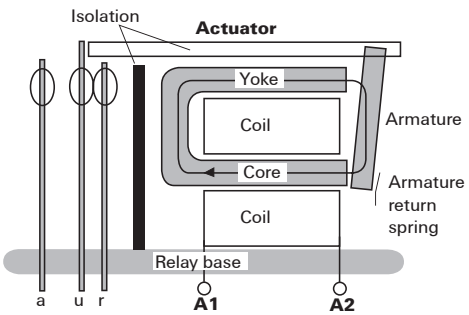
Historical background

The term 'relay' was originally used for a station where stagecoaches were able to change their tired horses for fresh ones. The term 'relay' was given a totally different meaning by the English physicist Charles Wheatstone (1802–1875). In Wheatstone's times, departing trains were advised of by a bell ringing at the next railway station up the line.

This was achieved by connecting a battery in the first station to a bell in the second. However, as the railway stations were generally several kilometres apart the power arriving at the second station was often insufficient to ring the bell. Wheatstone invented a switchgear apparatus that was installed at the second railway station. This continued to function even with low power supply levels. The switchgear apparatus switched a second electrical circuit that actuated the bell. This was the birth of the electromagnetic relay.

How a relay functions

A relay is an electromagnetic switch comprising of two galvanically isolated circuits. Firstly the control circuit and secondly the open circuit with the normally open contact. As soon as the control circuit is energised, the coil creates a magnetic field in the core/yoke and attracts the armature. The actuator now actuates the switch at the output, the normally open contact (make contact) closes and the normally closed contact (break contact) opens. When the control circuit is turned off, the magnetic field diminishes and the return spring returns the armature to its initial position. The actuator moves the normally open (make contact) back to its normal position, the normally open contact opens, the normally closed contact (break contact) closes.



Consequently, with low power input – battery power for example – a relay provides the option of switching heavy loads as well as being able to serve as a switching amplifier. Thanks to the isolation between the input and output, relays are also suitable for providing separation when the power of the control and the open circuits differ. Equipped with several NO (make) contacts, a relay can also be utilised for multiplying signals.

From relay to relay module

There are two alternative methods that make a relay module suitable for use in industrial applications: mounting onto a PCB – in combination with the corresponding assembly techniques and circuitry – or plugging onto a specially designed relay base.

Generally, the design and rating data determine if a relay coupler is or is not suitable for a particular application.

For example, relay modules with plugged on relays are only partly suitable for use in applications subjected to heavy vibrations. In this case, relay modules with soldered relays should be preferred. Low, compact designs such as those provided by the RIDERSERIES are utilised in small consumer units where the overall available height is limited. Conversely, the compact design of the TERMSERIES helps to save space in electrical cabinets.

Protective separation

It is essential that all electrical equipment required to provide protective separation be designed in such a manner that the insulation cannot be impaired, for example by mechanical errors. If a mechanical error occurs in a relay (bent soldering pin, broken winding wire or broken spring), 'protective separation' must be guaranteed. Relays are specified and tested in accordance with EN 61810-1. However, the standard makes no reference to EN 50178 (Electronic equipment for use in power installations); equally no definition is given for the term 'protective separation'. Things are made worse by the fact that different measurement conditions are given for the test voltages stipulated for relays. As a consequence, the test voltages cannot be applied to the standards EN 50178 or EN 61140. And because the user is nevertheless increasingly deploying electrical equipment that is supposed to guarantee 'protective separation', a large number of manufacturers of relays point to the EN 61140 and carry out the tests accordingly. And of course the values are then 'protective separation' conform.

Standards

The following individual standards are applied in accordance with the corresponding requirements:

Relay modules
- DIN EN 50178:
  Electronic equipment for use in power installations

Relays
- DIN EN 61810-1:
  Electromechanical elementary relays (electromechanical elementary relays without specified time response characteristics)
  Part 1: General and safety requirements

Relay base
- DIN EN 61984
  Connectors - Safety requirements and tests

EMC – Electromagnetic compatibility

DIN EN 61000-6-1
Part 6-1: Generic standards; Immunity for residential, commercial and light-industrial environments

DIN EN 61000-6-2
Part 6-2: Generic standards - Immunity for industrial environments

DIN EN 61000-6-3
Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments

DIN EN 61000-6-4
Part 6-4: Generic standards - Emission standard for industrial environments

Coil suppression circuit

In DC circuits, the inductance of the relay coil generates a release voltage when de-energised that is capable of damaging or destroying the connected control electronics. A free wheel diode connected in parallel to the coil limits the release voltage, protects the control electronics and prevents induction of the cut-off voltage to other signal lines.

Large circuits or long cable runs are subjected to increased electrical and electromechanical interference and damage. Malfunctions or even total failure of the relay module can result. The radiated interference, and not to forget leakage currents emanating from trigger modules, can also mean that a triggered relay does not drop out. As standards specify that the drop-out voltage is limited to about 15 percent of the rated voltage, the interference voltage generated can be sufficient to prevent the relay from opening. One way of resolving this problem is to connect an RC combination line side to filter out disturbances and provide capacitive suppression of interference voltages.

TERMSERIES products are supplied ex works with these protective circuits already integrated in the electronics; for the RIDERSERIES these are available as modular series electronics.

The same principles apply as with contact protection circuits.

Relay modules – an overview

Switching large and small capacities

Basically, the reliability of the contacts in a relay reaches a maximum at a medium current load thanks to the continuous self-cleaning effect. As the contact load increases and hence leads to more severe erosion of the contacts, the switching reliability decreases with an increasing number of switching operations. This reduces the service life of the contacts. Although at very low loads the minimal erosion of the contacts does raise the service life more or less to the level of the mechanical service life, the lack of a self-cleaning effect contributes to a lower contact reliability.

Reliable contact at low currents, especially when only small voltages are involved as well, depends on the choice of contact material. Contacts of silver-nickel, which is standard for the majority of Weidmüller relays, are generally suitable for currents of approx. 10 mA and higher. Such large-surface contacts can switch both low and high currents. However, at low currents occasional failures can occur due to erosion and the lack of the self-cleaning effect. The higher the current, the more reliable is the contact – thanks to the self-cleaning. Silver-nickel is suitable as a contact material for low currents/voltages. It provides, however, only **moderate switching reliability**. If this is acceptable, then conventional standard relays represent an inexpensive solution.

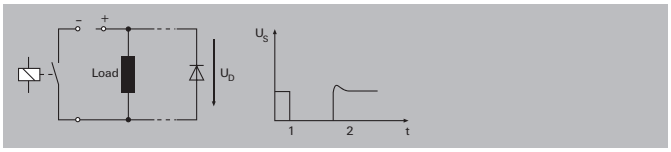
For applications that call for **improved contact reliability** or low currents/voltages, conventional relays with hard-plated gold contacts are preferable because they do not erode and therefore operate more reliably.

If **maximum switching reliability** is necessary, especially for low currents/voltages, a relay should not be your first choice. In these instances Weidmüller advises the use of solid-state relays. Wear and abrasion caused by mechanical movements are non-existent in solid-state relays.

Protective circuits for the contacts

The switching of inductive or capacitive loads produces switching sparks which can influence the electrical service life of the relays. The following protective circuits for the contacts reduce contact wear:

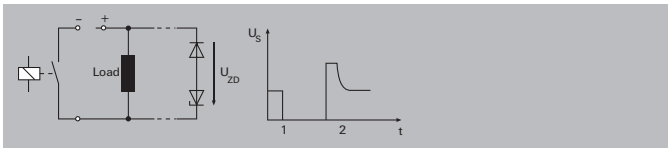
Diode



Free-wheeling diodes (DC)
Free-wheeling diodes are used primarily to protect against overvoltages, which occur through self-induction when switching off inductive DC loads (electric motors, relay coils). Voltage spikes are limited to the equivalent value of the diode forward voltage and excess voltage is discharged via the diode. However, this leads to a delay in the voltage drop and as such also delays the switching operation.

Advantage:	Can be used for all capacities, low surge, minimum space required, low price
Disadvantage:	Very long release delay

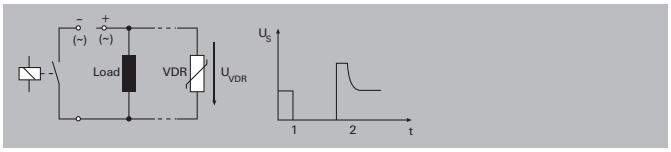
Diode and Z-diode



Zener diode / suppressor diode (DC)
These function as normal diodes in the forward conducting direction. In the blocking direction they become low resistant at a certain voltage (breakdown voltage).
High levels of overvoltages can lead to the destruction of the zener diode / suppressor diode.

Advantage:	Low surge (defined by Z-diode), short release delay
Disadvantage:	Cannot be used for large capacities

Varistor

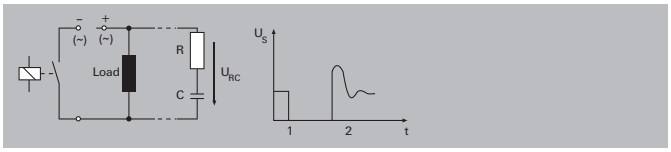


Varistor (AC/DC)

The functional principle of the varistor is also based on a breakdown voltage, but with faster reaction times. This allows higher levels of energy to be shunted, however, these lead to the component aging. This in turn reduces the breakdown voltage over time and increases the leakage current.

Advantage:	Low surge, short release delay
Disadvantage:	High current load on the contacts when switching on; more complicated and expensive at greater capacities

RC combination



RC-element (AC)

The RC element compensates voltage spikes by means of a capacitor. Due to the charging and discharging characteristics interference pulses are filtered out when the voltage is rising and not first when overload is reached. For this reason, RC elements are used to protect against interference pulses and exclude faulty switching operations.

Advantage:	Short release delay, low price
Disadvantage:	Cannot be used for all operating voltages and capacities

U_S = Voltage progression 1 = Closing 2 = Opening

Glossary: Relay modules

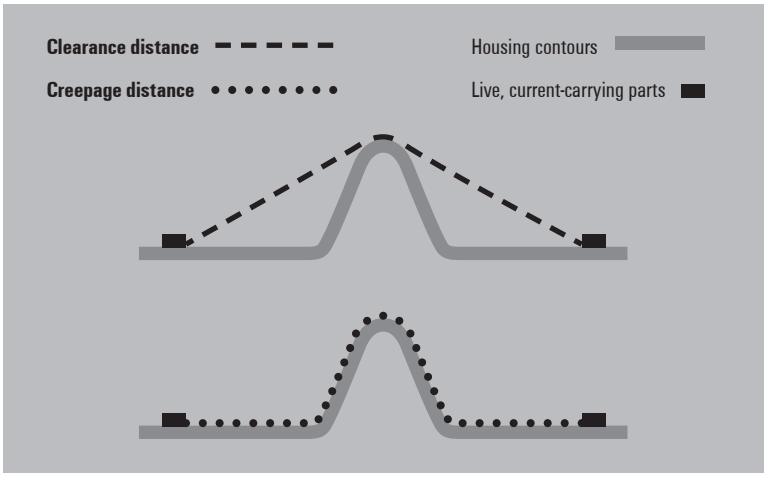
A

AC	Refers both to alternating values (such as voltage or current) as well as to those devices and variables which reference these devices. Specifications are valid for 50 Hz, unless otherwise indicated.
AC coil, alternating current coil	Relay; excitation with alternating current (AC). Specifications are valid for 50 Hz, unless otherwise indicated.
Adhesion (contacts)	This refers to when the relay armature does not return back to its starting position after the coil voltage has been turned off. The armature can get stuck if there is too much retentivity in the iron core or if the reset force is too small.
Approvals and testing marks	Testing approvals are independent confirmation from governmental or private registration services and testing facilities. They certify that the product complies with the relevant regulations and maintains the specified product characteristics. Note: The ordering scheme gives you the choice of many variations, but not all variations are established as standard types (order numbers). Therefore, they may not be included in the list of approved relays. Technical specifications and list of approved types are available on request. CSA Canadian Standards Association, Canada GL Germanischer Lloyd, Germany TÜV Technical Monitoring Association, Germany UL Underwriters Laboratories, Inc., USA; UR Component Recognition Mark for the United States cUR UL Component Recognition Mark for Canada cURus UL Component Recognition Mark for the United States and Canada cULus UL Component Listing Mark for the United States and Canada VDE VDE testing location, Germany (advisory reports with production monitoring)

B

B10	The number of switching cycles for a load where 10 % of the relays fail. This value is used to determine the probability of system failure.
Bounce (chatter)	An unintended phenomenon that may arise during the closing or opening of a contact circuit when the contact elements touch and separate again before they have reached their final positions.
Bounce times	The time (average value) between the first and last closing (or first and last opening) of a relay contact. These times are valid when the rated voltage is used for excitation, without other components in series or in parallel to the coil, and at the reference temperature.
Breaking capacity	Maximum switching current that a relay contact can switch off under specified conditions, whereby the switching current must not be greater than the nominal current.
Burn-off	Loss of contact material due to switching electrical arcs.

C

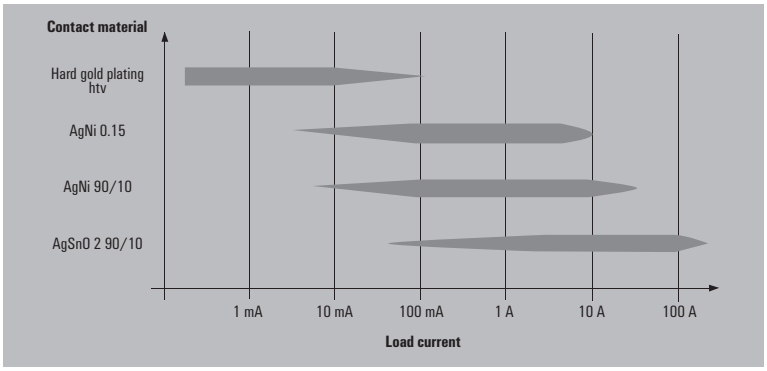
CE	Abbreviation for Communauté Européenne (the European Community). Manufacturers use the CE label to confirm that their products comply with the corresponding EC directives and the "essential requirements" therein. The EMC Directive 2004/108/EC and Low Voltage Directive 2006/95/EC are currently binding.
Clearance and creepage distances	Clearance and creepage distances are critical factors that affect the insulating capacity of electrical components. The creepage distance denotes the minimum clearance that two live parts along a surface must have in order to prohibit a flow of current across the insulating material at the specified operating voltage The operating voltage, the choice of insulation material (material group) and the protective measures taken against contamination (pollution degree) all influence the creepage distance. The clearance distance denotes the minimum direct clearance (through the air) that two live parts must have to one another in order to prohibit a charge passing through the air (an arc). The expected surge voltage (rated impulse voltage) forms the basis for calculating the distances. The surge protection category and pollution severity are further factors that influence dimensional design considerations. 
Coil resistance	DC resistance of a relay coil at the reference temperature (+20 °C); Higher coil temperatures increase the resistance value by 0.4 % / K. For actual operations, the excitation voltage should be adjusted accordingly (> sparkover value). For AC coils, the inductive resistance is much greater than the DC value. This is why the current consumption of the coil is also specified at nominal excitation.
Coil specifications	The coil specifications are specified according to IEC 61810-1. Unless otherwise specified, these values apply under the following conditions: ambient temperature 23 °C; coil at ambient temperature (cold coil, without pre-excitation); 50 Hz for AC voltage excitation; operating range of class 2; densely assembled (mounting gap of 0 mm). A relative duty cycle of 100 % (continuous excitation) is permitted.

Combination of relay and plug-in socket, Insulation requirements	The combination of relay and plug-in socket is described in the new relay standard IEC 61810-1. The relay sockets must meet the requirements of IEC 61984 and the insulation requirements of IEC 60664-1. Even if the socket itself already meets (or surpasses) the insulation requirements, there may still be reduced clearance and creepage distances (and thus reduced insulation rated voltage) for the combination of the relay and plug-in socket. Restrictions – such as a reduced voltage range or reduced pollution degree – should be expected for the relay/socket combination. This should be taken into consideration for miniature multi-pole relays with plug-in sockets which have minimal gaps between the contact circuits. In addition to the insulation properties, the thermal properties of the combined relay/socket are very important (refer to the derating curves). The plug-in frames from different manufacturers cannot be compared directly, which is why the technical specifications are only guaranteed for approved relay/socket combinations. Possible risks of fire or reduced dielectric strength may result when non-approved combinations are in use.

Contact material

The list below provides an overview of the most important performance coatings and contact materials. The load capacity of the contacts and their life span can vary depending on the contact material and construction used. It is important to achieve the best combination of relay function and contact material. The specifications for individual relay types are only partially valid for other variants.

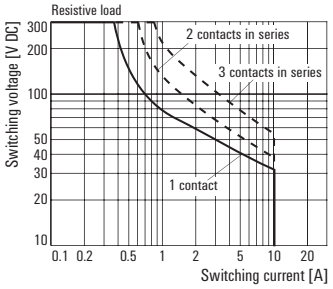
1) Performance coatings:
   Pure gold – the best corrosion resistance but too soft when used as solid metal; high tendency toward cold welding in layer thickness > 1 µm (gold-flashed); only functions as a gold gilding and does not protect against corrosive gases.
2) Contact material:
   Hard gold (hard gold-plated) - Very good corrosion resistance for dry loads; measuring and switching circuits; control inputs (1 mV – 10 V, 0.1 mA – 100 mA); low and constant contact resistance with the smallest switching power; low cold-welding tendency and low current/voltage switching; recommended operating range > 1 V, 1 mA, 50 mW. After switching higher loads (>10 V, 100 mA), small loads can no longer be switched.
   Silver Nickel AgNi90/10 - High resistance to burn-off; minimal tendency towards cold welding; higher contact resistance than AgNi0,15; circuits with medium to high loads; DC and AC circuits (solenoid valves, fans, heaters); not suitable for high capacitive in-rush currents; range of use > 12 V, 10 mA.
   Fine-grain silver AgNi0,15 - Relatively low contact resistance; low resistance to corrosive gases; all-purpose use for average loads and low loads; preferably in DC circuits (solenoid valves, fans, heaters); not suitable for hight currents; range of use > 12 V, 10 mA.
   Silver-tin-oxide AgSnO2 - Minimal tendency to weld; high resistance to burn-off at high switching capacity; low material migration; circuits with high input and output loads; DC and AC circuits (lamp loads, capacitive loads, fluorescent tubes, switching power supplies, etc.). Well suited for resistive, inductive and capacitive DC applications due to low occurrence of material migration, range of use > 12 V, 100 mA..
   Silver-cadmium oxide AgCdO – minimal tendency to weld; high resistance to burn-off; especially suitable for switching inductive loads; AC circuits, range of use > 12 V, 100 mA.
   Tungsten W – highest melting point; for high switching frequency at minimal duty cycle; as a lead contact in circuits with high in-rush and switch-off loads.

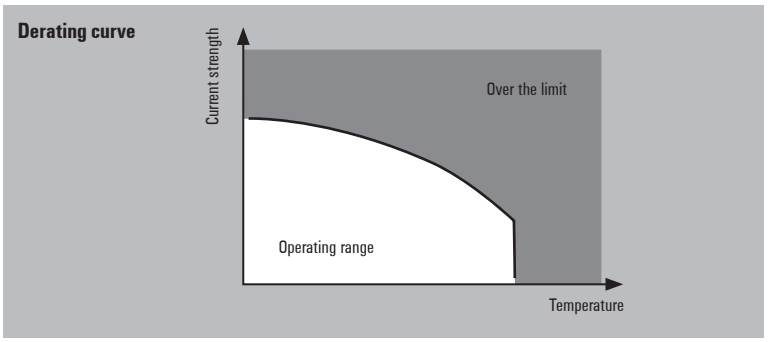
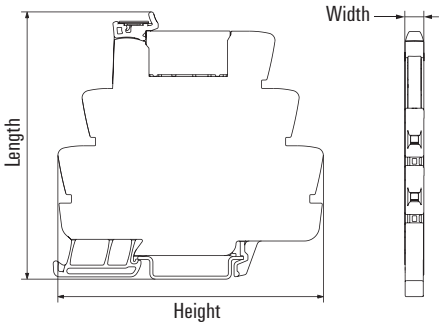


W

Continuous current limit	The highest current value (RMS value for AC) which a closed contact can continuously conduct at specified temperature limits; this corresponds to the thermal continuous current limit Ith. Unless otherwise specified, the data refers to the following conditions: equal load on all contact circuits, input voltage is 110 % of rated coil voltage, maximum ambient temperature, opened vent, dense mounting (mounting clearances of 0 mm), and test conditions according to the positioning for the heating test in IEC EC 61810-1 Appendix B.
Continuous current	The current that can be continuously conducted without exceeding the contact-overheating values under defined conditions.
Continuous operation	Operating mode in which a relay remains energised until it reaches thermal equilibrium.

D

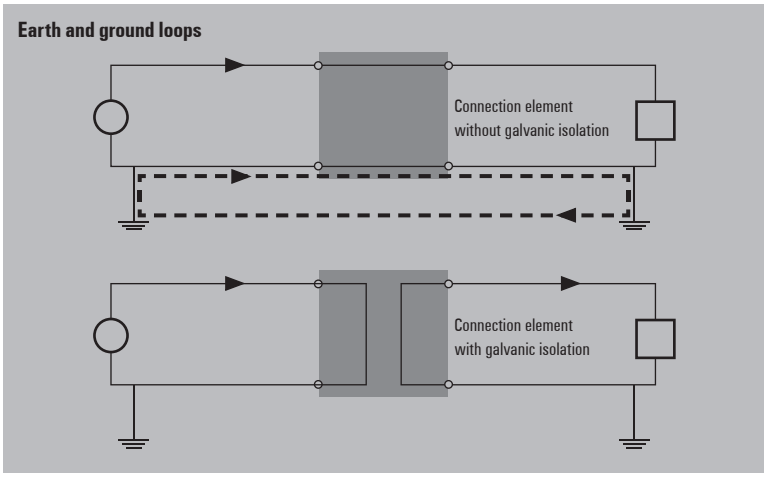
DC	Refers to the electrical variables such as voltage or current (DC, DC voltage) that are not dependent on time.
DC switch-off capacity, Direct-current switch-off capacity	Values below the DC switch-off capacity curve (for max. permitted switching voltage/current at resistive load) can be switched on and off reliably; e.g. an arc is extinguished (max. arc duration is 10 ms at resistive load). The position and shape of the load-limit curve is influenced by the contact material and relay construction (contact gap, opening speed of the contacts, etc.). Information about the electrical lifespan should not be derived from these curves! **DC load breaking capacity** Resistive load 

Derating / derating curve	The continuous current is reduced at higher ambient temperatures; this is shown using a derating curve (a load reduction curve). Current flow generates heat, which increases as the current increases. Electrical components have an upper temperature limit which limits their ability to function. The temperature influencing the components is a combination of the ambient temperature and the heat generated by the current. So to ensure that the limit temperature is not exceeded, the current must be reduced when the overall temperature rises. The derating curve depicts the relationship between the prevailing temperature and the resulting maximum amperage with regards to the temperature limit. 
Dielectric strength, test voltage	Voltage (RMS value for AC voltage, 50 Hz, 1 min) which can be applied between mutually insulated relay components during the voltage test.
Dimensions	Dimensions in millimetres. 
DIN rail	Unless otherwise noted, Weidmüller's products are built and tested for mounting on DIN rail (rails according to TH35-7.5 / EN60175). Other installations (e.g. TH35-15)may function but have not been tested or approved.
Duty cycle, relative duty cycle	Describes the ratio of the excitation duration of a relay (duty cycle) to the entire cycle time in intermittent, continuous or short-time operations. The duty cycle is expressed as a percentage of the total cycle duration.

E

Earth and ground loops

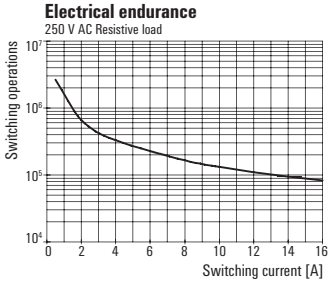
Denotes the connection of two potentials via their earth or ground connection. A potential difference between the earth or ground connection of two devices (for example, a sensor and controller) that are directly wired to one another causes current flow via the earth of the shared housing. These interference currents can lead to different problems, for example in the acquisition of measurement signals or when controlling actuators. When transmitting switching or measurement signals using a device with electrical isolation between the control and load circuits, it is important that a closed circuit via the earth or ground connection can never occur – so that no interference currents are generated.



Electrical lifespan curve

The curve for the electrical lifespan specifies the typical lifespan as the mean cycles to failure (MCTF) and is based on the Weibull distribution. No guaranteed minimum values can be interpreted from this statistical data.

Note: The curve for the electrical lifespan applies only to the specified contact materials (or those in the datasheet). The lifespans for other contact materials cannot be derived from this curve. It is also not possible to derive information about the electrical lifespan by extrapolating the curve.



Electrical lifespan, lifespan of contact	Number of switching cycles for a relay with electrical contact load under full operational capacity (according to IEC 61810-1 and IEC 61810-2). Unless indicated otherwise, the contact data and electrical lifespan are valid under the following conditions: • On NO contact, • AC mains frequency of 50 Hz, • 50 % relative duty cycle, • Nominal switching frequency, • Contact load, schedule A, • Resistive load, • Rated voltage (coil), • Ambient temperature 23 °C, • Protection degree RTII - flux-proof • Individual assembly • Vertically installed (the connections of a PCB relay point downwards). The electrical lifespan is specified according to the criteria for “useful life”, severity level B according to IEC 61810-2. The data does not cover all usage beyond the specified electrical lifespan. The user is obliged to avoid such situations. Experience shows that the electrical lifespan remains relatively constant up to a 0.8 power factor. When working with loads that have a power factor less than 0.8, we recommend consulting with the user.
Error, relay failure	According to IEC 61810, a relay failure is defined as the occurrence of malfunctions that exceed a certain number: • Malfunction On contact closing • Malfunction on contact opening (contact bridging for CO contact, as special type of malfunction during contact opening) or as • Insufficient dielectric strength. Such malfunctions must be considered in the scope of the application – they should not create any risks. Depending on the specific loads and the contact power, a malfunction can cause excessive heat or even a fire. The user is responsible for taking the necessary precautions in accordance with the relevant regulations.

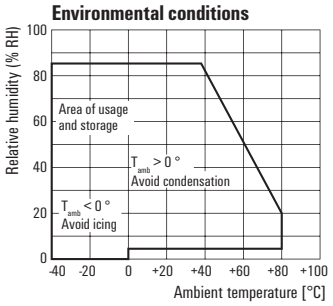
F

Flammability according to UL	Indicates the flammability class according to the specification from UL 94 (Underwriters Laboratories, Inc., USA). Flammability tests according to UL 94: for testing plastic materials and classifying the propagation/extinction characteristics when the material burns. The UL 94 flammability classes which are relevant to relays are V-0, V-1, V-2 and HB.

G

Galvanic isolation	Potential-free isolation between electrical components. Electrical (or galvanic) isolation means that no charge can flow from one circuit to another. There is no conductive electrical connection between the circuits. The circuits can nevertheless exchange electrical power or signals via magnetic fields, infrared radiation or by charge displacements.

H

Humidity / condensation	Standard conditions: annual average relative humidity > 75 % at an ambient temperature of 21 °C, in 30 days, evenly distributed throughout the year, and 95 % at ambient temperature w of 25 °C. On other days: occasionally 85 % at 23 °C. No icing or condensation is allowed - affects storage and/or operation. When storing or operating under other conditions, you must take steps to avoid temperature changes which could cause icing or condensation. Operating and storage should be within the limits specified in the graphic. 

I

Impulse withstand voltage	The highest withstand voltage of a specified shape and polarity that does not lead to an insulation breakthrough or flash-over, under the specific conditions.
Inductive loads	Refer to usage categories.
Inrush current	Specified as the switching current by resistive loads that can turn on a relay under defined conditions. The data refers to the NO contact, nominal voltage, and a current value for a duration of max. 20 ms for at least 100 switching cycles, or 4 seconds with a relative duty cycle of 10 %, unless otherwise indicated.

Insulating material group	According to their CTI (comparative tracking index) values, the insulating materials are categorised in one of the following four groups: Group I 600 CTI Group II 400 CTI < 600 Group IIIa 175 CTI < 400 Group IIIb 100 CTI < 175 The figures for the comparative tracking index, according to IEC 60112 (DIN IEC 60112 / DIN VDE 0303-1) are determined using special samples prepared for this purpose with test solution A.
Insulation according to EN 50178	Specifications for insulation coordination with: • Type of insulation • Nominal voltage of the supply system • Pollution severity level • Impulse withstand voltage • Surge voltage category

M

Max. switching current	The max. switching current indicates the maximum level of current that can be switched.
Max. switching frequency at rated load	The number of switching operations that occur in a specific unit of time. The maximum switching frequency for average loads may be higher than the value specified for the nominal load when the switching characteristics of the load (such as arcing) do not cause the contact temperature to increase. The maximum switching frequency for no-load switching can also be used for loads where no arcing will take place (purely resistive loads cause no significant arcs up to 12 V or 50 mA at 12 – 250 V, because the arc breaks off fairly quickly through the contact opening (insulation)).
Max. switching power	The switching capacity is calculated as the product of the switching voltage and the switching power (in VA for AC; in W for DC).
Mechanical service life	Number of switching cycles for de-energised relay contacts, where a relay must remain functional within specific conditions.
Micro-switch-off	Reasonable contact opening in at least one contact that ensures functional safety. Note: The contact opening has a requirement for the dielectric strength but not for the dimensions.
Minimum switching capacity	Calculated product of switching current and switching voltage – a measure of reliable switching. Low contact resistance values are realised only above a certain load. Greatly increased resistances may occur at lower switching loads which can prevent the load circuit from being safely switched. The minimum contact loads for different contact materials should also be taken into account.
Mono-stable relay, switching behaviour	A relay is referred to as mono-stable when its contacts return to the idle state automatically after the energising parameter (the input voltage) is switched off.
Mono-stable, non-polarized relay, neutral relay	The switch position change in a neutral, mono-stable relay does not depend on the polarity of its excitation.

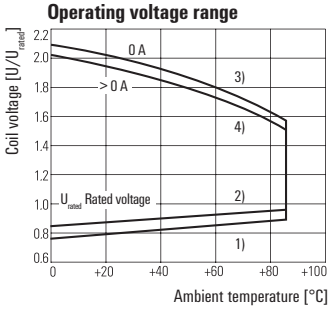
Mounting distance	Distance between two adjacent components when using parallel, uni-directional positioning; or the distance to other electrical components. Because of the insulation requirements, you may need to increase the minimum gap between the components or select a different positioning. These values refer to components in “single-file arrangement“, unless otherwise indicated. Also relevant for this definition: • Density of assembly: assembled with minimum mounting clearances; this minimum distance is determined by the insulation requirements at 230 V AC and/or mechanical requirements for the installation(e.g. use of sockets), • Individual installation: components are mounted with gaps so that there is NO thermal influences from adjacent components.
Mounting position	Mechanical and electronic relays can usually be installed in any position when there are no qualifying limitations. To ensure the proper current flow and heat dissipation, the connections must be properly contacted and the cross-sections must be adequate. Several factors must be taken into consideration when positioning: including the insulation requirements, heat dissipation and the possible mutual magnetic influence.

N

Nominal current (contact)	Current that a relay contact can switch off or on under specific conditions, or the current that the relay accessories can conduct. The nominal current specification covers the following data, unless otherwise specified: • Contact current, switching current • Continuous current limit The conditions for the relay are specified under the contact lifespan; For accessories, the nominal current is specified for a relative duty cycle of 50 %, at the nominal switching frequency, and for an ambient temperature of 23 °C.
Nominal switching voltage (contact)	Voltage between the switching contacts - before the contact closes or after it opens.
Nominal torque	The specified value for the torque of the screws (screw connection) must not be exceeded.
Number of contacts	Number of working contacts in a relay (normally-open, normally-closed or change-over)

O

Operating temperature	Permissible ambient temperature – relative to a specific relative humidity – at which a product should be operated at nominal load.

Operational voltage range	Allowable input voltage range – depending on the ambient temperature. The top part of the range is specified by the maximum voltage; the lower part of the range is specified by the response/minimum voltage. Curve 1: response time/minimum voltage U0 (without pre-excitation) Curve 2: response time/minimum voltage U1 (after pre-excitation) Curve 3: maximum voltage U2, contact current = 0 A Curve 4: maximum voltage at contact current I_{nom} 

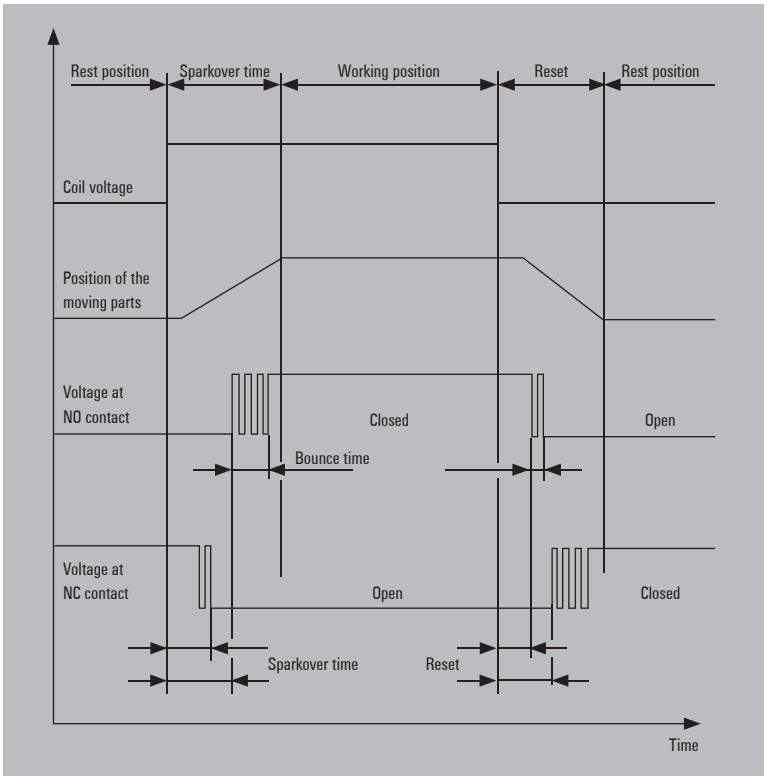
P

Packing unit	Indicates the smallest amount (a pack, for example) or the quantity per carton.
Plug-in cycles	Sockets and accessories are designed for 10 insertion cycles without electrical load – unless otherwise specified.
Pollution severity level	Pollution (contamination) includes any foreign material – whether it is solid, liquid or gaseous (ionised gas) – which is capable of influencing the surface resistance of the insulating material. The standard defines four degrees of pollution. Their numbering and classification is based on the quantity of the contaminant or the frequency with which the contaminant reduces the dielectric strength and/or surface resistance. Pollution degree 1: • there is no contamination or only dry occurrences of non-conductive pollution. The pollution has no influence. Pollution degree 2: • there is only non-conductive pollution. Temporary occurrences of conductivity caused by condensation may also occur. Pollution degree 3: • conductive pollution or dry, non-conductive pollution that can become conductive due to condensation is likely to occur. Pollution degree 4: • the contamination leads to continual conductivity which can be caused by contaminants such as conductive dust, rain or snow. Note: Pollution degree 3 is typical for industrial environments and similar settings; pollution degree 2 is typical for households or similar.

Positively-driven contacts	Arrangement of contacts in accordance with EN 50205, with at least one NO and one NC contact; mechanically constructed so that the NO and NC contacts of the entire contact system can never (even in the event of a malfunction) be closed at the same time. Such relays are used in safety engineering controls in order to prevent injury and property damage.
Power rating	The nominal value of the power that is converted when the nominal control voltage is applied.
Protection degree - (IEC 60529), IP	The degree of protection afforded by an enclosure is indicated by the IP Code (IP = International Protection). This specification is equally valid for industrial relays and accessories. For the purposes of "component" relays(such as PCB relays), refer to the RT protection degree. A two-digit number is used to indicate the protection provided against touch contact and foreign bodies (the first number) and against humidity (the second number). Protection levels for touch contact and foreign bodies (the first digit): the first digit indicates the degree of protection inside the housing against ingress of solid foreign objects and against any human access to hazardous parts. 0: no protection 1: protection for large body parts with a diameter > 50 mm 2: finger protection (diameter 12 mm) 3: tools and wires (diameter > 2.5 mm) 4: tools and wires (diameter > 1 mm) 5: full protection against touch contact 6: full protection against touch contact Degree of water protection (the second digit) The second digit indicates the degree of protection provided against the ingress of water into the housing: 0: no protection 1: protection against vertically falling drops of water 2: protection against water droplets falling diagonally (up to 15°) 3: protection against water spray that falls at an angle up to 60° from vertical 4: protection against splashed water from all sides 5: protection against water jets 6: protection against powerful jets of water (flooding) 7: protection against sporadic submersion 8: protection against constant submersion
Pull-in / drop-out current, AC/DC coil	Value of the coil current at which a relay responds (spark-over) or drops out.

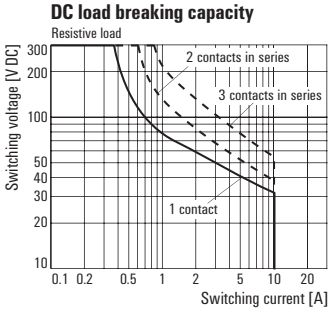
R

Rated control voltage	The nominal value of the sparkover voltage for the relay.
Rated voltage (Isolation)	Voltage level at which the insulation specifications are measured – this is the basis for sizing the creepage distance.

Relay times (time response)	Because of the self-inductance of the coil and the inertia of the moving parts, the steps involved in operating a relay do not occur instantaneously. The following chart illustrates several time-function terms for the main contact variants of non-delayed switching relays. These specified times are valid when the rated voltage is used for excitation, without other components in series or in parallel to the coil, and at the reference temperature. • Sparkover time • Drop-out/reset time • Bounce time • Min. excitation period 
Relays and sockets	The relays in this catalogue have been designed, specified and tested in accordance with the relay standard IEC 61810-1 “Electro-mechanical elementary relays - part 1: General considerations and safety-related requirements”. Where the appropriate approvals have been specified in the data sheet, the relays and sockets have been tested according to IEC 61810 or EN 61984 and UL 508.
Reliability	Electro-mechanical components such as relays are subject to wear (both mechanical and electrical). A typical “bathtub curve” depicts the reliability. This means that there may be isolated statistical exceptions which are below the typical levels of reliability.
Reset	Process in which a mono-stable relay resets from the working position to the rest position.

Reset time	Time interval (average) between when a mono-stable relay is in its working state with the coil voltage switched off and the time at which the final output circuit is closed or opened (not including the bounce time). These specified times are valid when the rated voltage is used for excitation, without other components in series or in parallel to the coil, and at the reference temperature.
Reset voltage	Value of the input voltage at which a mono-stable relay reliably returns to the rest position while at the reference temperature.
Response	The process in which the relay transitions from the normally-closed (break) contact position into the normally-open (make) contact position.
Response voltage / drop-out voltage AC/DC coil	Value of the coil voltage at which a relay responds (spark-over) or drops out.
Rest position	The switched position of a mono-stable relay in its unexcited state.
RoHS Directive 2002/95/EC	RoHS stands for “Restriction of (the use of certain) Hazardous Substances”. According to the EU Directive 2002/95/EC from 01.07.2006, all EU member nations must forbid the use of hazardous substances which damage human health and the environment (including mercury (Hg), cadmium (Cd), lead (Pb), hexavalent chrome (Cr6), polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE)) in new electrical and electronic devices. The term “compliant” means that the entire product group meets the requirements of the RoHS Directive. The maximum weight percentage in homogeneous materials is below the limits specified in the directive: 0.1 % for lead, hexavalent chrome, mercury, PBB and PBDE; and below 0.01 % for cadmium, or qualifies for an exemption in accordance with the annex to the RoHS Directive .

S

Self-heating	The heating up of an operational component based on the power loss from the relay coil and the switching contacts.
Series-circuit relay contacts	When two or more NO contacts in a relay are connected in series, the contact opening is increased while switching off. Arcs which occur from DC loads are cleared more quickly which results in reduced burn-off on the contact. This increases the electrical lifespan and the breaking (switch-off) capacity. 

SIL	Safety Integrity Level. The components must meet the requirements of IEC 61508 is order to reduce risk. This standard provides general requirements for avoiding and minimising device and equipment outages. It stipulates organisation and technical requirements concerning device design and operation. Four safety levels are defined (from SIL1 for minimal risk to SIL4 for very high risk) for classifying facilities and risk-reduction measures. Measures taken to reduce risk must be more reliable when the classified risk level is higher.
Standardised labelling of connections	A1, A2: coil 13, 14: NO contact (contact closes when applying a voltage to the coil) 11, 12: NC contact 11, 12, 14: CO contact (11 is the common contact, i.e. the root)
Status indicator	The status LED display on the input control circuit can differ from the state of the contact circuit in the following cases: • when there are welded-together or broken switching elements, • when there is interference or residual voltages On the signal lines. A reduction in light intensity may result when the ambient temperatures are greater than 50 °C.
Storage temperature	The permitted ambient temperature, related to a specific relative humidity level, for which the product should be stored while in a current-free state.
Surge voltage category	The overvoltage category of a circuit or an electrical system is numbered conventionally (from I to IV) and is based on limiting the assumed surge voltage values that can occur in a circuit (or electrical system with different mains voltages). The assignment to a particular overvoltage category is dependent on the measures which are used to influence (reduce) the surge voltages. Overvoltage category I • Devices that are intended to be connected to the permanent electrical building installation. The measures for limiting transient surge voltages to the proper level are taken outside of the device. The protective mechanisms can either be in the permanent installation or between the permanent installation and the device. Overvoltage category II • Devices that are intended to be connected to the permanent electrical building installation (such as a household appliances or portable tools). Overvoltage category III • Devices that are a part of the permanent installation and other devices where a higher degree of availability is required. This includes the distributor panels, power switches, distribution systems (including cable, busbars, distributor boxes, switches and outlets) that are part of the permanent installation, devices intended for industrial use, and devices that are continually connected to the permanent installation (such as stationary motors). Overvoltage category IV • Devices that are intended to be used on or near the power feed in a building's electrical installation – ranging from the main distribution to the mains power system. This includes electrical meters, surge protection switches and ripple control equipment.

Switch-off delay	Usual time interval from switching off the coil voltage of a switched relay until the first opening or closing of the last output circuit (not including the bounce time).
Switch-on delay	Usual time interval from switching on the coil voltage of an idle relay until the first opening or closing of the last output circuit (not including the bounce time). Coil voltage: pulse or square wave excitation, with rated voltage at the reference temperature of 20 °C.
Switching capacity	The calculated product of the switching current and switching voltage (in W for DC, in VA for AC).
Switching current	Current strength required to switch a relay on or off.
Switching cycle	A single occurrence of the sparkover and subsequent reset.
Switching voltage	The voltage between the switch contacts (contact elements) that is applied prior to the closing or after the opening of the contact (DC for DC voltage; AC for AC voltage).
Switching voltage, max.	The maximum allowable voltage between the contact elements prior to closing and after opening a relay contact.

T

Test button, manual operation	For operating the relay manually: the test button is used only for test purposes during the initial commissioning and testing of equipment. The test button is not appropriate for normal on/off switching and has not been designed for continuous electrical load while in the mechanical ON position. The button should also not be used as a switch. Before pressing the test button, make sure there is no danger posed by loads or other connected devices. Only trained personnel should operate the test button. This prevents the facility's safety mechanisms from being circumvented and the insulation requirements from being compromised.
Transients	Transients are short-term current or voltage spikes caused by interferences in the mains supply grid or by electromagnetic radiation. On the control side of the optocoupler these can trigger unintended switching operations or, in extreme cases, cause the destruction of the component. In an AC-driven load circuit, transients can lead to the maximum permissible forward voltage being exceeded, which in turn can activate the thyristor or Triac. As these operate at quite high switching speeds, even very short pulses can suffice to falsely trigger a switching operation.
Type code	The ordering scheme gives you the choice of many variations, but not all possible variations in the current product line are established as standard types (building codes, ordering designations). Special versions are available on request to meet customer specifications.

Type of contact	DIN 41020 describes various switching functions of the relay contacts and the specific contact configurations, constructions and descriptions based on these functions. • NO (normally open) contact: contact which is closed in the relay's operating position and open in its rest position. • NC (normally closed) contact: contact which is closed in the relay's rest position and open in its working position. • CO (change-over) contact: a CO consists of an NO and an NC contact with a common terminal (root) connection. When changing the switch position, first the previously closed contact opens and then the previously opened contact closes. Note: A temporary electrical connection may be established between the NC and NO contacts due to the switch-off arc.
Type of insulation	Quality of the insulation system, depending on the design and application conditions: • Functional insulation: insulation between live components – necessary so the relay functions properly. • Basic insulation: insulation of live parts to provide basic protection against electrical shock. • Doubled insulation: consisting of a base insulation and additional insulation. • Reinforced insulation: a single "enhanced" insulation of active components, which ensures the same protection against electric shock as doubled insulation. The doubled insulation is composed of a base insulation and an additional insulation; the extra insulation protects against electric shock if the basic insulation fails.

U

Usage category according to EN 60947 (mechanical relays)	AC1: non-inductive or slightly inductive load, such as heating elements AC14: small electro-magnetic loads (< 72 VA), such as mini-contactors AC15: small electro-magnetic loads (< 72 VA), such as power contactors DC1: non-inductive or slightly inductive load, such as heating elements DC13: electro-magnetic loads, such as solenoid valves

W

Wash resistant	Wash-resistant relays can withstand a washing process. During the wash process, none of the cleaning agent should be able to penetrate inside the relay.
Withstand test voltage	The voltage applied to a device under specific test conditions which causes no breakthrough or flash-over of the test piece.

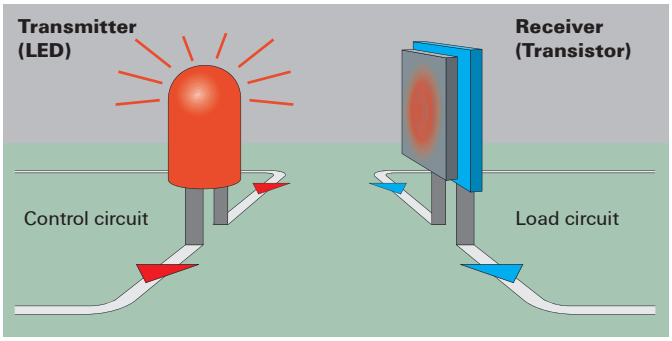
Definition / mode of operation

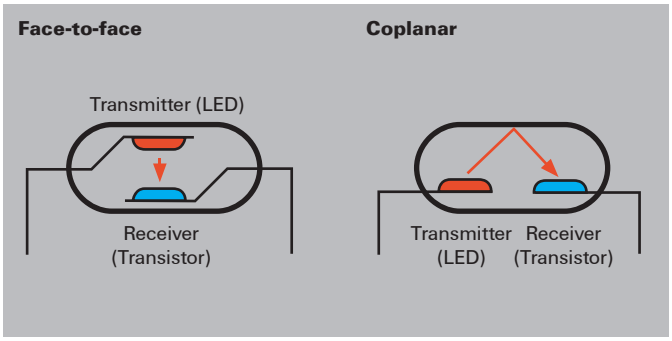
Opto modules – mode of operation

Opto modules are electronic components for switching load circuits by means of a control circuit. On the one hand this allows applications with different performance ratings to be operated by relatively low switching currents. And on the other *electrical isolation*)* between control and load circuits is provided to assure protection of components should a malfunction occur.

In contrast to electromechanical relay modules opto modules do not have any mechanical parts that are prone to wear. To enable the switching operation a light signal is triggered via an LED in the control circuit that causes a light-sensitive semiconductor receiver to complete a connected load circuit. Transmitter (LED) and receiver (for example a phototransistor) are embedded in a light conducting plastic material and encased in a light-proof casing that protects against outside influences.

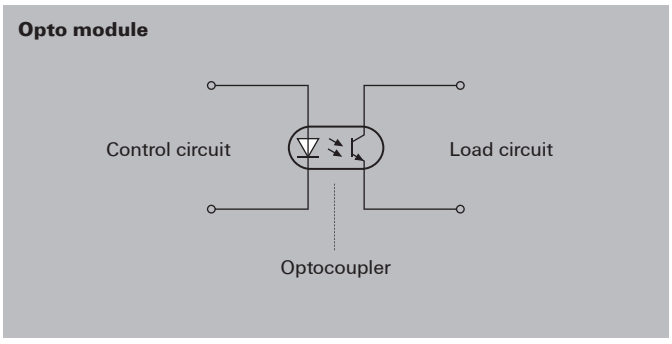
Two design types are differentiated:
Face-to-face design with LED and transistor mounted across from each other with direct light contact
Coplanar design with LED and transistor on the same level. In this case the beam of light is transferred by reflection according to the principle of fibre-optics.





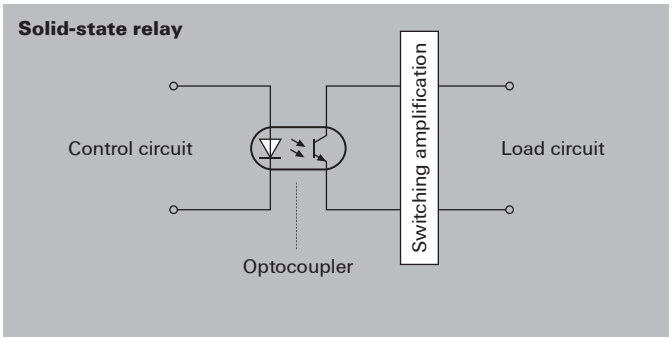
Opto module

The voltage, which can be applied to the opto output itself, is restricted by the sensitivity of the semiconductor receiver (phototransistor). In applications in which only low currents or voltages are required in the load circuit it is possible to use the component without an additional auxiliary circuit in an opto module.



Solid-State Relay

In order to switch higher currents it is necessary to make adaptations to accommodate the different performance levels of the phototransistor and the load circuit (switching amplification).
Modules other than optos equipped with a switching amplifier are called **solid-state relays** (SSR).



** Refer to page W.36 in the Glossary for a detailed explanation of this term.*

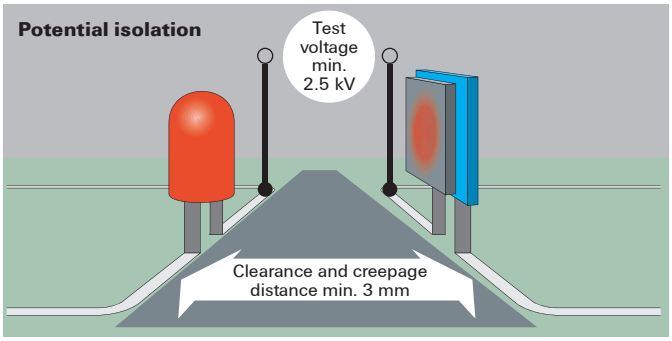
Basic functions

Opto modules and solid-state relays are generally used in the following fields of applications:

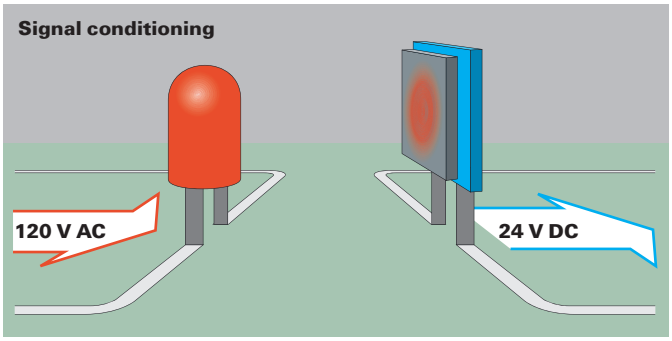
Potential isolation
Many applications require that the control circuit is electrically isolated from the load circuit. This primarily protects the control level from interference from the field, such as:

- Interference currents e.g. from *earth and ground loops*)*
- Interference pulses e.g. from inductive effects of *transients*)*

The separation of the control and load circuits in the opto module provides the required isolation.
However, this must withstand an isolation test of at least 2.5 kV in all opto modules and solid-state relays.
To guarantee isolation it is necessary that a minimum of 3 mm clearance and *creepage distance*)* be maintained in all components.



Signal conditioning
The separation of the load and control circuits, in conjunction with the variety of options this offers to configure both circuits separately, means that opto modules are often used for signal conditioning purposes.
This allows the different electrical potentials of signals from the control and load circuits (for example sensors and control) to be equalised.



Switching amplification
Applications with current and voltage values that exceed the capacity of the phototransistor require an auxiliary circuit on the output side of the opto module for switching amplification purposes. During the switching operation the opto module LED activates a base current in the phototransistor. This activates a second semiconductor (transistor, thyristor) selected to meet application requirements which then becomes conductive for the load current.

** Refer to page W.36 in the Glossary for a detailed explanation of this term.*

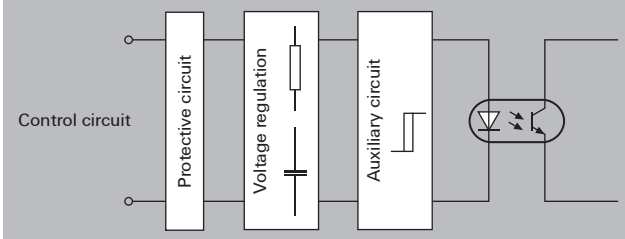
Control circuit

The input circuits (control circuit)

Most industrial applications cannot be connected directly to an opto module, generally requiring voltage regulation by means of series-connected resistances or capacitors.
To obtain exact-as-possible switching points a *Schmitt Trigger*)* can be used to assign the control signals an unambiguous status (0 - 1) when moving from high to low or low to high, which is then passed on to the opto module.

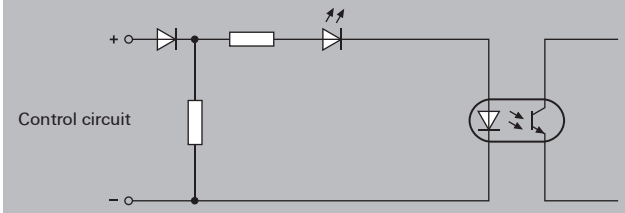
Depending on the design, all Weidmüller opto modules and solid-state relays are equipped with suitable protective devices (varistors, diodes) and filters to protect against interference pulses from the control circuit.

Input configuration



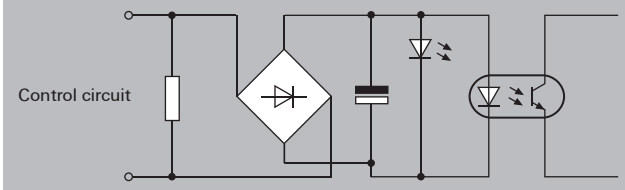
DC input:
An additional reverse-polarity protection diode guarantees protection against the opto module being destroyed if the control voltage is incorrectly wired. The switching status of the control circuit is signalised by a status indicator.

DC input



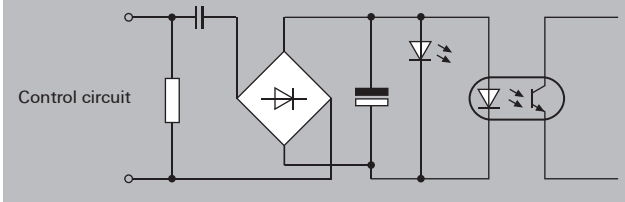
AC/DC input:
A rectifier with smoothing capacitor is connected in series for AC control voltages. Reverse polarity protection for DC current is not necessary. The following construction corresponds to a DC circuit.
Due to the smoothing capacitor the switching frequency of AC control signals is fundamentally less than half the mains frequency. A higher switching frequency would result in the control signal being constantly switched through in rhythm with the mains frequency.
The advantage of being able to choose between an AC or a DC current input contrasts with the disadvantage that the smoothing capacitor also restricts the switching frequency of the DC control signal.

AC/DC input



AC input:
The circuit diagram corresponds in principle with an AC/DC circuit. Instead of series resistors it is possible to use capacitors to regulate the voltage in a purely AC operation. In contrast to resistors there is no power loss with capacitors and as a result no heat that needs to be dissipated.

AC input



** Refer to page W.36 in the Glossary for a detailed explanation of this term.*

Load circuit

The output circuit (load circuit)

As a rule, an operating voltage range is stated for the rated switching voltage of opto modules and solid-state relays (for example 5 ... 48 V DC); it is not permitted to exceed or fall below this value.

The same applies to continuous current. Exceeding this value too often can result in premature wear-out and destruction of the opto modules semiconductor.
As a direct correlation exists between the current and ambient temperature a *derating curve*)* is provided for all opto modules and solid-state relays.

Overvoltages are shunted by protective devices such as diodes or varistors.
To prevent damage caused by current spikes (for example starting or off pulses) some modules are equipped with a *power boost*)* which is capable of carrying higher levels of current than the maximum stated for a short period of time.

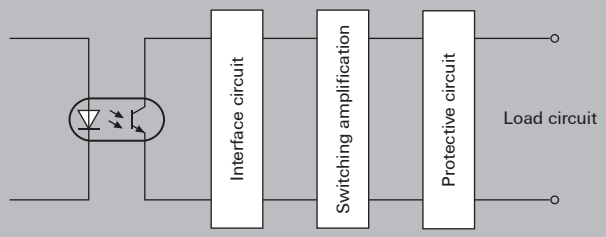
It is possible to connect AC or DC loads subject to the output circuit having corresponding amplifier semiconductors.

DC output:
With a 2-pole DC output the connection terminals are to be considered in the same manner as with a conventional switch. All that is required is that care is taken to observe the predetermined polarity.

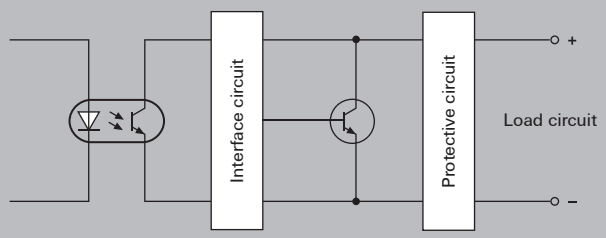
With a 3-pole DC connection an auxiliary voltage assists the output circuit to control the amplifying transistor more precisely. Several applications also require this auxiliary voltage for short-circuit protection in the interface or protective circuitry.

AC output:
To activate AC switching and control devices a semiconductor is connected on the load side of the opto module component to switch the AC voltage (TRIAC or thyristor).

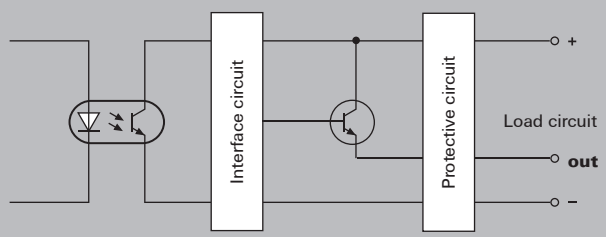
Output circuit



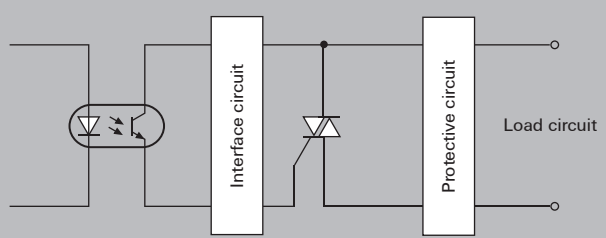
2-wire DC output



3-wire DC output



AC output

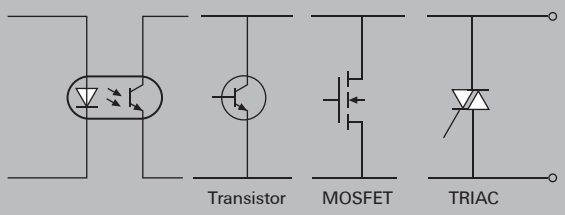


** Refer to page W.36 in the Glossary for a detailed explanation of this term.*

Switching amplification

The phototransistor of the opto module has a low current and voltage rating. As a consequence, an additional semiconductor element is accessed for larger output loads that is capable of switching the corresponding rated switching voltages and rated switching currents.

Switching amplification



Bipolar Transistor (DC)
Used for low currents (0.5 A).
The bipolar transistor has short response times, which makes high switching frequencies possible as a result.

MOSFET (DC)
Used for high load currents (up to 10 A).
The low contact resistance of the MOSFET create only very small leakage currents (< 10 µA) with low power loss.

Triac (AC)
A Triac combines the functional principle of antiparallel connected thyristors in a single component.
The mode of function of a thyristor is comparable with that of a one-way diode. Therefore, an opposing parallel circuit configuration consisting of two thyristors is used for AC currents.

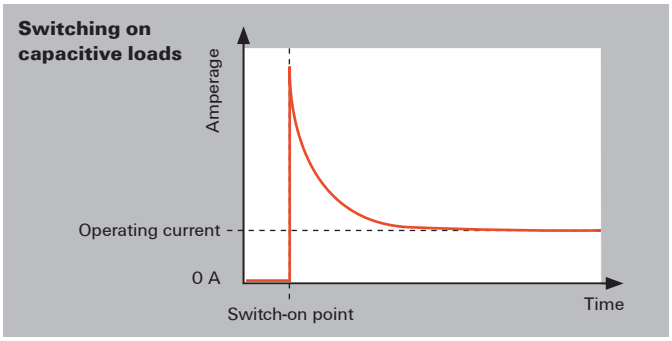
Switching diverse loads

The different types of loads resulting from the possible applications (resistive, inductive, capacitive loads) represent a particular challenge for the load circuit arrangements of opto modules and solid-state relays. With reference to the planned application, one should always be aware of what effects the loads will have on the modules and how the corresponding protective devices have to be designed.

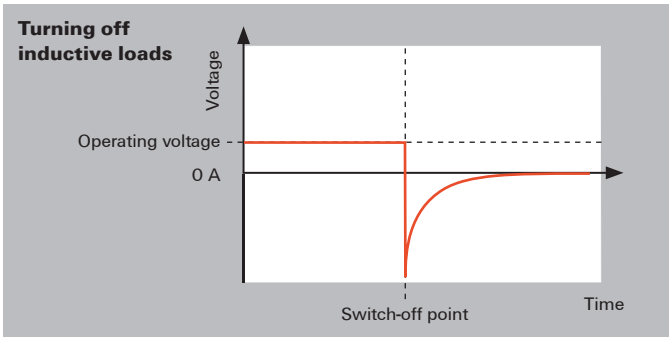
Generally speaking, it must be ensured that the power loss at the amplifier semiconductor does not exceed the permitted limit for any length of time. This would lead to overheating and finally to the destruction of the component.

Switching resistive loads
Due to the fact that in resistive loads the amperage in the load circuit and the voltage across the amplifier semiconductor are inversely proportional to one another these do not generally pose a problem. It is sufficient to adhere to the maximum current and voltage ratings of the modules.
Switching glow lamps represents a special case. It is possible that when being switched on that overcurrents 10 to 20 times the operating current can occur due to the low cold resistance.
Therefore, the components must be designed to cope with these possible overloads situations which correspond to the effect of capacitive loads.

Switching capacitive loads
Capacitive loads occur if there is a capacitor in the load circuit. The effect is similar to to a short-circuit at the point of activation and results in a high inrush current.
If this current is not limited it can lead to the destruction of the amplifier semiconductor.

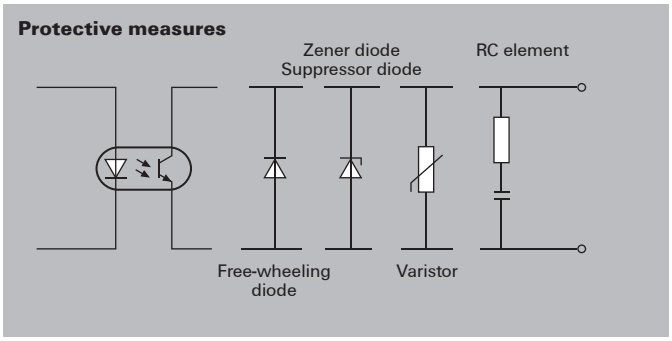


Switching inductive loads
Problems can arise with inductive loads when they are being switched off, in particular when coils are used in the load circuit. The flow of current in the coil builds up a magnetic field that suddenly collapses and creates a high induction voltage.
This voltage spike has to be short-circuited via a diode connected in parallel (free-wheeling diode). However, the time required leads to delayed release.



Protective measures

The construction of the opto module enables fast and sensitive switching, however, the component is also more prone to interference. For this reason, all Weidmüller opto modules and solid-state relays are equipped with a variety of measures to protect against overloading and interference pulses.



Free-wheeling diodes (DC)
Free-wheeling diodes are used primarily to protect against overvoltages, which occur through self-induction when switching off inductive DC loads (electric motors, relay coils). Voltage spikes are limited to the equivalent value of the diode forward voltage and excess voltage is discharged via the diode. However, this leads to a delay in the voltage drop and as such also delays the switching operation.

Zener diode / suppressor diode (DC)
These function as normal diodes in the forward conducting direction. In the blocking direction they become low resistant at a certain voltage (breakdown voltage).
High levels of overvoltages can lead to the destruction of the zener diode / suppressor diode.

Varistor (AC/DC)
The functional principle of the varistor is also based on a breakdown voltage, but with faster reaction times. This allows higher levels of energy to be shunted, however, these lead to the component aging. This in turn reduces the breakdown voltage over time and increases the leakage current.

RC-element (AC)
The RC element compensates voltage spikes by means of a capacitor. Due to the charging and discharging characteristics interference pulses are filtered out when the voltage is rising and not first when overload is reached.
For this reason, RC elements are used to protect against interference pulses and exclude faulty switching operations.

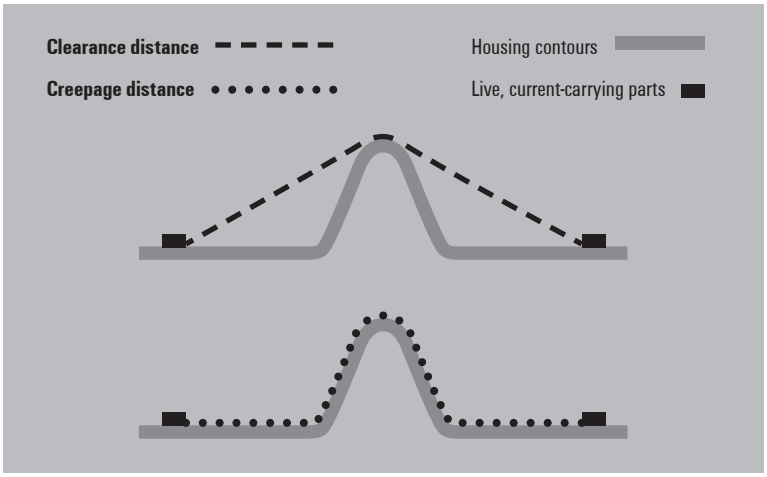
Glossary: Solid-state relays

A

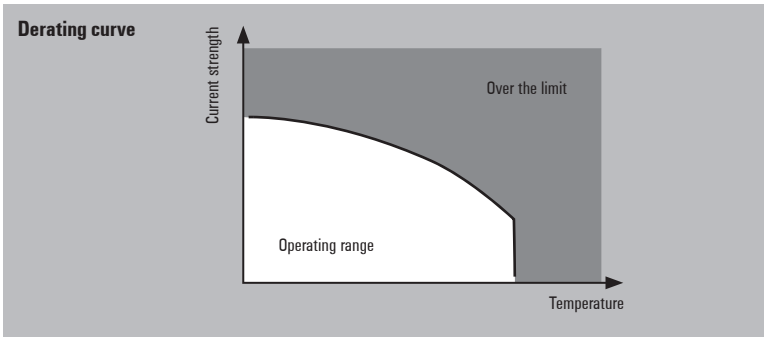
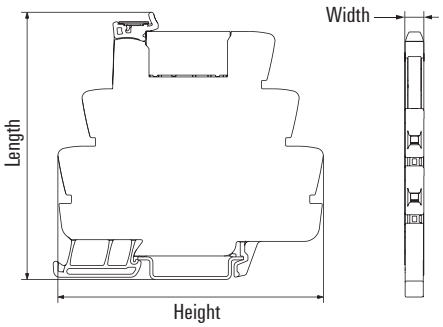
AC	Refers both to alternating values (such as voltage or current) as well as to those devices and variables which reference these devices. Specifications are valid for 50 Hz, unless otherwise indicated.
Approvals and testing marks	Testing approvals are independent confirmation from governmental or private registration services and testing facilities. They certify that the product complies with the relevant regulations and maintain the specified product characteristics. Note: The ordering scheme gives you the choice of many variations, but not all variations are established as standard types (order numbers). Therefore, they may not be included in the list of approved relays. Technical specifications and list of approved types are available on request. CSA Canadian Standards Association, Canada GL Germanischer Lloyd, Germany TÜV Technical Monitoring Association, Germany UL Underwriters Laboratories, Inc., USA; UR Component Recognition Mark for the United States cUR UL Component Recognition Mark for Canada cURus UL Component Recognition Mark for the United States and Canada cULus UL Component Listing Mark for the United States and Canada VDE VDE testing location, Germany (advisory reports with production monitoring)

C

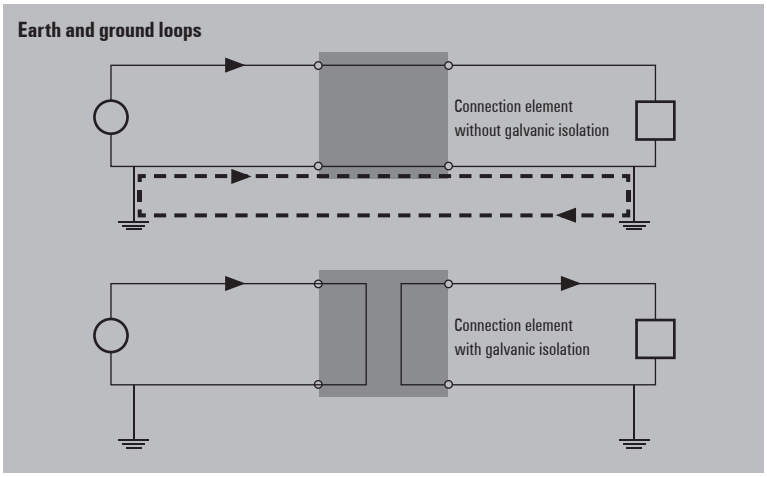
CE	Abbreviation for Communauté Européenne (the European Community). The CE marking is a way for the manufacturer to confirm that their product complies with the relevant EC directives and the “essential requirements” contained therein. The EMC Directive 2004/108/EC and Low Voltage Directive 2006/95/EC are currently binding.

Clearance and creepage distances	Clearance and creepage distances are critical factors which influence the insulation capability of electrical components. The creepage distance denotes the minimum clearance that two live parts along a surface must have in order to prohibit a flow of current across the insulating material at the specified operating voltage. In addition to the operating voltage, the choice of insulating material (material group) and the protective measures to counteract pollution (pollution severity) affect the creepage distance. The clearance distance denotes the minimum direct clearance (through the air) that two live parts must have to one another in order to prohibit a charge passing through the air (an arc). The expected surge voltage (rated impulse voltage) forms the basis for calculating the distances. The surge protection category and pollution severity are further factors that influence dimensional design considerations. 
Continuous current	The current can be continuously conducted without exceeding the overheating values under defined conditions.
Cut-in (switch-on) voltage	The voltage level at which an opto module or solid-state relay is conductive.

D

DC	Refers to the electrical variables such as voltage or current (DC, DC voltage) that are not dependent on time.
Derating / derating curve	The continuous current is reduced at higher ambient temperatures; this is shown using a derating curve (a load reduction curve). Current flow generates heat, which increases as the current increases. Electrical components have an upper temperature limit which limits their ability to function. The temperature influencing the components is a combination of the ambient temperature and the heat generated by the current. So to ensure that the limit temperature is not exceeded, the current must be reduced when the overall temperature rises. The derating curve depicts this relationship between the prevailing temperature and the resulting maximum amperage with regard to the limit temperature. 
Dimensions	Dimensions in millimetres. 
DIN rail	Unless otherwise noted, Weidmüller's products are built and tested for mounting on DIN rail (rails according to TH35-7.5 / EN60175). Other installations (e.g. TH35-15)may function but have not been tested or approved.
Dropout voltage	The voltage level at which an opto module or solid-state relay blocks itself.

E

Earth and ground loops	Denote the connection of two potentials via their earth or ground connection. A potential difference between the earth or ground connection of two devices (for example, a sensor and controller) that are directly wired to one another causes current flow via the earth of the shared housing. These interference currents can lead to different problems, for example in the acquisition of measurement signals or when controlling actuators. When transmitting switching signals or measurement signals using a device with electrical isolation between the control and load circuits, it is important that a closed circuit via the earth or ground connection can never occur – so that no interference currents are generated. **Earth and ground loops** 

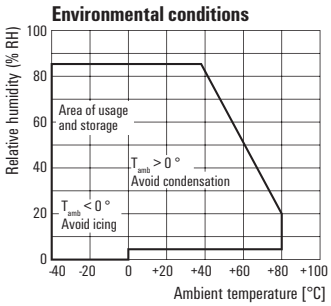
F

Flammability according to UL	Indicates the flammability class according to the specification from UL 94 (Underwriters Laboratories, Inc., USA). Flammability tests according to UL 94: for testing plastic materials and classifying the propagation/extinction characteristics when the material burns. The UL 94 flammability classes which are relevant to the relay are V-0, V-1, V-2 and HB.

G

Galvanic isolation	Potential-free isolation between electrical components. Electrical (or galvanic) isolation means that no charge can flow from one circuit to another. There is no conductive electrical connection between the circuits. The circuits can nevertheless exchange electrical power or signals via magnetic fields, infrared radiation or by charge displacements.

H

Humidity / condensation	Standard conditions: annual average relative humidity > 75 % at an ambient temperature of 21 °C, in 30 days, evenly distributed throughout the year, and 95 % at ambient temperature w of 25 °C. On other days: occasionally 85 % at 23 °C. No icing or condensation is allowed - affects storage and/or operation. When storing or operating under other conditions, you must takes steps to avoid temperature changes which could cause icing or condensation. Operating and storage should be within the limits specified in the graphic. 

I

Impulse withstand voltage	The highest withstand voltage of a specified shape and polarity that does not lead to an insulation breakthrough or flash-over, under the specific conditions.
Inductive loads	Refer to load category
Input frequency	The number of switching operations that occur in a specific unit of time. The maximum switching frequency for medium loads may be higher than the value specified for the nominal load, as long as the switching of the load does not result in an increased temperature.
Insulating material group	According to their CTI (comparative tracking index) values, the insulating materials are categorised into one of the following four groups: Group I 600 CTI Group II 400 CTI < 600 Group IIIa 175 CTI < 400 Group IIIb 100 CTI < 175 The figures for the comparative tracking index, according to IEC 60112 (DIN IEC 60112 / DIN VDE 0303-1) are determined using special samples prepared for this purpose with test solution A.
Insulation according to EN 50178	Specifications for insulation coordination with: • Type of insulation • Nominal voltage of the supply system • Pollution severity level • Impulse withstand voltage • Surge voltage category

L

Leakage current	The current on the load side of an opto module or solid-state relay that flows towards the output stage while in a blocked state.
Load category (solid-state relay)	Classification of the load of a solid state relay, in accordance with EN 62314 LC A – resistive loads or minimally inductive loads LC B – motor loads LC C – electrical discharge lamps LC D – incandescent filament lamps LC E – transformers LC F – capacitive loads

M

Max. switching current	The max. switching current indicates the maximum level of current that can be switched.
Max. switching power	The switching capacity is calculated as the product of switching voltage and switching current (in VA for AC / in W for DC).
Mounting distance	Distance between two adjacent components in parallel, uni-directional positioning; or the proximity to other electrical components. Because of the insulation requirements, you may need to increase the minimum distance between the components or select a different positioning. These values refer to components in “single-file arrangement”, unless otherwise indicated. Also relevant for this definition: • density of assembly: assembled with minimum mounting clearances; this minimum distance is determined by the insulation requirements at 230 V AC and/or mechanical requirements for the installation(e.g. use of sockets), • individual installation: components are mounted with gaps so that there are no thermal influences from adjacent components.
Mounting position	Mechanical and electronic relays can usually be installed in any position when there are no qualifying limitations. To ensure the proper current flow and heat dissipation, the connections must be properly contacted and the cross-sections must be adequate. Several factors must be taken into consideration when positioning: including the insulation requirements, heat dissipation and the possible mutual magnetic influence.

N

Nominal control current	Input current that is required, under specific conditions, to switch the output.
Nominal switching voltage	Voltage at the output - before the closing or opening of the contact.
Nominal torque	The specified value for the torque of the screws (screw connection) must not be exceeded.

O

Operating temperature	Permissible ambient temperature – relative to a specific relative humidity – at which a product should be operated at nominal load.

P

Packing unit	Indicates the smallest amount (a pack, for example) or the quantity per carton.
Plug-in cycles	Sockets and accessories are designed for 10 insertion cycles without electrical load – unless otherwise specified.
Pollution severity level	Pollution (contamination) includes any foreign material – whether it is solid, liquid or gaseous (ionised gas) – which is capable of influencing the surface resistance of the insulating material. The standard defines four degrees of pollution. Their numbering and classification is based on the quantity of the contaminant or the frequency with which the contaminant reduces the dielectric strength and/or surface resistance. Pollution degree 1: • there is no contamination or only dry occurrences of non-conductive pollution. The pollution has no influence. Pollution degree 2: • there is only non-conductive pollution. Temporary occurrences of conductivity caused by condensation may also occur. Pollution degree 3: • conductive pollution or dry, non-conductive pollution that can become conductive due to condensation is likely to occur. Pollution degree 4: • the contamination leads to continual conductivity which can be caused by contaminants such as conductive dust, rain or snow. Note: Pollution degree 3 is typical for industrial environments and similar settings; pollution degree 2 is typical for households or similar.
Power rating	The nominal value of the power that is converted when the nominal control voltage is applied.

Protection degree - (IEC 60529), IP	The degree of protection afforded by an enclosure is shown using the IP Code (IP = International Protection). This information is equally relevant for industrial relays and accessories. For the purposes of "component" relays (such as PCB relays), refer to the RT protection degree. A two-digit number is used to indicate the protection provided against touch contact and foreign bodies (the first number) and against humidity (the second number). Protection levels for touch contact and foreign bodies (the first digit): the first digit indicates the degree of protection inside the housing against ingress of solid foreign objects and against any human access to hazardous parts. 0: no protection 1: protection for large body parts with a diameter > 50 mm 2: finger protection (diameter 12 mm) 3: tools and wires (diameter > 2.5 mm) 4: tools and wires (diameter > 1 mm) 5: full protection against touch contact 6: full protection against touch contact Degree of water protection (the second digit) The second digit indicates the degree of protection provided against the ingress of water into the housing: 0: no protection 1: protection against vertically falling drops of water 2: protection against water droplets falling diagonally (up to 15°) 3: protection against water spray that falls at an angle up to 60° from vertical 4: protection against splashed water from all sides 5: protection against water jets 6: protection against powerful jets of water (flooding) 7: protection against sporadic submersion 8: protection against constant submersion

R

Rated control voltage	The nominal value of the sparkover (response) voltage for the solid-state relay
Rated voltage (Isolation)	Voltage level at which the insulation specifications are measured – this is the basis for sizing the creepage distance.
ROHS Directive 2002/95/EC	RoHS stands for the "Restriction of (the use of certain) Hazardous Substances" According to the EU Directive 2002/95/EC from 01.07.2006, all EU member nations must forbid the use of hazardous substances which damage human health and the environment (including mercury (Hg), cadmium (Cd), lead (Pb), hexavalent chrome (Cr6), polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE)) in new electrical and electronic devices. The term "compliant" means that the entire product group meets the requirements of the RoHS Directive. The maximum weight percentage in homogeneous materials is below the limits specified in the directive: 0.1 % for lead, hexavalent chrome, mercury, PBB and PBDE; and below 0.01 % for cadmium, or qualifies for an exemption in accordance with the annex to the RoHS Directive .

S

Schmitt trigger	Strictly speaking, switching voltages for digital control follow an analogue pattern (no changeover from 0 to 1 between maximum and minimum voltages). This can lead to inaccuracies in switching results, above all when signals are being transmitted rapidly. In this case, the Schmitt trigger functions as a threshold switch. If the threshold voltage set in the Schmitt Trigger is exceeded, the output assumes the maximum possible output voltage (logic 1). Otherwise it is the minimum possible output voltage (logic 0). The Schmitt trigger is normally designed with a hysteresis. The threshold voltage set for activating is higher than that for deactivating. That prevents small irregularities from triggering a switching operation.
Self-heating	The heating up of an operational component based on the power loss from the relay coil and the switching contacts. For semiconductors (such as a transistor output), the increase in heat is caused by power loss.
Short-circuit-proof	Shuts off the output stage of a solid-state relay when there is a short circuit, in order to prevent the output circuit from being damaged.
Solid-state relay	Semiconductor relay that uses an electronic component as the switching mechanism, such as a transistor, thyristor or Triac. Semiconductor relays function with no wearing parts and have a high switching frequency compared with normal relays. But compared to normal relays they have a higher power loss in the load current circuit. An integrated optocoupler is used for galvanic isolation.
Status indicator	The status LED display on the input control circuit can differ from the state of the contact circuit in the following cases: • when there are welded-together or broken switching elements, • when there is interference or residual voltages on the signal lines. A reduction in light intensity may result when the ambient temperatures are greater than 50 °C.
Storage temperature	The permitted ambient temperature, related to a specific relative humidity level, for which the product should be stored while in a current-free state.

Surge voltage category	The overvoltage category of a circuit or an electrical system is numbered conventionally (from I to IV) and is based on limiting the assumed surge voltage values that can occur in a circuit (or electrical system with different mains voltages). The assignment to a particular overvoltage category is dependent on the measures which are used to influence (reduce) the surge voltages. Overvoltage category I • Devices that are intended to be connected to the permanent electrical building installation. The measures for limiting transient surge voltages to the proper level are taken outside of the device. The protective mechanisms can either be in the permanent installation or between the permanent installation and the device. Overvoltage category II • Devices that are intended to be connected to the permanent electrical building installation (such as household appliances or portable tools). Overvoltage category III • Devices that are a part of the permanent installation and other devices where a higher degree of availability is required. This includes the distributor panels, power switches, distribution systems (including cables, busbars, distributor boxes, switches and outlets) that are part of the permanent installation, devices intended for industrial use, and devices that are continually connected to the permanent installation (such as stationary motors).
Switch-off delay	The usual time interval from switching off the control voltage of a conducting solid-state relay to the time when the output circuit is blocked.
Switch-on delay	The usual time interval from switching on the control voltage of a closed solid-state relay to the time when the output circuit is conductive.

T

Transients	Transients are short-term current or voltage peaks caused by interferences in the mains supply grid or by electromagnetic radiation. On the control side of the optocoupler these can trigger unintended switching operations or, in extreme cases, cause the destruction of the component. In an AC-driven load circuit, transients can lead to the maximum permissible forward voltage being exceeded, which in turn can activate the thyristor or Triac. As these operate at quite high switching speeds, even very short pulses can suffice to falsely trigger a switching operation.
Type of insulation	Quality of the insulation system, depending on the design and application conditions: • Functional insulation: insulation between live components – necessary so the relay functions properly. • Basic insulation: insulation of live parts to provide basic protection against electrical shock. • Doubled insulation: consisting of a base insulation and additional insulation. • Reinforced insulation: a single “enhanced” insulation of active components, which ensures the same protection against electric shock as doubled insulation. The doubled insulation is composed of a base and an additional insulation; the extra insulation protects against electric shock if the basic insulation fails.

V

Voltage drop	The reduction of voltage via the opto module, when measured under full load

W

Withstand test voltage	The voltage applied to a device under specific test conditions which causes no breakthrough or flash-over of the test piece.

Index

Type	Order No.	Page
A		
AP MCZ1.5	8389030000	A.90
B		
BT LOCK PEN	8659840000	E.4
D		
DRH173012LT	1219840000	B.25
DRH173024LT	1219850000	B.25
DRH173048LT	1219860000	B.25
DRH173110LT	1219870000	B.25
DRH173220LT	1219880000	B.25
DRH173524LT	1219890000	B.25
DRH173548LT	1219910000	B.25
DRH173615LT	1219920000	B.25
DRH173730LT	1219930000	B.25
DRH174012LT	1219940000	B.25
DRH174024LT	1219950000	B.25
DRH174048LT	1219960000	B.25
DRH174110LT	1219970000	B.25
DRH174220LT	1219980000	B.25
DRH174524LT	1219990000	B.25
DRH174548LT	1220010000	B.25
DRH174615LT	1220020000	B.25
DRH174730LT	1220030000	B.25
DRH275012LT	1220040000	B.27
DRH275024LT	1220050000	B.27
DRH275048LT	1220060000	B.27
DRH275110LT	1220070000	B.27
DRH275220LT	1220080000	B.27
DRH275524LT	1220090000	B.27
DRH275548LT	1220110000	B.27
DRH275615LT	1220120000	B.27
DRH275730LT	1220130000	B.27
DRH276012LT	1220140000	B.29
DRH276024LT	1220150000	B.29
DRH276048LT	1220170000	B.29
DRH276110LT	1220180000	B.29
DRH276220LT	1220190000	B.29
DRH276524LT	1220200000	B.29
DRH276548LT	1220210000	B.29
DRH276615LT	1220220000	B.29
DRH276730LT	1220230000	B.29
DRL170012L	1133450000	B.13
DRL170024L	1133460000	B.13
DRL170048L	1133470000	B.13
DRL170110L	1133480000	B.13
DRL170220L	1133490000	B.13
DRL170524L	1133840000	B.13
DRL170615L	1133850000	B.13
DRL170730L	1133860000	B.13
DRL270012L	1133510000	B.15
DRL270024L	1133520000	B.15
DRL270048L	1133530000	B.15
DRL270110L	1133540000	B.15
DRL270220L	1133550000	B.15
DRL270524L	1133870000	B.15
DRL270615L	1133880000	B.15
DRL270730L	1133890000	B.15
DRL370012L	1133570000	B.17
DRL370024L	1133580000	B.17
DRL370048L	1133590000	B.17
DRL370110L	1133600000	B.17
DRL370220L	1133610000	B.17
DRL370524L	1133910000	B.17
DRL370615L	1133920000	B.17
DRL370730L	1133930000	B.17
DRL570012L	1133620000	B.19
DRL570024L	1133630000	B.19
DRL570048L	1133640000	B.19
DRL570110L	1133650000	B.19
DRL570220L	1133660000	B.19
DRL570524L	1133940000	B.19
DRL570615L	1133950000	B.19
DRL570730L	1133960000	B.19
DRM/DRL CLIP M	7760056108	B.10
DRM/DRL CLIP M	7760056108	B.10
DRM/DRL CLIP M	7760056108	B.20
DRM270012	7760056050	B.7
DRM270012L	7760056059	B.7
DRM270012LT	7760056068	B.7
DRM270024	7760056051	B.7
DRM270024L	7760056060	B.7
DRM270024LD	7760056077	B.7
DRM270024LT	7760056069	B.7
DRM270048	7760056052	B.7
DRM270048L	7760056061	B.7
DRM270048LT	7760056070	B.7
DRM270110	7760056053	B.7
DRM270110L	7760056062	B.7
DRM270110LT	7760056071	B.7
DRM270220	7760056054	B.7
DRM270220L	7760056063	B.7
DRM270220LT	7760056072	B.7
DRM270524	7760056055	B.7
DRM270524L	7760056064	B.7

Type	Order No.	Page
DRM270524LT	7760056073	B.7
DRM270548	7760056056	B.7
DRM270548L	7760056065	B.7
DRM270548LT	7760056074	B.7
DRM270615	7760056057	B.7
DRM270615L	7760056066	B.7
DRM270615LT	7760056075	B.7
DRM270730	7760056058	B.7
DRM270730L	7760056067	B.7
DRM270730LT	7760056076	B.7
DRM570012	7760056078	B.9
DRM570012L	7760056087	B.9
DRM570012LT	7760056096	B.9
DRM570024	7760056079	B.9
DRM570024L	7760056088	B.9
DRM570024LD	7760056105	B.9
DRM570024LT	7760056097	B.9
DRM570048	7760056080	B.9
DRM570048L	7760056089	B.9
DRM570048LT	7760056098	B.9
DRM570110	7760056081	B.9
DRM570110L	7760056090	B.9
DRM570110LT	7760056099	B.9
DRM570220	7760056082	B.9
DRM570220L	7760056091	B.9
DRM570220LT	7760056100	B.9
DRM570524	7760056083	B.9
DRM570524L	7760056092	B.9
DRM570524LT	7760056101	B.9
DRM570548	7760056084	B.9
DRM570548L	7760056093	B.9
DRM570548LT	7760056102	B.9
DRM570615	7760056085	B.9
DRM570615L	7760056094	B.9
DRM570615LT	7760056103	B.9
DRM570730	7760056086	B.9
DRM570730L	7760056095	B.9
DRM570730LT	7760056104	B.9
DRR CLIP M	1134160000	B.36
DRR270012L	1133360000	B.33
DRR270024L	1133370000	B.33
DRR270048L	1133380000	B.33
DRR270110L	1133390000	B.33
DRR270220L	1133400000	B.33
DRR270524L	1133760000	B.33
DRR270615L	1133780000	B.33
DRR270730L	1133800000	B.33
DRR370012L	1133410000	B.35
DRR370024L	1133420000	B.35
DRR370048L	1133430000	B.35
DRR370110L	1133440000	B.35
DRR370220L	1133560000	B.35
DRR370524L	1133810000	B.35
DRR370615L	1133820000	B.35
DRR370730L	1133830000	B.35
DRW/DRH CLIP M	1220260000	B.30
DRW270012LT	1219730000	B.23
DRW270024LT	1219740000	B.23
DRW270048LT	1219750000	B.23
DRW270110LT	1219760000	B.23
DRW270220LT	1219770000	B.23
DRW270524LT	1219350000	B.23
DRW270548LT	1219360000	B.23
DRW270615LT	1219370000	B.23
DRW270730LT	1219380000	B.23
DRW270900LT	1219390000	B.23
DRW370012LT	1219780000	B.23
DRW370024LT	1219790000	B.23
DRW370048LT	1219810000	B.23
DRW370110LT	1219820000	B.23
DRW370220LT	1219830000	B.23
DRW370524LT	1219410000	B.23
DRW370548LT	1219420000	B.23
DRW370615LT	1219430000	B.23
DRW370730LT	1219440000	B.23
DRW370900LT	1219450000	B.23
E		
ESG 6/15 K MC NE WS	1880100000	B.46
ESG 6/15 K MC NE WS	1880100000	B.46
ESG 6/15 K MC NE WS	1880100000	B.46
ESG 6/15 K MC NE WS	1880100000	B.50
ESG 6/15 K MC NE WS	1880100000	B.50
ESG 6/15 K MC NE WS	1880100000	B.50
ESG 9/11 K MC NE WS	1857440000	B.57
ESG 9/11 K MC NE WS	1857440000	B.57
ESG 9/11 K MC NE WS	1857440000	B.60
ESG 9/11 K MC NE WS	1857440000	B.63
ESG 9/11 K MC NE WS	1857440000	B.63
ESG 9/11 K MC NE WS	1857440000	B.63
F		
FS 2CO	7760056106	B.10
FS 4CO	7760056107	B.10
ISPF QB75 BL	0526780000	A.78
ISPF QB75 RT	0526760000	A.78
ISPF QB75 SW	0526700000	A.78

Type	Order No.	Page
M		
MCZ O 120VUC	8421060000	A.87
MCZ O 230VAC	8421380000	A.87
MCZ O 24VDC	8324610000	A.88
MCZ O 24VUC	8287730000	A.86
MCZ O 24VUC	8365940000	A.86
MCZ O 5VTTL	8398940000	A.88
MCZ O TRAK 24.110VDC	8820710000	A.89
MCZ R 110VDC	8467470000	A.81
MCZ R 120VAC	8420880000	A.81
MCZ R 230VAC	8237710000	A.81
MCZ R 24VDC	8365980000	A.81
MCZ R 24VDC 1CO AU TRAK	8790520000	A.85
MCZ R 24Vdc 1CO TRAK	8713890000	A.83
MCZ R 24Vdc 1NO TRAK	8499550000	A.83
MCZ R 24VDC 5uAu	8442960000	A.81
MCZ R 24VUC	8390590000	A.81
MCZ R 36VDC 1CO AU TRAK	8790510000	A.85
MCZ R 36Vdc 1CO TRAK	8713900000	A.83
MCZ R 48...110VDC 1CO AU TRAK	8790500000	A.85
MCZ R 48...110Vdc 1CO TRAK	8713910000	A.83
MCZ R 48...110Vdc 1NO TRAK	8574070000	A.83
MCZ TO 24VDC/150MS	8286410000	E.8
MCZ TO 24VDC/50MS	8324590000	E.8
MOS 12-28VDC 100kHz	8937990000	A.75
MOS 12-28VDC/5VTTL	8937930000	A.77
MOS 24VDC/12-300VDC 1A	8937830000	A.71
MOS 24VDC/5-33VDC 10A	8937940000	A.70
MOS 24VDC/5-48VDC 0,5A	8937980000	A.74
MOS 24VDC/8-30VDC 2A	8937970000	A.72
MOS 24VDC/8-30VDC 2A E	1283230000	A.73
MOS 5VTTL/24VDC 0,1A	8937920000	A.76
MOS FEED THROUGH	8973450000	A.78
MOS SUPPLY	8973460000	A.78
P		
PSSR 1PH CONTROL UNIT	1406230000	C.7
PSSR 20MA/1PH AC70A PC	1406270000	C.10
PSSR 230VAC/1PH AC 25A	1406220000	C.5
PSSR 230VAC/3PH AC 20A	8952140000	C.13
PSSR 24VDC/1PH AC 25A	1406200000	C.4
PSSR 24VDC/1PH AC 35A	1406210000	C.6
PSSR 24VDC/1PH AC50A HP	1406240000	C.8
PSSR 24VDC/1PH AC75A HP	1406250000	C.9
PSSR 24VDC/3PH AC 20A	8952130000	C.12
PWR173012L	1219470000	B.39
PWR173024L	1219480000	B.39
PWR173048L	1219490000	B.39
PWR173110L	1219510000	B.39
PWR173220L	1219520000	B.39
PWR173524L	1219090000	B.39
PWR173548L	1219120000	B.39
PWR173615L	1219130000	B.39
PWR173730L	1219140000	B.39
PWR173880L	1219150000	B.39
PWR276012L	1219540000	B.41
PWR276024L	1219550000	B.41
PWR276048L	1219560000	B.41
PWR276110L	1219570000	B.41
PWR276220L	1219580000	B.41
PWR276524L	1219160000	B.41
PWR276548L	1219170000	B.41
PWR276615L	1219180000	B.41
PWR276730L	1219190000	B.41
PWR276880L	1219220000	B.41
Q		
QB 75/6.2/15	0535200000	A.78
R		
RCI314012	8869800000	B.53
RCI314024	8869810000	B.53
RCI314048	8869820000	B.53
RCI314110	8869830000	B.53
RCI314524	8869840000	B.53
RCI314615	8869850000	B.53
RCI314730	8869860000	B.53
RCI314AB2	8870090000	B.53
RCI314AC4	8870100000	B.44
RCI314AC4	8870100000	B.53
RCI314AE8	8870110000	B.53
RCI314BB0	8870120000	B.53
RCI314R24	8870130000	B.44
RCI314R24	8870130000	B.45
RCI314R24	8870130000	B.45
RCI314R24	8870130000	B.53
RCI314S15	8870140000	B.44
RCI314S15	8870140000	B.45
RCI314S15	8870140000	B.53
RCI314T30	8870150000	B.44
RCI314T30	8870150000	B.45
RCI314T30	8870150000	B.53
RCI374012	8869950000	B.53
RCI374024	8869960000	B.53
RCI374524	8869990000	B.53

Type	Order No.	Page
RCI374730	8870010000	B.53
RCI374AB2	8870240000	B.53
RCI374AC4	8870250000	B.44
RCI374AC4	8870250000	B.53
RCI374AE8	8870260000	B.53
RCI374BB0	8870270000	B.53
RCI374R24	8870280000	B.44
RCI374R24	8870280000	B.45
RCI374R24	8870280000	B.45
RCI374R24	8870280000	B.53
RCI374S15	8870290000	B.44
RCI374S15	8870290000	B.45
RCI374S15	8870290000	B.53
RCI374T30	8870300000	B.44
RCI374T30	8870300000	B.45
RCI374T30	8870300000	B.53
RCI424012	8869870000	B.55
RCI424024	8869880000	B.55
RCI424048	8869900000	B.55
RCI424110	8869910000	B.55
RCI42424FG	1218380000	B.74
RCI424524	8869920000	B.55
RCI424615	8869930000	B.55
RCI424730	8869940000	B.55
RCI424AB2	8870170000	B.55
RCI424AC4	8870180000	B.48
RCI424AC4	8870180000	B.49
RCI424AC4	8870180000	B.55
RCI424AE8	8870190000	B.55
RCI424BB0	8870200000	B.55
RCI424R24	8870210000	B.48
RCI424R24	8870210000	B.49
RCI424R24	8870210000	B.55
RCI424S15	8870220000	B.48
RCI424S15	8870220000	B.49
RCI424S15	8870220000	B.55
RCI424T30	8870230000	B.48
RCI424T30	8870230000	B.49
RCI424T30	8870230000	B.55
RCI484012	8870020000	B.55
RCI484024	8870030000	B.55
RCI484048	8870040000	B.55
RCI484110	8870050000	B.55
RCI484524	8870060000	B.55
RCI484615	8870070000	B.55
RCI484730	8870080000	B.55
RCI484AB2	8870310000	B.55
RCI484AC4	8870320000	B.48
RCI484AC4	8870320000	B.49
RCI484AC4	8870320000	B.55
RCI484AE8	8870330000	B.55
RCI484BB0	8870340000	B.55
RCI484R24	8870350000	B.48
RCI484R24	8870350000	B.49
RCI484R24	8870350000	B.55
RCI484S15	8870360000	B.48
RCI484S15	8870360000	B.49
RCI484S15	8870360000	B.55
RCI484T30	8870370000	B.48
RCI484T30	8870370000	B.49
RCI484T30	8870370000	B.55
RCIKIT 115VAC 1CO LD	8897090000	B.44
RCIKIT 115VAC 1CO LD/PB	8897060000	B.44
RCIKIT 115VAC 2CO LD	8897100000	B.48
RCIKIT 115VAC 2CO LD/PB	8897080000	B.48
RCIKIT 230VAC 1CO LD/PB	8881600000	B.44
RCIKIT 230VAC 1CO LED	8871020000	B.44
RCIKIT 230VAC 2CO LD/PB	8881630000	B.48
RCIKIT 230VAC 2CO LED	8871050000	B.48
RCIKIT 24VAC 1CO LD/PB	8881590000	B.44
RCIKIT 24VAC 1CO LED	8871010000	B.44
RCIKIT 24VAC 2CO LD/PB	8881620000	B.48
RCIKIT 24VAC 2CO LED	8871040000	B.48
RCIKIT 24VDC 1CO LD/PB	8881580000	B.44
RCIKIT 24VDC 1CO LED	8871000000	B.44
RCIKIT 24VDC 2CO LD/FG	1218410000	B.74
RCIKIT 24VDC 2CO LD/PB	8881610000	B.48
RCIKIT 24VDC 2CO LED	8871030000	B.48
RCIKITP 115VAC 1CO LD	8897130000	B.45
RCIKITP 115VAC 2CO LD	8897170000	B.49
RCIKITP 230VAC 1CO LD	8897140000	B.45
RCIKITP 230VAC 2CO LD	8897180000	B.49
RCIKITP 24VAC 1CO LD	8897120000	B.45
RCIKITP 24VAC 1CO LD/PB	8897200000	B.45
RCIKITP 24VAC 2CO LD	8897160000	B.49
RCIKITP 24VAC 2CO LD/PB	8897240000	B.49
RCIKITP 24VDC 1CO LD	8897110000	B.45
RCIKITP 24VDC 1CO LD/PB	8897190000	B.45
RCIKITP 24VDC 2CO LD	8897150000	B.49
RCIKITP 24VDC 2CO LD/PB	8897230000	B.49
RCIKITP115VAC 1CO LD/PB	8897210000	B.45
RCIKITP115VAC 2CO LD/PB	8897250000	B.49
RCIKITP230VAC 1CO LD/PB	8897220000	B.45
RCIKITP230VAC 2CO LD/PB	8897260000	B.49
RCIKITZ 24VDC 2CO LD/FG	1218390000	B.74
RCL424005	8693790000	A.48
RCL424012	4058560000	A.48
RCL424024	4058570000	A.48
RCL424048	4058750000	A.48

Type	Order No.	Page
RCL424060	4058760000	A.48
RCL424110	4058590000	A.48
RCL425005	1174490000	A.48
RCL425012	4074580000	A.48
RCL425024	4058580000	A.48
RCL425048	1201230000	A.48
RCL425060	1201260000	A.48
RCL425110	8828370000	A.48
RCM270012	8689840000	B.67
RCM270024	8689860000	B.56
RCM270024	8689860000	B.67
RCM270048	8689880000	B.67
RCM270110	8689900000	B.67
RCM270524	8689760000	B.56
RCM270524	8689760000	B.67
RCM270548	8689780000	B.67
RCM270615	8689800000	B.56
RCM270615	8689800000	B.67
RCM270730	8689820000	B.56
RCM270730	8689820000	B.67
RCM270AB2	8957020000	B.67
RCM270AC4	8957030000	B.67
RCM270L12	8689850000	B.67
RCM270L24	8689870000	B.67
RCM270L48	8689890000	B.67
RCM270R24	8689770000	B.67
RCM270S15	8689810000	B.67
RCM270T30	8689830000	B.67
RCM370012	8690020000	B.69
RCM370024	8690040000	B.59
RCM370024	8690040000	B.69
RCM370048	8690060000	B.69
RCM370110	8690080000	B.69
RCM370524	8690030000	B.59
RCM370524	8690030000	B.69
RCM370615	8689980000	B.59
RCM370615	8689980000	B.69
RCM370730	8690000000	B.59
RCM370730	8690000000	B.69
RCM370AB2	8957090000	B.69
RCM370AC4	8957100000	B.69
RCM370BB0	8957120000	B.69
RCM370R24	8689950000	B.69
RCM370R48	8689970000	B.69
RCM370S15	8689990000	B.69
RCM370T30	8690010000	B.69
RCM570012	8054360000	B.71
RCM570024	8690200000	B.62
RCM570024	8690200000	B.71
RCM570048	8074670000	B.71
RCM570110	8074700000	B.71
RCM570524	8690110000	B.62
RCM570524	8690110000	B.71
RCM570548	1180900000	B.71
RCM570615	1180800000	B.62
RCM570615	1180800000	B.71
RCM570730	1181100000	B.62
RCM570730	1181100000	B.71
RCM570AB2	8957160000	B.71
RCM570AC4	8957170000	B.71
RCM570AE8	8957180000	B.71
RCM570BB0	8957190000	B.71
RCM570L12	8690180000	B.71
RCM570L24	8690220000	B.71
RCM570L48	8690230000	B.71
RCM570M10	8690240000	B.71
RCM570R24	8690120000	B.71
RCM570R48	8690130000	B.71
RCM570S15	8690150000	B.71
RCM570T30	8690160000	B.71
RCM580012	auf Anfrage	B.71
RCM580024	8694460000	B.71
RCM580048	auf Anfrage	B.71
RCM580615	8824860000	B.71
RCM580730	7940007637	B.71
RCMKIT-I 115VAC 2CO LD	8920960000	B.56
RCMKIT-I 115VAC 3CO LD	8921010000	B.59
RCMKIT-I 115VAC 4CO LD	8921050000	B.62
RCMKIT-I 230VAC 2CO LD	8920970000	B.56
RCMKIT-I 230VAC 3CO LD	8921020000	B.59
RCMKIT-I 230VAC 4CO LD	8921060000	B.62
RCMKIT-I 24VAC 2CO LD	8920950000	B.56
RCMKIT-I 24VAC 3CO LD	8920990000	B.59
RCMKIT-I 24VAC 4CO LD	8921040000	B.62
RCMKIT-I 24VDC 2CO LD	8920940000	B.56
RCMKIT-I 24VDC 3CO LD	8920980000	B.59
RCMKIT-I 24VDC 4CO LD	8921030000	B.62
RCMKITP-I 115VAC 2CO LD	8921100000	B.56
RCMKITP-I 115VAC 4CO LD	8921140000	B.62
RCMKITP-I 230VAC 2CO LD	8921110000	B.56
RCMKITP-I 230VAC 4CO LD	8921150000	B.62
RCMKITP-I 24VAC 2CO LD	8921090000	B.56
RCMKITP-I 24VAC 4CO LD	8921130000	B.62
RCMKITP-I 24VDC 2CO LD	8921080000	B.56
RCMKITP-I 24VDC 4CO LD	8921120000	B.62
RELAY SOCKET SPW 3CO	1220250000	B.30
RIM 1 6/230Vdc	7760056169	B.10
RIM 1 6/230Vdc	7760056169	B.20
RIM 2 110/230VDC	7760056017	B.10
RIM 2 24/60VDC	7760056016	B.10
RIM 2 6/24VDC	7760056015	B.10
RIM 3 110/230VAC	7760056014	B.10
RIM 3 110/230VAC	7760056014	B.20
RIM 3 110/230Vac LED	7760056045	B.10
RIM 3 110/230VUC	7940018455	B.10
RIM 3 24/60VUC	7760056018	B.10
RIM 3 6/24VUC	7940018457	B.10
RIM 5 6/230VAC	1174670000	B.20
RIM 5 6/230VAC	1174670000	B.30
RIM 5 6/230VAC	1174670000	B.36
RIM 5 6/230VDC	1174650000	B.20
RIM 5 6/230VDC	1174650000	B.30
RIM 5 6/230VDC	1174650000	B.36
RIM-I 1 6/230V	8869580000	B.47
RIM-I 1 6/230V	8869580000	B.51
RIM-I 1 6/230V	8869580000	B.58
RIM-I 1 6/230V	8869580000	B.61
RIM-I 1 6/230V	8869580000	B.64
RIM-I 1 R 110/230V	8870830000	B.47
RIM-I 1 R 110/230V	8870830000	B.51
RIM-I 1 R 110/230V	8870830000	B.58
RIM-I 1 R 110/230V	8870830000	B.61
RIM-I 1 R 110/230V	8870830000	B.64
RIM-I 2 110/230VDC	8869690000	B.47
RIM-I 2 110/230VDC	8869690000	B.51
RIM-I 2 110/230VDC	8869690000	B.58
RIM-I 2 110/230VDC	8869690000	B.61
RIM-I 2 110/230VDC	8869690000	B.64
RIM-I 2 110/230VDC GN	8869700000	B.47
RIM-I 2 110/230VDC GN	8869700000	B.51
RIM-I 2 110/230VDC GN	8869700000	B.58
RIM-I 2 110/230VDC GN	8869700000	B.61
RIM-I 2 110/230VDC GN	8869700000	B.64
RIM-I 2 24/60VDC	8869670000	B.47
RIM-I 2 24/60VDC	8869670000	B.51
RIM-I 2 24/60VDC	8869670000	B.58
RIM-I 2 24/60VDC	8869670000	B.61
RIM-I 2 24/60VDC	8869670000	B.64
RIM-I 2 24/60VDC GN	8869680000	B.47
RIM-I 2 24/60VDC GN	8869680000	B.51
RIM-I 2 24/60VDC GN	8869680000	B.58
RIM-I 2 24/60VDC GN	8869680000	B.61
RIM-I 2 24/60VDC GN	8869680000	B.64
RIM-I 2 6/24VDC	8869590000	B.47
RIM-I 2 6/24VDC	8869590000	B.51
RIM-I 2 6/24VDC	8869590000	B.58
RIM-I 2 6/24VDC	8869590000	B.61
RIM-I 2 6/24VDC	8869590000	B.64
RIM-I 2 6/24VDC GN	8869600000	B.47
RIM-I 2 6/24VDC GN	8869600000	B.51
RIM-I 2 6/24VDC GN	8869600000	B.58
RIM-I 2 6/24VDC GN	8869600000	B.61
RIM-I 2 6/24VDC GN	8869600000	B.64
RIM-I 3 110/230VAC RC	8869790000	B.47
RIM-I 3 110/230VAC RC	8869790000	B.51
RIM-I 3 110/230VAC RC	8869790000	B.58
RIM-I 3 110/230VAC RC	8869790000	B.61
RIM-I 3 110/230VAC RC	8869790000	B.64
RIM-I 3 110/230VUC	8869650000	B.47
RIM-I 3 110/230VUC	8869650000	B.51
RIM-I 3 110/230VUC	8869650000	B.58
RIM-I 3 110/230VUC	8869650000	B.61
RIM-I 3 110/230VUC	8869650000	B.64
RIM-I 3 110/230VUC GN	8869660000	B.47
RIM-I 3 110/230VUC GN	8869660000	B.51
RIM-I 3 110/230VUC GN	8869660000	B.58
RIM-I 3 110/230VUC GN	8869660000	B.61
RIM-I 3 110/230VUC GN	8869660000	B.64
RIM-I 3 24/60VUC	8869610000	B.47
RIM-I 3 24/60VUC	8869610000	B.51
RIM-I 3 24/60VUC	8869610000	B.58
RIM-I 3 24/60VUC	8869610000	B.61
RIM-I 3 24/60VUC	8869610000	B.64
RIM-I 3 24/60VUC GN	8869620000	B.47
RIM-I 3 24/60VUC GN	8869620000	B.51
RIM-I 3 24/60VUC GN	8869620000	B.58
RIM-I 3 24/60VUC GN	8869620000	B.61
RIM-I 3 24/60VUC GN	8869620000	B.64
RIM-I 3 6/24VUC	8869630000	B.47
RIM-I 3 6/24VUC	8869630000	B.51
RIM-I 3 6/24VUC	8869630000	B.58
RIM-I 3 6/24VUC	8869630000	B.61
RIM-I 3 6/24VUC	8869630000	B.64
RIM-I 3 6/24VUC GN	8869640000	B.47
RIM-I 3 6/24VUC GN	8869640000	B.51
RIM-I 3 6/24VUC GN	8869640000	B.58
RIM-I 3 6/24VUC GN	8869640000	B.61
RIM-I 3 6/24VUC GN	8869640000	B.64
RIM-I 3 6/60VAC RC	8869770000	B.47
RIM-I 3 6/60VAC RC	8869770000	B.51
RIM-I 3 6/60VAC RC	8869770000	B.58
RIM-I 3 6/60VAC RC	8869770000	B.61
RIM-I 3 6/60VAC RC	8869770000	B.64
RIM-I 4 110VUC VAR	8869730000	B.47
RIM-I 4 110VUC VAR	8869730000	B.51
RIM-I 4 110VUC VAR	8869730000	B.58
RIM-I 4 110VUC VAR	8869730000	B.61
RIM-I 4 110VUC VAR	8869730000	B.64
RIM-I 4 230VUC VAR	8869750000	B.47
RIM-I 4 230VUC VAR	8869750000	B.51
RIM-I 4 230VUC VAR	8869750000	B.58
RIM-I 4 230VUC VAR	8869750000	B.61
RIM-I 4 230VUC VAR	8869750000	B.64
RIM-I 4 24VUC VAR	8869710000	B.47
RIM-I 4 24VUC VAR	8869710000	B.51
RIM-I 4 24VUC VAR	8869710000	B.58
RIM-I 4 24VUC VAR	8869710000	B.61
RIM-I 4 24VUC VAR	8869710000	B.64
RSS112005 05VDC-REL1U	1174540000	A.48
RSS112012 12VDC-REL1U	1220670000	A.48
RSS112024 24VDC-REL1U	4061590000	A.48
RSS112060 60VDC-REL1U	4061600000	A.48
RSS113005 05VDC-REL1U	4061580000	A.48
RSS113012 12VDC-REL1U	4061610000	A.48
RSS113024 24VDC-REL1U	4060120000	A.48
RSS113060 60VDC-REL1U	4061630000	A.48

S

SCM 2CO ECO	7760056263	B.10
SCM 4CO ECO	7760056264	B.10
SCM-I 2CO	8869400000	B.57
SCM-I 2CO P	8876220000	B.57
SCM-I 3CO N	8869410000	B.60
SCM-I 4CO	8869420000	B.63
SCM-I 4CO N	8869390000	B.63
SCM-I 4CO P	8869430000	B.63
SCM-I CLIP M	8869450000	B.57
SCM-I CLIP M	8869450000	B.57
SCM-I CLIP M	8869450000	B.60
SCM-I CLIP M	8869450000	B.63
SCM-I CLIP M	8869450000	B.63
SCM-I CLIP M	8869450000	B.63
SCM-I CLIP N	8875620000	B.60
SCM-I CLIP N	8875620000	B.63
SCM-I CLIP P	8869440000	B.57
SCM-I CLIP P	8869440000	B.57
SCM-I CLIP P	8869440000	B.63
SCM-I CLIP P	8869440000	B.63
SCM-I MARK	8869460000	B.57
SCM-I MARK	8869460000	B.57
SCM-I MARK	8869460000	B.60
SCM-I MARK	8869460000	B.63
SCM-I MARK	8869460000	B.63
SCM-I MARK	8869460000	B.63
SCM-I QV P	8870850000	B.57
SCM-I QV P	8870850000	B.63
SCM-I QV S	1132080000	B.57
SCM-I QV S	1132080000	B.60
SCM-I QV S	1132080000	B.63
SCM-I QV S	1132080000	B.63
SCS 24VDC P1SIL3DS	1303890000	D.6
SCS 24VDC P1SIL3DS M	1303760000	D.6
SCS 24VDC P1SIL3DS MG3	1304040000	D.6
SCS 24VDC P2SIL3DSES	1319270000	D.7
SCS 24VDC P2SIL3ES	1319280000	D.8
SD TO 0,6X3,0	1323880000	A.51
SDK PH0	9008470000	A.51
SDK PZ2	9008540000	C.14
SDS 0.5X3.0X80	9008320000	C.14
SDS 0.6X3.5X100	9008330000	A.51
SDS 0.6X3.5X100	9008330000	A.66
SDS 0.6X3.5X100	9008330000	A.78
SDS 0.6X3.5X100	9008330000	A.90
SLD CLIP 3CO M	7760056234	B.20
SLD CLIP 4CO M	7760056235	B.20
SLD F 2CO	7760056225	B.20
SLD F 3CO	7760056226	B.20
SLD F 4CO	7760056227	B.20
SRC-I 2CO	8869490000	B.46
SRC-I 2CO	8869490000	B.50
SRC-I 2CO N	8869480000	B.46
SRC-I 2CO N	8869480000	B.50
SRC-I 2CO P	8869500000	B.46
SRC-I 2CO P	8869500000	B.50
SRC-I CLIP HM RCI	1132090000	B.46
SRC-I CLIP HM RCI	1132090000	B.46
SRC-I CLIP HM RCI	1132090000	B.46
SRC-I CLIP HM RCI	1132090000	B.50
SRC-I CLIP HM RCI	1132090000	B.50
SRC-I CLIP HM RCI	1132090000	B.50
SRC-I CLIP HP	8869510000	B.46
SRC-I CLIP HP	8869510000	B.46
SRC-I CLIP HP	8869510000	B.46
SRC-I CLIP HP	8869510000	B.50
SRC-I CLIP HP	8869510000	B.50
SRC-I CLIP HP	8869510000	B.50
SRC-I MARK	8869530000	B.46
SRC-I MARK	8869530000	B.46
SRC-I MARK	8869530000	B.46
SRC-I MARK	8869530000	B.50
SRC-I MARK	8869530000	B.50
SRC-I MARK	8869530000	B.50
SRC-I QV P	8870840000	B.46
SRC-I QV P	8870840000	B.50
SRC-I QV S	1132070000	B.46
SRC-I QV S	1132070000	B.46
SRC-I QV S	1132070000	B.50
SRC-I QV S	1132070000	B.50
SRD ECO 2CO	1132810000	B.36
SRD ECO 3CO	1132820000	B.36
SSR 24VDC/0-24VDC 3,5A	1132310000	A.49
SSR 24VDC/max.240VAC 1A	1132290000	A.49
SSS RELAIS 24V/230V 1AAC	4061210000	A.49
SSS RELAIS 24V/24V 0,1ADC	4061180000	A.49
SSS RELAIS 24V/24V 2ADC	4061190000	A.49
SSS RELAIS 5V/230V 1AAC	1132260000	A.49
SSS RELAIS 5V/24V 0,1ADC	4064320000	A.49
SSS RELAIS 5V/24V 2ADC	4064310000	A.49
SSS RELAIS 60V/230V 1AAC	4061220000	A.49
SSS RELAIS 60V/24V 0,1ADC	4061230000	A.49
SSS RELAIS 60V/24V 2ADC	4061200000	A.49

T

Test Lever Block DRH/DRW	7760056249	B.23
Test Lever Block DRH/DRW	7760056249	B.23
Test Lever Block DRH/DRW	7760056249	B.23
Test Lever Block DRH/DRW	7760056249	B.23
Test Lever Block DRH/DRW	7760056249	B.23
Test Lever Block DRH/DRW	7760056249	B.23
Test Lever Block DRH/DRW	7760056249	B.23
Test Lever Block DRH/DRW	7760056249	B.23
Test Lever Block DRH/DRW	7760056249	B.23
Test Lever Block DRH/DRW	7760056249	B.25
Test Lever Block DRH/DRW	7760056249	B.25
Test Lever Block DRH/DRW	7760056249	B.25
Test Lever Block DRH/DRW	7760056249	B.25
Test Lever Block DRH/DRW	7760056249	B.25
Test Lever Block DRH/DRW	7760056249	B.25
Test Lever Block DRH/DRW	7760056249	B.25
Test Lever Block DRH/DRW	7760056249	B.25
Test Lever Block DRH/DRW	7760056249	B.25
Test Lever Block DRH/DRW	7760056249	B.27
Test Lever Block DRH/DRW	7760056249	B.27
Test Lever Block DRH/DRW	7760056249	B.27
Test Lever Block DRH/DRW	7760056249	B.27
Test Lever Block DRH/DRW	7760056249	B.27
Test Lever Block DRH/DRW	7760056249	B.27
Test Lever Block DRH/DRW	7760056249	B.27
Test Lever Block DRH/DRW	7760056249	B.27
Test Lever Block DRH/DRW	7760056249	B.27
Test Lever Block DRH/DRW	7760056249	B.29
Test Lever Block DRH/DRW	7760056249	B.29
Test Lever Block DRH/DRW	7760056249	B.29
Test Lever Block DRH/DRW	7760056249	B.29
Test Lever Block DRH/DRW	7760056249	B.29
Test Lever Block DRH/DRW	7760056249	B.29
Test Lever Block DRH/DRW	7760056249	B.29
Test Lever Block DRH/DRW	7760056249	B.29
TIA F10	1463520000	A.52
TIA SUBD 15S	1463530000	A.53
TIAL F10	1463540000	A.54
TIAL F20	1463550000	A.55
TIMER BTMF-S	8647680000	E.6
TIMER BTMF-Z	8647690000	E.6
TIMER BTM-S	8647700000	E.5
TIMER BTM-Z	8647710000	E.5
TIMER BTR-S	8647720000	E.6
TIMER BTR-Z	8647730000	E.6
TIMER BTTT-S	8647740000	E.7
TOP 110VDC/230VAC 0,1A	8951200000	A.63
TOP 110VDC/48VDC 0,1A	8950800000	A.59
TOP 110VDC/48VDC 0,5A	8951000000	A.61
TOP 120VAC/230VAC 0,1A	8951280000	A.63
TOP 120VAC/48VDC 0,1A	8950880000	A.59
TOP 120VAC/48VDC 0,5A	8951080000	A.61
TOP 120VAC/48VDC 0.5A RC	1188830000	A.64
TOP 12VDC/230VAC 0,1A	8951170000	A.63
TOP 12VDC/48VDC 0,1A	8950770000	A.59
TOP 12VDC/48VDC 0,5A	8950970000	A.61
TOP 220VDC/230VAC 0,1A	8951210000	A.63
TOP 220VDC/48VDC 0,1A	8950810000	A.59
TOP 220VDC/48VDC 0,5A	8951010000	A.61
TOP 230VAC/230VAC 0,1A	8951290000	A.63
TOP 230VAC/48VDC 0,1A	8950890000	A.59
TOP 230VAC/48VDC 0,5A	8951090000	A.61
TOP 230VAC/48VDC 0.5A RC	1189260000	A.64
TOP 24VAC/230VAC 0,1A	8951260000	A.63
TOP 24VAC/48VDC 0,1A	8950860000	A.59
TOP 24VAC/48VDC 0,5A	8951060000	A.61
TOP 24VDC/230VAC 0,1A	8951180000	A.63
TOP 24VDC/24VDC 4A	1254880000	A.65
TOP 24VDC/48VDC 0,1A	8950780000	A.59
TOP 24VDC/48VDC 0,5A	8950980000	A.61
TOP 48-60VAC/230VAC 0,1A	8951270000	A.63
TOP 48-60VAC/48VDC 0,1A	8950870000	A.59
TOP 48-60VAC/48VDC 0,5A	8951070000	A.61
TOP 48-60VDC/230VAC 0,1A	8951190000	A.63
TOP 48-60VDC/48VDC 0,1A	8950790000	A.59
TOP 48-60VDC/48VDC 0,5A	8950990000	A.61
TOP 5VDC/230VAC 0,1A	8951160000	A.63
TOP 5VDC/48VDC 0,1A	8950760000	A.59
TOP 5VDC/48VDC 0,5A	8950960000	A.61

Type	Order No.	Page
TOS 110VDC/230VAC 0,1A	8951140000	A.63
TOS 110VDC/48VDC 0,1A	8950740000	A.59
TOS 110VDC/48VDC 0,5A	8950940000	A.61
TOS 120VAC RC 230VAC1A	1127480000	A.37
TOS 120VAC RC 24VDC2A	1127230000	A.33
TOS 120VAC RC 48VDC0,1A	1127000000	A.29
TOS 120VAC/230VAC 0,1A	8951240000	A.63
TOS 120VAC/48VDC 0,1A	8950840000	A.59
TOS 120VAC/48VDC 0,5A	8951040000	A.61
TOS 120VAC/48VDC 0.5A RC	1180290000	A.64
TOS 120VUC 230VAC1A	1127450000	A.37
TOS 120VUC 24VDC2A	1127210000	A.33
TOS 120VUC 48VDC0,1A	1126980000	A.29
TOS 12VDC 230VAC1A	1127400000	A.37
TOS 12VDC 24VDC2A	1127150000	A.33
TOS 12VDC 48VDC0,1A	1126930000	A.29
TOS 12VDC/230VAC 0,1A	8951110000	A.63
TOS 12VDC/48VDC 0,1A	8950710000	A.59
TOS 12VDC/48VDC 0,5A	8950910000	A.61
TOS 220VDC/230VAC 0,1A	8951150000	A.63
TOS 220VDC/48VDC 0,1A	8950750000	A.59
TOS 220VDC/48VDC 0,5A	8950950000	A.61
TOS 230VAC RC 230VAC1A	1127490000	A.37
TOS 230VAC RC 24VDC2A	1127240000	A.33
TOS 230VAC RC 48VDC0,1A	1127010000	A.29
TOS 230VAC/230VAC 0,1A	8951250000	A.63
TOS 230VAC/48VDC 0,1A	8950850000	A.59
TOS 230VAC/48VDC 0,5A	8951050000	A.61
TOS 230VAC/48VDC 0.5A RC	1189270000	A.64
TOS 230VUC 230VAC1A	1127470000	A.37
TOS 230VUC 24VDC2A	1127220000	A.33
TOS 230VUC 48VDC0,1A	1126990000	A.29
TOS 24-230VUC 230VAC1A	1127500000	A.38
TOS 24-230VUC 230VAC1A	1127690000	A.42
TOS 24-230VUC 24VDC2A	1127250000	A.34
TOS 24-230VUC 24VDC3,5A	1127640000	A.40
TOS 24-230VUC 24VDC5A	1990970000	A.41
TOS 24-230VUC 48VDC0,1A	1127020000	A.30
TOS 24-230VUC EMPTY	1127730000	A.50
TOS 24VAC/230VAC 0,1A	8951220000	A.63
TOS 24VAC/48VDC 0,1A	8950820000	A.59
TOS 24VAC/48VDC 0,5A	8951020000	A.61
TOS 24VDC 230VAC1A	1127410000	A.37
TOS 24VDC 230VAC1A	1127680000	A.42
TOS 24VDC 24VDC2A	1127170000	A.33
TOS 24VDC 24VDC3,5A	1127630000	A.40
TOS 24VDC 24VDC5A	1990960000	A.41
TOS 24VDC 48VDC0,1A	1126940000	A.29
TOS 24VDC ACT	1391680000	A.35
TOS 24VDC EMPTY	1127720000	A.50
TOS 24VDC/230VAC 0,1A	8951120000	A.63
TOS 24VDC/24VDC 4A	1275100000	A.65
TOS 24VDC/48VDC 0,1A	8950720000	A.59
TOS 24VDC/48VDC 0,5A	8950920000	A.61
TOS 24VUC 230VAC1A	1127420000	A.37
TOS 24VUC 24VDC2A	1127180000	A.33
TOS 24VUC 48VDC0,1A	1126950000	A.29
TOS 48-60VAC/230VAC 0,1A	8951230000	A.63
TOS 48-60VAC/48VDC 0,1A	8950830000	A.59
TOS 48-60VAC/48VDC 0,5A	8951030000	A.61
TOS 48-60VDC/230VAC 0,1A	8951130000	A.63
TOS 48-60VDC/48VDC 0,1A	8950730000	A.59
TOS 48-60VDC/48VDC 0,5A	8950930000	A.61
TOS 48VUC 230VAC1A	1127430000	A.37
TOS 48VUC 24VDC2A	1127190000	A.33
TOS 48VUC 48VDC0,1A	1126960000	A.29
TOS 5VDC 230VAC1A	1127390000	A.37
TOS 5VDC 24VDC2A	1127140000	A.33
TOS 5VDC 48VDC0,1A	1126920000	A.29
TOS 5VDC/230VAC 0,1A	8951100000	A.63
TOS 5VDC/48VDC 0,1A	8950700000	A.59
TOS 5VDC/48VDC 0,5A	8950900000	A.61
TOS 60VUC 230VAC1A	1127440000	A.37
TOS 60VUC 24VDC2A	1127200000	A.33
TOS 60VUC 48VDC0,1A	1126970000	A.29
TOZ 120VAC RC 230VAC1A	1127600000	A.37
TOZ 120VAC RC 24VDC2A	1127350000	A.33
TOZ 120VAC RC 48VDC0,1A	1127110000	A.29
TOZ 120VUC 230VAC1A	1127580000	A.37
TOZ 120VUC 24VDC2A	1127330000	A.33
TOZ 120VUC 48VDC0,1A	1127090000	A.29
TOZ 12VDC 230VAC1A	1127520000	A.37
TOZ 12VDC 24VDC2A	1127280000	A.33
TOZ 12VDC 48VDC0,1A	1127040000	A.29
TOZ 230VAC RC 230VAC1A	1127610000	A.37
TOZ 230VAC RC 24VDC2A	1127370000	A.33
TOZ 230VAC RC 48VDC0,1A	1127120000	A.29
TOZ 230VUC 230VAC1A	1127590000	A.37
TOZ 230VUC 24VDC2A	1127340000	A.33
TOZ 230VUC 48VDC0,1A	1127100000	A.29
TOZ 24-230VUC 230VAC1A	1127620000	A.38
TOZ 24-230VUC 230VAC1A	1127710000	A.42
TOZ 24-230VUC 24VDC2A	1127380000	A.34
TOZ 24-230VUC 24VDC3,5A	1127670000	A.40
TOZ 24-230VUC 24VDC5A	1990990000	A.41
TOZ 24-230VUC 48VDC0,1A	1127130000	A.30
TOZ 24-230VUC EMPTY	1127750000	A.50
TOZ 24VDC 230VAC1A	1127530000	A.37
TOZ 24VDC 230VAC1A	1127700000	A.42

Type	Order No.	Page
TOZ 24VDC 24VDC2A	1127290000	A.33
TOZ 24VDC 24VDC3,5A	1127650000	A.40
TOZ 24VDC 24VDC5A	1990980000	A.41
TOZ 24VDC 48VDC0,1A	1127050000	A.29
TOZ 24VDC ACT	1391690000	A.35
TOZ 24VDC EMPTY	1127740000	A.50
TOZ 24VUC 230VAC1A	1127540000	A.37
TOZ 24VUC 24VDC2A	1127300000	A.33
TOZ 24VUC 48VDC0,1A	1127060000	A.29
TOZ 48VUC 230VAC1A	1127550000	A.37
TOZ 48VUC 24VDC2A	1127310000	A.33
TOZ 48VUC 48VDC0,1A	1127070000	A.29
TOZ 5VDC 230VAC1A	1127510000	A.37
TOZ 5VDC 24VDC2A	1127270000	A.33
TOZ 5VDC 48VDC0,1A	1127030000	A.29
TOZ 60VUC 230VAC1A	1127570000	A.37
TOZ 60VUC 24VDC2A	1127320000	A.33
TOZ 60VUC 48VDC0,1A	1127080000	A.29
TRS 120VAC RC 1CO	1122830000	A.9
TRS 120VAC RC 1CO 16A	1479750000	A.17
TRS 120VAC RC 1CO AU	1123070000	A.11
TRS 120VAC RC 1CO EMPTY	1123310000	A.50
TRS 120VAC RC 2CO	1123550000	A.23
TRS 120VAC RC 2CO AU	1123800000	A.25
TRS 120VAC RC 2CO EMPTY	1124040000	A.50
TRS 120VACRC 1CO C1D2	1984590000	A.45
TRS 120VACRC 1COAU C1D2	1984640000	A.47
TRS 120VUC 2CO	1123530000	A.23
TRS 120VUC 1CO	1122810000	A.9
TRS 120VUC 1CO 16A	1479730000	A.17
TRS 120VUC 1CO AU	1123040000	A.11
TRS 120VUC 1CO EMPTY	1123290000	A.50
TRS 120VUC 2CO AU	1123780000	A.25
TRS 120VUC 2CO EMPTY	1124020000	A.50
TRS 12VDC 1CO	1122750000	A.9
TRS 12VDC 1CO 16A	1479670000	A.17
TRS 12VDC 1CO AU	1122990000	A.11
TRS 12VDC 1CO C1D2	1984560000	A.45
TRS 12VDC 1CO EMPTY	1123230000	A.50
TRS 12VDC 1COAU C1D2	1984620000	A.47
TRS 12VDC 2CO	1123480000	A.23
TRS 12VDC 2CO AU	1123720000	A.25
TRS 12VDC 2CO EMPTY	1123970000	A.50
TRS 230VAC RC 1CO	1122840000	A.9
TRS 230VAC RC 1CO 16A	1479760000	A.17
TRS 230VAC RC 1CO AU	1123080000	A.11
TRS 230VAC RC 1CO EMPTY	1123320000	A.50
TRS 230VAC RC 2CO	1123570000	A.23
TRS 230VAC RC 2CO AU	1123810000	A.25
TRS 230VAC RC 2CO EMPTY	1124050000	A.50
TRS 230VACRC 1CO C1D2	1984600000	A.45
TRS 230VUC 2CO	1123540000	A.23
TRS 230VUC 1CO	1122820000	A.9
TRS 230VUC 1CO 16A	1479740000	A.17
TRS 230VUC 1CO AU	1123050000	A.11
TRS 230VUC 1CO EMPTY	1123300000	A.50
TRS 230VUC 2CO AU	1123790000	A.25
TRS 230VUC 2CO EMPTY	1124030000	A.50
TRS 24-230VUC 1CO	1122850000	A.12
TRS 24-230VUC 1CO 16A	1479770000	A.18
TRS 24-230VUC 1CO AU	1123090000	A.13
TRS 24-230VUC 1CO C1D2	1984610000	A.45
TRS 24-230VUC 1CO EMPTY	1123330000	A.50
TRS 24-230VUC 1COAUC1D2	1984650000	A.47
TRS 24-230VUC 1NO HC	1479790000	A.20
TRS 24-230VUC 1NO HCP	1479830000	A.21
TRS 24-230VUC 2CO	1123580000	A.26
TRS 24-230VUC 2CO AU	1123820000	A.27
TRS 24-230VUC 2CO EMPTY	1124070000	A.50
TRS 24VDC 1CO	1122770000	A.9
TRS 24VDC 1CO 16A	1479680000	A.17
TRS 24VDC 1CO AGSNO	1984540000	A.15
TRS 24VDC 1CO AU	1123000000	A.11
TRS 24VDC 1CO C1D2	1984570000	A.45
TRS 24VDC 1CO EMPTY	1123240000	A.50
TRS 24VDC 1COAU C1D2	1984630000	A.47
TRS 24VDC 1NO HC	1479780000	A.20
TRS 24VDC 1NO HCP	1479810000	A.21
TRS 24VDC 2CO	1123490000	A.23
TRS 24VDC 2CO AU	1123730000	A.25
TRS 24VDC 2CO EMPTY	1123980000	A.50
TRS 24VDC ACT	1381900000	A.14
TRS 24VUC 1CO	1122780000	A.9
TRS 24VUC 1CO 16A	1479690000	A.17
TRS 24VUC 1CO AU	1123010000	A.11
TRS 24VUC 1CO C1D2	1984580000	A.45
TRS 24VUC 1CO EMPTY	1123250000	A.50
TRS 24VUC 2CO	1123500000	A.23
TRS 24VUC 2CO AU	1123740000	A.25
TRS 24VUC 2CO EMPTY	1123990000	A.50
TRS 48VUC 1CO	1122790000	A.9
TRS 48VUC 1CO 16A	1479700000	A.17
TRS 48VUC 1CO AU	1123020000	A.11
TRS 48VUC 1CO EMPTY	1123270000	A.50
TRS 48VUC 2CO	1123510000	A.23
TRS 48VUC 2CO AU	1123750000	A.25
TRS 48VUC 2CO EMPTY	1124000000	A.50
TRS 5VDC 1CO	1122740000	A.9
TRS 5VDC 1CO 16A	1479650000	A.17

Type	Order No.	Page
TRS 5VDC 1CO AU	1122980000	A.11
TRS 5VDC 1CO EMPTY	1123220000	A.50
TRS 5VDC 2CO	1123470000	A.23
TRS 5VDC 2CO AU	1123710000	A.25
TRS 5VDC 2CO EMPTY	1123950000	A.50
TRS 60VUC 1CO	1122800000	A.9
TRS 60VUC 1CO 16A	1479710000	A.17
TRS 60VUC 1CO AU	1123030000	A.11
TRS 60VUC 1CO EMPTY	1123280000	A.50
TRS 60VUC 2CO	1123520000	A.23
TRS 60VUC 2CO AU	1123770000	A.25
TRS 60VUC 2CO EMPTY	1124010000	A.50
TRZ 120VAC RC 1CO	1122940000	A.9
TRZ 120VAC RC 1CO 16A	1479910000	A.17
TRZ 120VAC RC 1CO AU	1123190000	A.11
TRZ 120VAC RC 1CO EMPTY	1123430000	A.50
TRZ 120VAC RC 2CO	1123680000	A.23
TRZ 120VAC RC 2CO AU	1123920000	A.25
TRZ 120VAC RC 2CO EMPTY	1124170000	A.50
TRZ 120VUC 1CO	1122920000	A.9
TRZ 120VUC 1CO 16A	1479890000	A.17
TRZ 120VUC 1CO AU	1123170000	A.11
TRZ 120VUC 1CO EMPTY	1123410000	A.50
TRZ 120VUC 2CO	1123650000	A.23
TRZ 120VUC 2CO AU	1123900000	A.25
TRZ 120VUC 2CO EMPTY	1124140000	A.50
TRZ 12VDC 1CO	1122870000	A.9
TRZ 12VDC 1CO 16A	1479820000	A.17
TRZ 12VDC 1CO AU	1123110000	A.11
TRZ 12VDC 1CO EMPTY	1123350000	A.50
TRZ 12VDC 2CO	1123600000	A.23
TRZ 12VDC 2CO AU	1123840000	A.25
TRZ 12VDC 2CO EMPTY	1124090000	A.50
TRZ 230VAC RC 1CO	1122950000	A.9
TRZ 230VAC RC 1CO 16A	1479920000	A.17
TRZ 230VAC RC 1CO AU	1123200000	A.11
TRZ 230VAC RC 1CO EMPTY	1123440000	A.50
TRZ 230VAC RC 2CO	1123690000	A.23
TRZ 230VAC RC 2CO AU	1123930000	A.25
TRZ 230VAC RC 2CO EMPTY	1124180000	A.50
TRZ 230VUC 1CO	1122930000	A.9
TRZ 230VUC 1CO 16A	1479900000	A.17
TRZ 230VUC 1CO AU	1123180000	A.11
TRZ 230VUC 1CO EMPTY	1123420000	A.50
TRZ 230VUC 2CO	1123670000	A.23
TRZ 230VUC 2CO AU	1123910000	A.25
TRZ 230VUC 2CO EMPTY	1124150000	A.50
TRZ 24-230VUC 1CO	1122970000	A.12
TRZ 24-230VUC 1CO 16A	1479930000	A.18
TRZ 24-230VUC 1CO AU	1123210000	A.13
TRZ 24-230VUC 1CO EMPTY	1123450000	A.50
TRZ 24-230VUC 1NO HC	1479950000	A.20
TRZ 24-230VUC 1NO HCP	1479980000	A.21
TRZ 24-230VUC 2CO	1123700000	A.26
TRZ 24-230VUC 2CO AU	1123940000	A.27
TRZ 24-230VUC 2CO EMPTY	1124190000	A.50
TRZ 24VDC 1CO	1122880000	A.9
TRZ 24VDC 1CO 16A	1479840000	A.17
TRZ 24VDC 1CO AGSNO	1984550000	A.15
TRZ 24VDC 1CO AU	1123120000	A.11
TRZ 24VDC 1CO EMPTY	1123370000	A.50
TRZ 24VDC 1NO HC	1479940000	A.20
TRZ 24VDC 1NO HCP	1479970000	A.21
TRZ 24VDC 2CO	1123610000	A.23
TRZ 24VDC 2CO AU	1123850000	A.25
TRZ 24VDC 2CO EMPTY	1124100000	A.50
TRZ 24VDC ACT	1391670000	A.14
TRZ 24VUC 1CO	1122890000	A.9
TRZ 24VUC 1CO 16A	1479850000	A.17
TRZ 24VUC 1CO AU	1123130000	A.11
TRZ 24VUC 1CO EMPTY	1123380000	A.50
TRZ 24VUC 2CO	1123620000	A.23
TRZ 24VUC 2CO AU	1123870000	A.25
TRZ 24VUC 2CO EMPTY	1124110000	A.50
TRZ 48VUC 1CO	1122900000	A.9
TRZ 48VUC 1CO 16A	1479870000	A.17
TRZ 48VUC 1CO AU	1123140000	A.11
TRZ 48VUC 1CO EMPTY	1123390000	A.50
TRZ 48VUC 2CO	1123630000	A.23
TRZ 48VUC 2CO AU	1123880000	A.25
TRZ 48VUC 2CO EMPTY	1124120000	A.50
TRZ 5VDC 1CO	1122860000	A.9
TRZ 5VDC 1CO 16A	1479800000	A.17
TRZ 5VDC 1CO AU	1123100000	A.11
TRZ 5VDC 1CO EMPTY	1123340000	A.50
TRZ 5VDC 2CO	1123590000	A.23
TRZ 5VDC 2CO AU	1123830000	A.25
TRZ 5VDC 2CO EMPTY	1124080000	A.50
TRZ 60VUC 1CO	1122910000	A.9
TRZ 60VUC 1CO 16A	1479880000	A.17
TRZ 60VUC 1CO AU	1123150000	A.11
TRZ 60VUC 1CO EMPTY	1123400000	A.50
TRZ 60VUC 2CO	1123640000	A.23
TRZ 60VUC 2CO AU	1123890000	A.25
TRZ 60VUC 2CO EMPTY	1124130000	A.50
TW TXS/TXZ R3.2	1240800000	A.51
TXS SUPPLY	1240780000	A.51
TXZ SUPPLY	1240790000	A.51

W

Type	Order No.	Page
WEW 35/2	1061200000	A.90
WEW 35/2 SW	1061210000	A.51
WEW 35/2 SW	1061210000	A.78
WS 10/6 MC M NE WS	1818400000	A.51
WS 10/6 MC NE WS	1828450000	A.90
WS 12/6 MC NE WS	1609900000	A.66
WS 12/6 MC NE WS	1609900000	A.78

Z

Type	Order No.	Page
ZQV 1.5N/R12.8/10 GE	1193700000	A.51
ZQV 1.5N/R6.4/10 BL	1390350000	A.51
ZQV 1.5N/R6.4/10 GE	1193680000	A.51
ZQV 1.5N/R6.4/10 RT	1391640000	A.51
ZQV 1.5N/R6.4/10 SW	1391630000	A.51
ZQV 1.5N/R6.4/19 BL	1391620000	A.51
ZQV 1.5N/R6.4/19 GE	1193690000	A.51
ZQV 1.5N/R6.4/19 RT	1391610000	A.51
ZQV 1.5N/R6.4/19 SW	1391600000	A.51
ZQV 1.5N/R6.4/2 GE	1193670000	A.51
ZQV 4N/10 BL	1794050000	A.66
ZQV 4N/10 BL	1794050000	A.78
ZQV 4N/10 BL	1794050000	A.90
ZQV 4N/10 GE	1758260000	A.66
ZQV 4N/10 GE	1758260000	A.78
ZQV 4N/10 GE	1758260000	A.90
ZQV 4N/10 RT	1794040000	A.66
ZQV 4N/10 RT	1794040000	A.78
ZQV 4N/10 RT	1794040000	A.90
ZQV 4N/10 SW	1794060000	A.66
ZQV 4N/10 SW	1794060000	A.78
ZQV 4N/10 SW	1794060000	A.90
ZQV 4N/2 BL	1793960000	A.66
ZQV 4N/2 BL	1793960000	A.78
ZQV 4N/2 BL	1793960000	A.90
ZQV 4N/2 GE	1758250000	A.66
ZQV 4N/2 GE	1758250000	A.78
ZQV 4N/2 GE	1758250000	A.90
ZQV 4N/2 RT	1793950000	A.66
ZQV 4N/2 RT	1793950000	A.78
ZQV 4N/2 RT	1793950000	A.90
ZQV 4N/2 SW	1793970000	A.66
ZQV 4N/2 SW	1793970000	A.78
ZQV 4N/2 SW	1793970000	A.90
ZQV 4N/20 BL	1909100000	A.66
ZQV 4N/20 BL	1909100000	A.78
ZQV 4N/20 BL	1909100000	A.90
ZQV 4N/20 GE	1909020000	A.66
ZQV 4N/20 GE	1909020000	A.78
ZQV 4N/20 GE	1909020000	A.90
ZQV 4N/20 RT	1909150000	A.66
ZQV 4N/20 RT	1909150000	A.78
ZQV 4N/20 RT	1909150000	A.90
ZQV 4N/20 SW	1909120000	A.66
ZQV 4N/20 SW	1909120000	A.78
ZQV 4N/20 SW	1909120000	A.90
ZQV 4N/3 BL	1793990000	A.66
ZQV 4N/3 BL	1793990000	A.78
ZQV 4N/3 BL	1793990000	A.90
ZQV 4N/3 GE	1762630000	A.66
ZQV 4N/3 GE	1762630000	A.78
ZQV 4N/3 GE	1762630000	A.90
ZQV 4N/3 RT	1793980000	A.66
ZQV 4N/3 RT	1793980000	A.78
ZQV 4N/3 RT	1793980000	A.90
ZQV 4N/3 SW	1794000000	A.66
ZQV 4N/3 SW	1794000000	A.78
ZQV 4N/3 SW	1794000000	A.90
ZQV 4N/4 BL	1794020000	A.66
ZQV 4N/4 BL	1794020000	A.78
ZQV 4N/4 BL	1794020000	A.90
ZQV 4N/4 GE	1762620000	A.66
ZQV 4N/4 GE	1762620000	A.78
ZQV 4N/4 GE	1762620000	A.90
ZQV 4N/4 RT	1794010000	A.66
ZQV 4N/4 RT	1794010000	A.78
ZQV 4N/4 RT	1794010000	A.90
ZQV 4N/4 SW	1794030000	A.66
ZQV 4N/4 SW	1794030000	A.78
ZQV 4N/4 SW	1794030000	A.90

Order No.	Type	Page
0520000000		
0526700000	ISPF QB75 SW	A.78
0526760000	ISPF QB75 RT	A.78
0526780000	ISPF QB75 BL	A.78
0530000000		
0535200000	QB 75/6.2/15	A.78
1060000000		
1061200000	WEW 35/2	A.90
1061210000	WEW 35/2 SW	A.51
1061210000	WEW 35/2 SW	A.78
1120000000		
1122740000	TRS 5VDC 1CO	A.9
1122750000	TRS 12VDC 1CO	A.9
1122770000	TRS 24VDC 1CO	A.9
1122780000	TRS 24VUC 1CO	A.9
1122790000	TRS 48VUC 1CO	A.9
1122800000	TRS 60VUC 1CO	A.9
1122810000	TRS 120VUC 1CO	A.9
1122820000	TRS 230VUC 1CO	A.9
1122830000	TRS 120VAC RC 1CO	A.9
1122840000	TRS 230VAC RC 1CO	A.9
1122850000	TRS 24-230VUC 1CO	A.12
1122860000	TRZ 5VDC 1CO	A.9
1122870000	TRZ 12VDC 1CO	A.9
1122880000	TRZ 24VDC 1CO	A.9
1122890000	TRZ 24VUC 1CO	A.9
1122900000	TRZ 48VUC 1CO	A.9
1122910000	TRZ 60VUC 1CO	A.9
1122920000	TRZ 120VUC 1CO	A.9
1122930000	TRZ 230VUC 1CO	A.9
1122940000	TRZ 120VAC RC 1CO	A.9
1122950000	TRZ 230VAC RC 1CO	A.9
1122970000	TRZ 24-230VUC 1CO	A.12
1122980000	TRS 5VDC 1CO AU	A.11
1122990000	TRS 12VDC 1CO AU	A.11
1123000000	TRS 24VDC 1CO AU	A.11
1123010000	TRS 24VUC 1CO AU	A.11
1123020000	TRS 48VUC 1CO AU	A.11
1123030000	TRS 60VUC 1CO AU	A.11
1123040000	TRS 120VUC 1CO AU	A.11
1123050000	TRS 230VUC 1CO AU	A.11
1123070000	TRS 120VAC RC 1CO AU	A.11
1123080000	TRS 230VAC RC 1CO AU	A.11
1123090000	TRS 24-230VUC 1CO AU	A.13
1123100000	TRZ 5VDC 1CO AU	A.11
1123110000	TRZ 12VDC 1CO AU	A.11
1123120000	TRZ 24VDC 1CO AU	A.11
1123130000	TRZ 24VUC 1CO AU	A.11
1123140000	TRZ 48VUC 1CO AU	A.11
1123150000	TRZ 60VUC 1CO AU	A.11
1123170000	TRZ 120VUC 1CO AU	A.11
1123180000	TRZ 230VUC 1CO AU	A.11
1123190000	TRZ 120VAC RC 1CO AU	A.11
1123200000	TRZ 230VAC RC 1CO AU	A.11
1123210000	TRZ 24-230VUC 1CO AU	A.13
1123220000	TRS 5VDC 1CO EMPTY	A.50
1123230000	TRS 12VDC 1CO EMPTY	A.50
1123240000	TRS 24VDC 1CO EMPTY	A.50
1123250000	TRS 24VUC 1CO EMPTY	A.50
1123270000	TRS 48VUC 1CO EMPTY	A.50
1123280000	TRS 60VUC 1CO EMPTY	A.50
1123290000	TRS 120VUC 1CO EMPTY	A.50
1123300000	TRS 230VUC 1CO EMPTY	A.50
1123310000	TRS 120VAC RC 1CO EMPTY	A.50
1123320000	TRS 230VAC RC 1CO EMPTY	A.50
1123330000	TRS 24-230VUC 1CO EMPTY	A.50
1123340000	TRZ 5VDC 1CO EMPTY	A.50
1123350000	TRZ 12VDC 1CO EMPTY	A.50
1123370000	TRZ 24VDC 1CO EMPTY	A.50
1123380000	TRZ 24VUC 1CO EMPTY	A.50
1123390000	TRZ 48VUC 1CO EMPTY	A.50
1123400000	TRZ 60VUC 1CO EMPTY	A.50
1123410000	TRZ 120VUC 1CO EMPTY	A.50
1123420000	TRZ 230VUC 1CO EMPTY	A.50
1123430000	TRZ 120VAC RC 1CO EMPTY	A.50
1123440000	TRZ 230VAC RC 1CO EMPTY	A.50
1123450000	TRZ 24-230VUC 1CO EMPTY	A.50
1123470000	TRS 5VDC 2CO	A.23
1123480000	TRS 12VDC 2CO	A.23
1123490000	TRS 24VDC 2CO	A.23
1123500000	TRS 24VUC 2CO	A.23
1123510000	TRS 48VUC 2CO	A.23
1123520000	TRS 60VUC 2CO	A.23
1123530000	TRS 120VUC 2CO	A.23
1123540000	TRS 230VUC 2CO	A.23
1123550000	TRS 120VAC RC 2CO	A.23
1123570000	TRS 230VAC RC 2CO	A.23
1123580000	TRS 24-230VUC 2CO	A.26
1123590000	TRZ 5VDC 2CO	A.23
1123600000	TRZ 12VDC 2CO	A.23
1123610000	TRZ 24VDC 2CO	A.23
1123620000	TRZ 24VUC 2CO	A.23

Order No.	Type	Page
1123630000	TRZ 48VUC 2CO	A.23
1123640000	TRZ 60VUC 2CO	A.23
1123650000	TRZ 120VUC 2CO	A.23
1123670000	TRZ 230VUC 2CO	A.23
1123680000	TRZ 120VAC RC 2CO	A.23
1123690000	TRZ 230VAC RC 2CO	A.23
1123700000	TRZ 24-230VUC 2CO	A.26
1123710000	TRS 5VDC 2CO AU	A.25
1123720000	TRS 12VDC 2CO AU	A.25
1123730000	TRS 24VDC 2CO AU	A.25
1123740000	TRS 24VUC 2CO AU	A.25
1123750000	TRS 48VUC 2CO AU	A.25
1123770000	TRS 60VUC 2CO AU	A.25
1123780000	TRS 120VUC 2CO AU	A.25
1123790000	TRS 230VUC 2CO AU	A.25
1123800000	TRS 120VAC RC 2CO AU	A.25
1123810000	TRS 230VAC RC 2CO AU	A.25
1123820000	TRS 24-230VUC 2CO AU	A.27
1123830000	TRZ 5VDC 2CO AU	A.25
1123840000	TRZ 12VDC 2CO AU	A.25
1123850000	TRZ 24VDC 2CO AU	A.25
1123870000	TRZ 24VUC 2CO AU	A.25
1123880000	TRZ 48VUC 2CO AU	A.25
1123890000	TRZ 60VUC 2CO AU	A.25
1123900000	TRZ 120VUC 2CO AU	A.25
1123910000	TRZ 230VUC 2CO AU	A.25
1123920000	TRZ 120VAC RC 2CO AU	A.25
1123930000	TRZ 230VAC RC 2CO AU	A.25
1123940000	TRZ 24-230VUC 2CO AU	A.27
1123950000	TRS 5VDC 2CO EMPTY	A.50
1123970000	TRS 12VDC 2CO EMPTY	A.50
1123980000	TRS 24VDC 2CO EMPTY	A.50
1123990000	TRS 24VUC 2CO EMPTY	A.50
1124000000	TRS 48VUC 2CO EMPTY	A.50
1124010000	TRS 60VUC 2CO EMPTY	A.50
1124020000	TRS 120VUC 2CO EMPTY	A.50
1124030000	TRS 230VUC 2CO EMPTY	A.50
1124040000	TRS 120VAC RC 2CO EMPTY	A.50
1124050000	TRS 230VAC RC 2CO EMPTY	A.50
1124070000	TRS 24-230VUC 2CO EMPTY	A.50
1124080000	TRZ 5VDC 2CO EMPTY	A.50
1124090000	TRZ 12VDC 2CO EMPTY	A.50
1124100000	TRZ 24VDC 2CO EMPTY	A.50
1124110000	TRZ 24VUC 2CO EMPTY	A.50
1124120000	TRZ 48VUC 2CO EMPTY	A.50
1124130000	TRZ 60VUC 2CO EMPTY	A.50
1124140000	TRZ 120VUC 2CO EMPTY	A.50
1124150000	TRZ 230VUC 2CO EMPTY	A.50
1124170000	TRZ 120VAC RC 2CO EMPTY	A.50
1124180000	TRZ 230VAC RC 2CO EMPTY	A.50
1124190000	TRZ 24-230VUC 2CO EMPTY	A.50
1126920000	TOS 5VDC 48VDC0,1A	A.29
1126930000	TOS 12VDC 48VDC0,1A	A.29
1126940000	TOS 24VDC 48VDC0,1A	A.29
1126950000	TOS 24VUC 48VDC0,1A	A.29
1126960000	TOS 48VUC 48VDC0,1A	A.29
1126970000	TOS 60VUC 48VDC0,1A	A.29
1126980000	TOS 120VUC 48VDC0,1A	A.29
1126990000	TOS 230VUC 48VDC0,1A	A.29
1127000000	TOS 120VAC RC 48VDC0,1A	A.29
1127010000	TOS 230VAC RC 48VDC0,1A	A.29
1127020000	TOS 24-230VUC 48VDC0,1A	A.30
1127030000	TOZ 5VDC 48VDC0,1A	A.29
1127040000	TOZ 12VDC 48VDC0,1A	A.29
1127050000	TOZ 24VDC 48VDC0,1A	A.29
1127060000	TOZ 24VUC 48VDC0,1A	A.29
1127070000	TOZ 48VUC 48VDC0,1A	A.29
1127080000	TOZ 60VUC 48VDC0,1A	A.29
1127090000	TOZ 120VUC 48VDC0,1A	A.29
1127100000	TOZ 230VUC 48VDC0,1A	A.29
1127110000	TOZ 120VAC RC 48VDC0,1A	A.29
1127120000	TOZ 230VAC RC 48VDC0,1A	A.29
1127130000	TOZ 24-230VUC 48VDC0,1A	A.30
1127140000	TOS 5VDC 24VDC2A	A.33
1127150000	TOS 12VDC 24VDC2A	A.33
1127170000	TOS 24VDC 24VDC2A	A.33
1127180000	TOS 24VUC 24VDC2A	A.33
1127190000	TOS 48VUC 24VDC2A	A.33
1127200000	TOS 60VUC 24VDC2A	A.33
1127210000	TOS 120VUC 24VDC2A	A.33
1127220000	TOS 230VUC 24VDC2A	A.33
1127230000	TOS 120VAC RC 24VDC2A	A.33
1127240000	TOS 230VAC RC 24VDC2A	A.33
1127250000	TOS 24-230VUC 24VDC2A	A.34
1127270000	TOZ 5VDC 24VDC2A	A.33
1127280000	TOZ 12VDC 24VDC2A	A.33
1127290000	TOZ 24VDC 24VDC2A	A.33
1127300000	TOZ 24VUC 24VDC2A	A.33
1127310000	TOZ 48VUC 24VDC2A	A.33
1127320000	TOZ 60VUC 24VDC2A	A.33
1127330000	TOZ 120VUC 24VDC2A	A.33
1127340000	TOZ 230VUC 24VDC2A	A.33
1127350000	TOZ 120VAC RC 24VDC2A	A.33
1127370000	TOZ 230VAC RC 24VDC2A	A.33
1127380000	TOZ 24-230VUC 24VDC2A	A.34
1127390000	TOS 5VDC 230VAC1A	A.37
1127400000	TOS 12VDC 230VAC1A	A.37
1127410000	TOS 24VDC 230VAC1A	A.37
1127420000	TOS 24VUC 230VAC1A	A.37

Order No.	Type	Page
1127430000	TOS 48VUC 230VAC1A	A.37
1127440000	TOS 60VUC 230VAC1A	A.37
1127450000	TOS 120VUC 230VAC1A	A.37
1127470000	TOS 230VUC 230VAC1A	A.37
1127480000	TOS 120VAC RC 230VAC1A	A.37
1127490000	TOS 230VAC RC 230VAC1A	A.37
1127500000	TOS 24-230VUC 230VAC1A	A.38
1127510000	TOZ 5VDC 230VAC1A	A.37
1127520000	TOZ 12VDC 230VAC1A	A.37
1127530000	TOZ 24VDC 230VAC1A	A.37
1127540000	TOZ 24VUC 230VAC1A	A.37
1127550000	TOZ 48VUC 230VAC1A	A.37
1127570000	TOZ 60VUC 230VAC1A	A.37
1127580000	TOZ 120VUC 230VAC1A	A.37
1127590000	TOZ 230VUC 230VAC1A	A.37
1127600000	TOZ 120VAC RC 230VAC1A	A.37
1127610000	TOZ 230VAC RC 230VAC1A	A.37
1127620000	TOZ 24-230VUC 230VAC1A	A.38
1127630000	TOS 24VDC 24VDC3,5A	A.40
1127640000	TOS 24-230VUC 24VDC3,5A	A.40
1127650000	TOZ 24VDC 24VDC3,5A	A.40
1127670000	TOZ 24-230VUC 24VDC3,5A	A.40
1127680000	TOS 24VDC 230VAC1A	A.42
1127690000	TOS 24-230VUC 230VAC1A	A.42
1127700000	TOZ 24VDC 230VAC1A	A.42
1127710000	TOZ 24-230VUC 230VAC1A	A.42
1127720000	TOS 24VDC EMPTY	A.50
1127730000	TOS 24-230VUC EMPTY	A.50
1127740000	TOZ 24VDC EMPTY	A.50
1127750000	TOZ 24-230VUC EMPTY	A.50
1130000000		
1132070000	SRC-I QV S	B.46
1132070000	SRC-I QV S	B.46
1132070000	SRC-I QV S	B.50
1132070000	SRC-I QV S	B.50
1132080000	SCM-I QV S	B.57
1132080000	SCM-I QV S	B.60
1132080000	SCM-I QV S	B.63
1132080000	SCM-I QV S	B.63
1132090000	SRC-I CLIP HM RCI	B.46
1132090000	SRC-I CLIP HM RCI	B.46
1132090000	SRC-I CLIP HM RCI	B.46
1132090000	SRC-I CLIP HM RCI	B.50
1132090000	SRC-I CLIP HM RCI	B.50
1132090000	SRC-I CLIP HM RCI	B.50
1132260000	SSS RELAIS 5V/230V 1AAC	A.49
1132290000	SSR 24VDC/max.240VAC 1A	A.49
1132310000	SSR 24VDC/0-24VDC 3,5A	A.49
1132810000	SRD ECO 2CO	B.36
1132820000	SRD ECO 3CO	B.36
1133360000	DRR270012L	B.33
1133370000	DRR270024L	B.33
1133380000	DRR270048L	B.33
1133390000	DRR270110L	B.33
1133400000	DRR270220L	B.33
1133410000	DRR370012L	B.35
1133420000	DRR370024L	B.35
1133430000	DRR370048L	B.35
1133440000	DRR370110L	B.35
1133450000	DRL170012L	B.13
1133460000	DRL170024L	B.13
1133470000	DRL170048L	B.13
1133480000	DRL170110L	B.13
1133490000	DRL170220L	B.13
1133510000	DRL270012L	B.15
1133520000	DRL270024L	B.15
1133530000	DRL270048L	B.15
1133540000	DRL270110L	B.15
1133550000	DRL270220L	B.15
1133560000	DRR370220L	B.35
1133570000	DRL370012L	B.17
1133580000	DRL370024L	B.17
1133590000	DRL370048L	B.17
1133600000	DRL370110L	B.17
1133610000	DRL370220L	B.17
1133620000	DRL570012L	B.19
1133630000	DRL570024L	B.19
1133640000	DRL570048L	B.19
1133650000	DRL570110L	B.19
1133660000	DRL570220L	B.19
1133760000	DRR270524L	B.33
1133780000	DRR270615L	B.33
1133800000	DRR270730L	B.33
1133810000	DRR370524L	B.35
1133820000	DRR370615L	B.35
1133830000	DRR370730L	B.35
1133840000	DRL170524L	B.13
1133850000	DRL170615L	B.13
1133860000	DRL170730L	B.13
1133870000	DRL270524L	B.15
1133880000	DRL270615L	B.15
1133890000	DRL270730L	B.15
1133910000	DRL370524L	B.17
1133920000	DRL370615L	B.17
1133930000	DRL370730L	B.17
1133940000	DRL570524L	B.19
1133950000	DRL570615L	B.19

Order No.	Type	Page
1133960000	DRL570730L	B.19
1134160000	DRR CLIP M	B.36
1170000000		
1174490000	RCL425005	A.48
1174540000	RSS112005 05VDC-REL1U	A.48
1174650000	RIM 5 6/230VDC	B.20
1174650000	RIM 5 6/230VDC	B.30
1174650000	RIM 5 6/230VDC	B.36
1174670000	RIM 5 6/230VAC	B.20
1174670000	RIM 5 6/230VAC	B.30
1174670000	RIM 5 6/230VAC	B.36
1180000000		
1180290000	TOS 120VAC/48VDC 0.5A RC	A.64
1180800000	RCM570615	B.62
1180800000	RCM570615	B.71
1180900000	RCM570548	B.71
1181100000	RCM570730	B.62
1181100000	RCM570730	B.71
1188830000	TOP 120VAC/48VDC 0.5A RC	A.64
1189260000	TOP 230VAC/48VDC 0.5A RC	A.64
1189270000	TOS 230VAC/48VDC 0.5A RC	A.64
1190000000		
1193670000	ZQV 1.5N/R6.4/2 GE	A.51
1193680000	ZQV 1.5N/R6.4/10 GE	A.51
1193690000	ZQV 1.5N/R6.4/19 GE	A.51
1193700000	ZQV 1.5N/R12.8/10 GE	A.51
1200000000		
1201230000	RCL425048	A.48
1201260000	RCL425060	A.48
1210000000		
1218380000	RCI42424FG	B.74
1218390000	RCIKITZ 24VDC 2CO LD/FG	B.74
1218410000	RCIKIT 24VDC 2CO LD/FG	B.74
1219090000	PWR173524L	B.39
1219120000	PWR173548L	B.39
1219130000	PWR173615L	B.39
1219140000	PWR173730L	B.39
1219150000	PWR173880L	B.39
1219160000	PWR276524L	B.41
1219170000	PWR276548L	B.41
1219180000	PWR276615L	B.41
1219190000	PWR276730L	B.41
1219220000	PWR276880L	B.41
1219350000	DRW270524LT	B.23
1219360000	DRW270548LT	B.23
1219370000	DRW270615LT	B.23
1219380000	DRW270730LT	B.23
1219390000	DRW270900LT	B.23
1219410000	DRW370524LT	B.23
1219420000	DRW370548LT	B.23
1219430000	DRW370615LT	B.23
1219440000	DRW370730LT	B.23
1219450000	DRW370900LT	B.23
1219470000	PWR173012L	B.39
1219480000	PWR173024L	B.39
1219490000	PWR173048L	B.39
1219510000	PWR173110L	B.39
1219520000	PWR173220L	B.39
1219540000	PWR276012L	B.41
1219550000	PWR276024L	B.41
1219560000	PWR276048L	B.41
1219570000	PWR276110L	B.41
1219580000	PWR276220L	B.41
1219730000	DRW270012LT	B.23
1219740000	DRW270024LT	B.23
1219750000	DRW270048LT	B.23
1219760000	DRW270110LT	B.23
1219770000	DRW270220LT	B.23
1219780000	DRW370012LT	B.23
1219790000	DRW370024LT	B.23
1219810000	DRW370048LT	B.23
1219820000	DRW370110LT	B.23
1219830000	DRW370220LT	B.23
1219840000	DRH173012LT	B.25
1219850000	DRH173024LT	B.25
1219860000	DRH173048LT	B.25
1219870000	DRH173110LT	B.25
1219880000	DRH173220LT	B.25
1219890000	DRH173524LT	B.25
1219910000	DRH173548LT	B.25
1219920000	DRH173615LT	B.25
1219930000	DRH173730LT	B.25
1219940000	DRH174012LT	B.25
1219950000	DRH174024LT	B.25
1219960000	DRH174048LT	B.25
1219970000	DRH174110LT	B.25
1219980000	DRH174220LT	B.25
1219990000	DRH174524LT	B.25

X

Order No.	Type	Page
1220000000		
1220010000	DRH174548LT	B.25
1220020000	DRH174615LT	B.25
1220030000	DRH174730LT	B.25
1220040000	DRH275012LT	B.27
1220050000	DRH275024LT	B.27
1220060000	DRH275048LT	B.27
1220070000	DRH275110LT	B.27
1220080000	DRH275220LT	B.27
1220090000	DRH275524LT	B.27
1220110000	DRH275548LT	B.27
1220120000	DRH275615LT	B.27
1220130000	DRH275730LT	B.27
1220140000	DRH276012LT	B.29
1220150000	DRH276024LT	B.29
1220170000	DRH276048LT	B.29
1220180000	DRH276110LT	B.29
1220190000	DRH276220LT	B.29
1220200000	DRH276524LT	B.29
1220210000	DRH276548LT	B.29
1220220000	DRH276615LT	B.29
1220230000	DRH276730LT	B.29
1220250000	RELAY SOCKET SPW 3CO	B.30
1220260000	DRW/DRH CLIP M	B.30
1220670000	RSS112012 12VDC-REL1U	A.48
1240000000		
1240780000	TXS SUPPLY	A.51
1240790000	TXZ SUPPLY	A.51
1240800000	TW TXS/TXZ R3.2	A.51
1250000000		
1254880000	TOP 24VDC/24VDC 4A	A.65
1270000000		
1275100000	TOS 24VDC/24VDC 4A	A.65
1280000000		
1283230000	MOS 24VDC/8-30VDC 2A E	A.73
1300000000		
1303760000	SCS 24VDC P1SIL3DS M	D.6
1303890000	SCS 24VDC P1SIL3DS	D.6
1304040000	SCS 24VDC P1SIL3DS MG3	D.6
1310000000		
1319270000	SCS 24VDC P2SIL3DSES	D.7
1319280000	SCS 24VDC P2SIL3ES	D.8
1320000000		
1323880000	SD TO 0,6X3,0	A.51
1380000000		
1381900000	TRS 24VDC ACT	A.14
1390000000		
1390350000	ZQV 1.5N/R6.4/10 BL	A.51
1391600000	ZQV 1.5N/R6.4/19 SW	A.51
1391610000	ZQV 1.5N/R6.4/19 RT	A.51
1391620000	ZQV 1.5N/R6.4/19 BL	A.51
1391630000	ZQV 1.5N/R6.4/10 SW	A.51
1391640000	ZQV 1.5N/R6.4/10 RT	A.51
1391670000	TRZ 24VDC ACT	A.14
1391680000	TOS 24VDC ACT	A.35
1391690000	TOZ 24VDC ACT	A.35
1400000000		
1406200000	PSSR 24VDC/1PH AC 25A	C.4
1406210000	PSSR 24VDC/1PH AC 35A	C.6
1406220000	PSSR 230VAC/1PH AC 25A	C.5
1406230000	PSSR 1PH CONTROL UNIT	C.7
1406240000	PSSR 24VDC/1PH AC50A HP	C.8
1406250000	PSSR 24VDC/1PH AC75A HP	C.9
1406270000	PSSR 20MA/1PH AC70A PC	C.10
1460000000		
1463520000	TIA F10	A.52
1463530000	TIA SUBD 15S	A.53
1463540000	TIAL F10	A.54
1463550000	TIAL F20	A.55
1470000000		
1479650000	TRS 5VDC 1CO 16A	A.17

Order No.	Type	Page
1479670000	TRS 12VDC 1CO 16A	A.17
1479680000	TRS 24VDC 1CO 16A	A.17
1479690000	TRS 24VUC 1CO 16A	A.17
1479700000	TRS 48VUC 1CO 16A	A.17
1479710000	TRS 60VUC 1CO 16A	A.17
1479730000	TRS 120VUC 1CO 16A	A.17
1479740000	TRS 230VUC 1CO 16A	A.17
1479750000	TRS 120VAC RC 1CO 16A	A.17
1479760000	TRS 230VAC RC 1CO 16A	A.17
1479770000	TRS 24-230VUC 1CO 16A	A.18
1479780000	TRS 24VDC 1NO HC	A.20
1479790000	TRS 24-230VUC 1NO HC	A.20
1479800000	TRZ 5VDC 1CO 16A	A.17
1479810000	TRS 24VDC 1NO HCP	A.21
1479820000	TRZ 12VDC 1CO 16A	A.17
1479830000	TRS 24-230VUC 1NO HCP	A.21
1479840000	TRZ 24VDC 1CO 16A	A.17
1479850000	TRZ 24VUC 1CO 16A	A.17
1479870000	TRZ 48VUC 1CO 16A	A.17
1479880000	TRZ 60VUC 1CO 16A	A.17
1479890000	TRZ 120VUC 1CO 16A	A.17
1479900000	TRZ 230VUC 1CO 16A	A.17
1479910000	TRZ 120VAC RC 1CO 16A	A.17
1479920000	TRZ 230VAC RC 1CO 16A	A.17
1479930000	TRZ 24-230VUC 1CO 16A	A.18
1479940000	TRZ 24VDC 1NO HC	A.20
1479950000	TRZ 24-230VUC 1NO HC	A.20
1479970000	TRZ 24VDC 1NO HCP	A.21
1479980000	TRZ 24-230VUC 1NO HCP	A.21
1600000000		
1609900000	WS 12/6 MC NE WS	A.66
1609900000	WS 12/6 MC NE WS	A.78
1750000000		
1758250000	ZQV 4N/2 GE	A.66
1758250000	ZQV 4N/2 GE	A.78
1758250000	ZQV 4N/2 GE	A.90
1758260000	ZQV 4N/10 GE	A.66
1758260000	ZQV 4N/10 GE	A.78
1758260000	ZQV 4N/10 GE	A.90
1760000000		
1762620000	ZQV 4N/4 GE	A.66
1762620000	ZQV 4N/4 GE	A.78
1762620000	ZQV 4N/4 GE	A.90
1762630000	ZQV 4N/3 GE	A.66
1762630000	ZQV 4N/3 GE	A.78
1762630000	ZQV 4N/3 GE	A.90
1790000000		
1793950000	ZQV 4N/2 RT	A.66
1793950000	ZQV 4N/2 RT	A.78
1793950000	ZQV 4N/2 RT	A.90
1793960000	ZQV 4N/2 BL	A.66
1793960000	ZQV 4N/2 BL	A.78
1793960000	ZQV 4N/2 BL	A.90
1793970000	ZQV 4N/2 SW	A.66
1793970000	ZQV 4N/2 SW	A.78
1793970000	ZQV 4N/2 SW	A.90
1793980000	ZQV 4N/3 RT	A.66
1793980000	ZQV 4N/3 RT	A.78
1793980000	ZQV 4N/3 RT	A.90
1793990000	ZQV 4N/3 BL	A.66
1793990000	ZQV 4N/3 BL	A.78
1793990000	ZQV 4N/3 BL	A.90
1794000000	ZQV 4N/3 SW	A.66
1794000000	ZQV 4N/3 SW	A.78
1794000000	ZQV 4N/3 SW	A.90
1794010000	ZQV 4N/4 RT	A.66
1794010000	ZQV 4N/4 RT	A.78
1794010000	ZQV 4N/4 RT	A.90
1794020000	ZQV 4N/4 BL	A.66
1794020000	ZQV 4N/4 BL	A.78
1794020000	ZQV 4N/4 BL	A.90
1794030000	ZQV 4N/4 SW	A.66
1794030000	ZQV 4N/4 SW	A.78
1794030000	ZQV 4N/4 SW	A.90
1794040000	ZQV 4N/10 RT	A.66
1794040000	ZQV 4N/10 RT	A.78
1794040000	ZQV 4N/10 RT	A.90
1794050000	ZQV 4N/10 BL	A.66
1794050000	ZQV 4N/10 BL	A.78
1794050000	ZQV 4N/10 BL	A.90
1794060000	ZQV 4N/10 SW	A.66
1794060000	ZQV 4N/10 SW	A.78
1794060000	ZQV 4N/10 SW	A.90
1810000000		
1818400000	WS 10/6 MC M NE WS	A.51
1820000000		
1828450000	WS 10/6 MC NE WS	A.90

Order No.	Type	Page
1850000000		
1857440000	ESG 9/11 K MC NE WS	B.57
1857440000	ESG 9/11 K MC NE WS	B.57
1857440000	ESG 9/11 K MC NE WS	B.60
1857440000	ESG 9/11 K MC NE WS	B.63
1857440000	ESG 9/11 K MC NE WS	B.63
1857440000	ESG 9/11 K MC NE WS	B.63
1880000000		
1880100000	ESG 6/15 K MC NE WS	B.46
1880100000	ESG 6/15 K MC NE WS	B.46
1880100000	ESG 6/15 K MC NE WS	B.46
1880100000	ESG 6/15 K MC NE WS	B.50
1880100000	ESG 6/15 K MC NE WS	B.50
1880100000	ESG 6/15 K MC NE WS	B.50
1900000000		
1909020000	ZQV 4N/20 GE	A.66
1909020000	ZQV 4N/20 GE	A.78
1909020000	ZQV 4N/20 GE	A.90
1909100000	ZQV 4N/20 BL	A.66
1909100000	ZQV 4N/20 BL	A.78
1909100000	ZQV 4N/20 BL	A.90
1909120000	ZQV 4N/20 SW	A.66
1909120000	ZQV 4N/20 SW	A.78
1909120000	ZQV 4N/20 SW	A.90
1909150000	ZQV 4N/20 RT	A.66
1909150000	ZQV 4N/20 RT	A.78
1909150000	ZQV 4N/20 RT	A.90
1980000000		
1984540000	TRS 24VDC 1CO AGSNO	A.15
1984550000	TRZ 24VDC 1CO AGSNO	A.15
1984560000	TRS 12VDC 1CO C1D2	A.45
1984570000	TRS 24VDC 1CO C1D2	A.45
1984580000	TRS 24VUC 1CO C1D2	A.45
1984590000	TRS 120VACRC 1CO C1D2	A.45
1984600000	TRS 230VACRC 1CO C1D2	A.45
1984610000	TRS 24-230VUC 1CO C1D2	A.45
1984620000	TRS 12VDC 1COAU C1D2	A.47
1984630000	TRS 24VDC 1COAU C1D2	A.47
1984640000	TRS 120VACRC 1COAU C1D2	A.47
1984650000	TRS 24-230VUC 1COAUC1D2	A.47
1990000000		
1990960000	TOS 24VDC 24VDC5A	A.41
1990970000	TOS 24-230VUC 24VDC5A	A.41
1990980000	TOZ 24VDC 24VDC5A	A.41
1990990000	TOZ 24-230VUC 24VDC5A	A.41
4050000000		
4058560000	RCL424012	A.48
4058570000	RCL424024	A.48
4058580000	RCL425024	A.48
4058590000	RCL424110	A.48
4058750000	RCL424048	A.48
4058760000	RCL424060	A.48
4060000000		
4060120000	RSS113024 24VDC-REL1U	A.48
4061180000	SSS RELAIS 24V/24V 0,1ADC	A.49
4061190000	SSS RELAIS 24V/24V 2ADC	A.49
4061200000	SSS RELAIS 60V/24V 2ADC	A.49
4061210000	SSS RELAIS 24V/230V 1AAC	A.49
4061220000	SSS RELAIS 60V/230V 1AAC	A.49
4061230000	SSS RELAIS 60V/24V 0,1ADC	A.49
4061580000	RSS113005 05VDC-REL1U	A.48
4061590000	RSS112024 24VDC-REL1U	A.48
4061600000	RSS112060 60VDC-REL1U	A.48
4061610000	RSS113012 12VDC-REL1U	A.48
4061630000	RSS113060 60VDC-REL1U	A.48
4064310000	SSS RELAIS 5V/24V 2ADC	A.49
4064320000	SSS RELAIS 5V/24V 0,1ADC	A.49
4070000000		
4074580000	RCL425012	A.48
7760000000		
7760056014	RIM 3 110/230VAC	B.10
7760056014	RIM 3 110/230VAC	B.20
7760056015	RIM 2 6/24VDC	B.10
7760056016	RIM 2 24/60VDC	B.10
7760056017	RIM 2 110/230VDC	B.10
7760056018	RIM 3 24/60VUC	B.10
7760056045	RIM 3 110/230Vac LED	B.10
7760056050	DRM270012	B.7
7760056051	DRM270024	B.7
7760056052	DRM270048	B.7
7760056053	DRM270110	B.7
7760056054	DRM270220	B.7

Order No.	Type	Page
7760056055	DRM270524	B.7
7760056056	DRM270548	B.7
7760056057	DRM270615	B.7
7760056058	DRM270730	B.7
7760056059	DRM270012L	B.7
7760056060	DRM270024L	B.7
7760056061	DRM270048L	B.7
7760056062	DRM270110L	B.7
7760056063	DRM270220L	B.7
7760056064	DRM270524L	B.7
7760056065	DRM270548L	B.7
7760056066	DRM270615L	B.7
7760056067	DRM270730L	B.7
7760056068	DRM270012LT	B.7
7760056069	DRM270024LT	B.7
7760056070	DRM270048LT	B.7
7760056071	DRM270110LT	B.7
7760056072	DRM270220LT	B.7
7760056073	DRM270524LT	B.7
7760056074	DRM270548LT	B.7
7760056075	DRM270615LT	B.7
7760056076	DRM270730LT	B.7
7760056077	DRM270024LD	B.7
7760056078	DRM570012	B.9
7760056079	DRM570024	B.9
7760056080	DRM570048	B.9
7760056081	DRM570110	B.9
7760056082	DRM570220	B.9
7760056083	DRM570524	B.9
7760056084	DRM570548	B.9
7760056085	DRM570615	B.9
7760056086	DRM570730	B.9
7760056087	DRM570012L	B.9
7760056088	DRM570024L	B.9
7760056089	DRM570048L	B.9
7760056090	DRM570110L	B.9
7760056091	DRM570220L	B.9
7760056092	DRM570524L	B.9
7760056093	DRM570548L	B.9
7760056094	DRM570615L	B.9
7760056095	DRM570730L	B.9
7760056096	DRM570012LT	B.9
7760056097	DRM570024LT	B.9
7760056098	DRM570048LT	B.9
7760056099	DRM570110LT	B.9
7760056100	DRM570220LT	B.9
7760056101	DRM570524LT	B.9
7760056102	DRM570548LT	B.9
7760056103	DRM570615LT	B.9
7760056104	DRM570730LT	B.9
7760056105	DRM570024LD	B.9
7760056106	FS 2CO	B.10
7760056107	FS 4CO	B.10
7760056108	DRM/DRL CLIP M	B.10
7760056108	DRM/DRL CLIP M	B.10
7760056108	DRM/DRL CLIP M	B.20
7760056169	RIM 1 6/230Vdc	B.10
7760056169	RIM 1 6/230Vdc	B.20
7760056225	SLD F 2CO	B.20
7760056226	SLD F 3CO	B.20
7760056227	SLD F 4CO	B.20
7760056234	SLD CLIP 3CO M	B.20
7760056235	SLD CLIP 4CO M	B.20
7760056249	Test Lever Block DRH/DRW	B.23
7760056249	Test Lever Block DRH/DRW	B.23
7760056249	Test Lever Block DRH/DRW	B.23
7760056249	Test Lever Block DRH/DRW	B.23
7760056249	Test Lever Block DRH/DRW	B.23
7760056249	Test Lever Block DRH/DRW	B.23
7760056249	Test Lever Block DRH/DRW	B.23
7760056249	Test Lever Block DRH/DRW	B.23
7760056249	Test Lever Block DRH/DRW	B.23
7760056249	Test Lever Block DRH/DRW	B.23
7760056249	Test Lever Block DRH/DRW	B.25
7760056249	Test Lever Block DRH/DRW	B.25
7760056249	Test Lever Block DRH/DRW	B.25
7760056249	Test Lever Block DRH/DRW	B.25
7760056249	Test Lever Block DRH/DRW	B.25
7760056249	Test Lever Block DRH/DRW	B.25
7760056249	Test Lever Block DRH/DRW	B.25
7760056249	Test Lever Block DRH/DRW	B.25
7760056249	Test Lever Block DRH/DRW	B.25
7760056249	Test Lever Block DRH/DRW	B.27
7760056249	Test Lever Block DRH/DRW	B.27
7760056249	Test Lever Block DRH/DRW	B.27
7760056249	Test Lever Block DRH/DRW	B.27
7760056249	Test Lever Block DRH/DRW	B.27
7760056249	Test Lever Block DRH/DRW	B.27
7760056249	Test Lever Block DRH/DRW	B.27
7760056249	Test Lever Block DRH/DRW	B.27
7760056249	Test Lever Block DRH/DRW	B.29
7760056249	Test Lever Block DRH/DRW	B.29
7760056249	Test Lever Block DRH/DRW	B.29
7760056249	Test Lever Block DRH/DRW	B.29
7760056249	Test Lever Block DRH/DRW	B.29
7760056249	Test Lever Block DRH/DRW	B.29

X

Order No.	Type	Page
7760056249	Test Lever Block DRH/DRW	B.29
7760056263	SCM 2CO ECO	B.10
7760056264	SCM 4CO ECO	B.10

7940000000

7940007637	RCM580730	B.71
7940018455	RIM 3 110/230VUC	B.10
7940018457	RIM 3 6/24VUC	B.10

8050000000

8054360000	RCM570012	B.71

8070000000

8074670000	RCM570048	B.71
8074700000	RCM570110	B.71

8230000000

8237710000	MCZ R 230VAC	A.81

8280000000

8286410000	MCZ TO 24VDC/150MS	E.8
8287730000	MCZ O 24VUC	A.86

8320000000

8324590000	MCZ TO 24VDC/50MS	E.8
8324610000	MCZ O 24VDC	A.88

8360000000

8365940000	MCZ O 24VUC	A.86
8365980000	MCZ R 24VDC	A.81

8380000000

8389030000	AP MCZ1.5	A.90

8390000000

8390590000	MCZ R 24VUC	A.81
8398940000	MCZ O 5VTTL	A.88

8420000000

8420880000	MCZ R 120VAC	A.81
8421060000	MCZ O 120VUC	A.87
8421380000	MCZ O 230VAC	A.87

8440000000

8442960000	MCZ R 24VDC 5uAu	A.81

8460000000

8467470000	MCZ R 110VDC	A.81

8490000000

8499550000	MCZ R 24Vdc 1NO TRAK	A.83

8570000000

8574070000	MCZ R 48...110Vdc 1NO TRAK	A.83

8640000000

8647680000	TIMER BTMF-S	E.6
8647690000	TIMER BTMF-Z	E.6
8647700000	TIMER BTM-S	E.5
8647710000	TIMER BTM-Z	E.5
8647720000	TIMER BTR-S	E.6
8647730000	TIMER BTR-Z	E.6
8647740000	TIMER BTTT-S	E.7

8650000000

8659840000	BT LOCK PEN	E.4

8680000000

8689760000	RCM270524	B.56
8689760000	RCM270524	B.67
8689770000	RCM270R24	B.67
8689780000	RCM270548	B.67
8689800000	RCM270615	B.56
8689800000	RCM270615	B.67
8689810000	RCM270S15	B.67
8689820000	RCM270730	B.56
8689820000	RCM270730	B.67
8689830000	RCM270T30	B.67
8689840000	RCM270012	B.67
8689850000	RCM270L12	B.67
8689860000	RCM270024	B.56
8689860000	RCM270024	B.67

Order No.	Type	Page
8689870000	RCM270L24	B.67
8689880000	RCM270048	B.67
8689890000	RCM270L48	B.67
8689900000	RCM270110	B.67
8689950000	RCM370R24	B.69
8689970000	RCM370R48	B.69
8689980000	RCM370615	B.59
8689980000	RCM370615	B.69
8689990000	RCM370S15	B.69

8690000000

8690000000	RCM370730	B.59
8690000000	RCM370730	B.69
8690010000	RCM370T30	B.69
8690020000	RCM370012	B.69
8690030000	RCM370524	B.59
8690030000	RCM370524	B.69
8690040000	RCM370024	B.59
8690040000	RCM370024	B.69
8690060000	RCM370048	B.69
8690080000	RCM370110	B.69
8690110000	RCM570524	B.62
8690110000	RCM570524	B.71
8690120000	RCM570R24	B.71
8690130000	RCM570R48	B.71
8690150000	RCM570S15	B.71
8690160000	RCM570T30	B.71
8690180000	RCM570L12	B.71
8690200000	RCM570024	B.62
8690200000	RCM570024	B.71
8690220000	RCM570L24	B.71
8690230000	RCM570L48	B.71
8690240000	RCM570M10	B.71
8693790000	RCL424005	A.48
8694460000	RCM580024	B.71

8710000000

8713890000	MCZ R 24Vdc 1CO TRAK	A.83
8713900000	MCZ R 36Vdc 1CO TRAK	A.83
8713910000	MCZ R 48...110Vdc 1CO TRAK	A.83

8790000000

8790500000	MCZ R 48...110VDC 1CO AU TRAK	A.85
8790510000	MCZ R 36VDC 1CO AU TRAK	A.85
8790520000	MCZ R 24VDC 1CO AU TRAK	A.85

8820000000

8820710000	MCZ O TRAK 24.110VDC	A.89
8824860000	RCM580615	B.71
8828370000	RCL425110	A.48

8860000000

8869390000	SCM-I 4CO N	B.63
8869400000	SCM-I 2CO	B.57
8869410000	SCM-I 3CO N	B.60
8869420000	SCM-I 4CO	B.63
8869430000	SCM-I 4CO P	B.63
8869440000	SCM-I CLIP P	B.57
8869440000	SCM-I CLIP P	B.57
8869440000	SCM-I CLIP P	B.63
8869440000	SCM-I CLIP P	B.63
8869450000	SCM-I CLIP M	B.57
8869450000	SCM-I CLIP M	B.57
8869450000	SCM-I CLIP M	B.60
8869450000	SCM-I CLIP M	B.63
8869450000	SCM-I CLIP M	B.63
8869450000	SCM-I CLIP M	B.63
8869460000	SCM-I MARK	B.57
8869460000	SCM-I MARK	B.57
8869460000	SCM-I MARK	B.60
8869460000	SCM-I MARK	B.63
8869460000	SCM-I MARK	B.63
8869460000	SCM-I MARK	B.63
8869480000	SRC-I 2CO N	B.46
8869480000	SRC-I 2CO N	B.50
8869490000	SRC-I 2CO	B.46
8869490000	SRC-I 2CO	B.50
8869500000	SRC-I 2CO P	B.46
8869500000	SRC-I 2CO P	B.50
8869510000	SRC-I CLIP HP	B.46
8869510000	SRC-I CLIP HP	B.46
8869510000	SRC-I CLIP HP	B.46
8869510000	SRC-I CLIP HP	B.50
8869510000	SRC-I CLIP HP	B.50
8869510000	SRC-I CLIP HP	B.50
8869530000	SRC-I MARK	B.46
8869530000	SRC-I MARK	B.46
8869530000	SRC-I MARK	B.46
8869530000	SRC-I MARK	B.50
8869530000	SRC-I MARK	B.50
8869530000	SRC-I MARK	B.50
8869580000	RIM-I 1 6/230V	B.47
8869580000	RIM-I 1 6/230V	B.51
8869580000	RIM-I 1 6/230V	B.58

Order No.	Type	Page
8869580000	RIM-I 1 6/230V	B.61
8869580000	RIM-I 1 6/230V	B.64
8869590000	RIM-I 2 6/24VDC	B.47
8869590000	RIM-I 2 6/24VDC	B.51
8869590000	RIM-I 2 6/24VDC	B.58
8869590000	RIM-I 2 6/24VDC	B.61
8869590000	RIM-I 2 6/24VDC	B.64
8869600000	RIM-I 2 6/24VDC GN	B.47
8869600000	RIM-I 2 6/24VDC GN	B.51
8869600000	RIM-I 2 6/24VDC GN	B.58
8869600000	RIM-I 2 6/24VDC GN	B.61
8869600000	RIM-I 2 6/24VDC GN	B.64
8869610000	RIM-I 3 24/60VUC	B.47
8869610000	RIM-I 3 24/60VUC	B.51
8869610000	RIM-I 3 24/60VUC	B.58
8869610000	RIM-I 3 24/60VUC	B.61
8869610000	RIM-I 3 24/60VUC	B.64
8869620000	RIM-I 3 24/60VUC GN	B.47
8869620000	RIM-I 3 24/60VUC GN	B.51
8869620000	RIM-I 3 24/60VUC GN	B.58
8869620000	RIM-I 3 24/60VUC GN	B.61
8869620000	RIM-I 3 24/60VUC GN	B.64
8869630000	RIM-I 3 6/24VUC	B.47
8869630000	RIM-I 3 6/24VUC	B.51
8869630000	RIM-I 3 6/24VUC	B.58
8869630000	RIM-I 3 6/24VUC	B.61
8869630000	RIM-I 3 6/24VUC	B.64
8869640000	RIM-I 3 6/24VUC GN	B.47
8869640000	RIM-I 3 6/24VUC GN	B.51
8869640000	RIM-I 3 6/24VUC GN	B.58
8869640000	RIM-I 3 6/24VUC GN	B.61
8869640000	RIM-I 3 6/24VUC GN	B.64
8869650000	RIM-I 3 110/230VUC	B.47
8869650000	RIM-I 3 110/230VUC	B.51
8869650000	RIM-I 3 110/230VUC	B.58
8869650000	RIM-I 3 110/230VUC	B.61
8869650000	RIM-I 3 110/230VUC	B.64
8869660000	RIM-I 3 110/230VUC GN	B.47
8869660000	RIM-I 3 110/230VUC GN	B.51
8869660000	RIM-I 3 110/230VUC GN	B.58
8869660000	RIM-I 3 110/230VUC GN	B.61
8869660000	RIM-I 3 110/230VUC GN	B.64
8869670000	RIM-I 2 24/60VDC	B.47
8869670000	RIM-I 2 24/60VDC	B.51
8869670000	RIM-I 2 24/60VDC	B.58
8869670000	RIM-I 2 24/60VDC	B.61
8869670000	RIM-I 2 24/60VDC	B.64
8869680000	RIM-I 2 24/60VDC GN	B.47
8869680000	RIM-I 2 24/60VDC GN	B.51
8869680000	RIM-I 2 24/60VDC GN	B.58
8869680000	RIM-I 2 24/60VDC GN	B.61
8869680000	RIM-I 2 24/60VDC GN	B.64
8869690000	RIM-I 2 110/230VDC	B.47
8869690000	RIM-I 2 110/230VDC	B.51
8869690000	RIM-I 2 110/230VDC	B.58
8869690000	RIM-I 2 110/230VDC	B.61
8869690000	RIM-I 2 110/230VDC	B.64
8869700000	RIM-I 2 110/230VDC GN	B.47
8869700000	RIM-I 2 110/230VDC GN	B.51
8869700000	RIM-I 2 110/230VDC GN	B.58
8869700000	RIM-I 2 110/230VDC GN	B.61
8869700000	RIM-I 2 110/230VDC GN	B.64
8869710000	RIM-I 4 24VUC VAR	B.47
8869710000	RIM-I 4 24VUC VAR	B.51
8869710000	RIM-I 4 24VUC VAR	B.58
8869710000	RIM-I 4 24VUC VAR	B.61
8869710000	RIM-I 4 24VUC VAR	B.64
8869730000	RIM-I 4 110VUC VAR	B.47
8869730000	RIM-I 4 110VUC VAR	B.51
8869730000	RIM-I 4 110VUC VAR	B.58
8869730000	RIM-I 4 110VUC VAR	B.61
8869730000	RIM-I 4 110VUC VAR	B.64
8869750000	RIM-I 4 230VUC VAR	B.47
8869750000	RIM-I 4 230VUC VAR	B.51
8869750000	RIM-I 4 230VUC VAR	B.58
8869750000	RIM-I 4 230VUC VAR	B.61
8869750000	RIM-I 4 230VUC VAR	B.64
8869770000	RIM-I 3 6/60VAC RC	B.47
8869770000	RIM-I 3 6/60VAC RC	B.51
8869770000	RIM-I 3 6/60VAC RC	B.58
8869770000	RIM-I 3 6/60VAC RC	B.61
8869770000	RIM-I 3 6/60VAC RC	B.64
8869790000	RIM-I 3 110/230VAC RC	B.47
8869790000	RIM-I 3 110/230VAC RC	B.51
8869790000	RIM-I 3 110/230VAC RC	B.58
8869790000	RIM-I 3 110/230VAC RC	B.61
8869790000	RIM-I 3 110/230VAC RC	B.64
8869800000	RCI314012	B.53
8869810000	RCI314024	B.53
8869820000	RCI314048	B.53
8869830000	RCI314110	B.53
8869840000	RCI314524	B.53
8869850000	RCI314615	B.53
8869860000	RCI314730	B.53
8869870000	RCI424012	B.55
8869890000	RCI424024	B.55
8869900000	RCI424048	B.55
8869910000	RCI424110	B.55
8869920000	RCI424524	B.55

Order No.	Type	Page
8869930000	RCI424615	B.55
8869940000	RCI424730	B.55
8869950000	RCI374012	B.53
8869960000	RCI374024	B.53
8869990000	RCI374524	B.53

8870000000

8870010000	RCI374730	B.53
8870020000	RCI484012	B.55
8870030000	RCI484024	B.55
8870040000	RCI484048	B.55
8870050000	RCI484110	B.55
8870060000	RCI484524	B.55
8870070000	RCI484615	B.55
8870080000	RCI484730	B.55
8870090000	RCI314AB2	B.53
8870100000	RCI314AC4	B.44
8870100000	RCI314AC4	B.53
8870110000	RCI314AE8	B.53
8870120000	RCI314BB0	B.53
8870130000	RCI314R24	B.44
8870130000	RCI314R24	B.45
8870130000	RCI314R24	B.45
8870130000	RCI314R24	B.53
8870140000	RCI314S15	B.44
8870140000	RCI314S15	B.45
8870140000	RCI314S15	B.53
8870150000	RCI314T30	B.44
8870150000	RCI314T30	B.45
8870150000	RCI314T30	B.53
8870170000	RCI424AB2	B.55
8870180000	RCI424AC4	B.48
8870180000	RCI424AC4	B.49
8870180000	RCI424AC4	B.55
8870190000	RCI424AE8	B.55
8870200000	RCI424BB0	B.55
8870210000	RCI424R24	B.48
8870210000	RCI424R24	B.49
8870210000	RCI424R24	B.55
8870220000	RCI424S15	B.48
8870220000	RCI424S15	B.49
8870220000	RCI424S15	B.55
8870230000	RCI424T30	B.48
8870230000	RCI424T30	B.49
8870230000	RCI424T30	B.55
8870240000	RCI374AB2	B.53
8870250000	RCI374AC4	B.44
8870250000	RCI374AC4	B.53
8870260000	RCI374AE8	B.53
8870270000	RCI374BB0	B.53
8870280000	RCI374R24	B.44
8870280000	RCI374R24	B.45
8870280000	RCI374R24	B.45
8870280000	RCI374R24	B.53
8870290000	RCI374S15	B.44
8870290000	RCI374S15	B.45
8870290000	RCI374S15	B.53
8870300000	RCI374T30	B.44
8870300000	RCI374T30	B.45
8870300000	RCI374T30	B.53
8870310000	RCI484AB2	B.55
8870320000	RCI484AC4	B.48
8870320000	RCI484AC4	B.49
8870320000	RCI484AC4	B.55
8870330000	RCI484AE8	B.55
8870340000	RCI484BB0	B.55
8870350000	RCI484R24	B.48
8870350000	RCI484R24	B.49
8870350000	RCI484R24	B.55
8870360000	RCI484S15	B.48
8870360000	RCI484S15	B.49
8870360000	RCI484S15	B.55
8870370000	RCI484T30	B.48
8870370000	RCI484T30	B.49
8870370000	RCI484T30	B.55
8870830000	RIM-I 1 R 110/230V	B.47
8870830000	RIM-I 1 R 110/230V	B.51
8870830000	RIM-I 1 R 110/230V	B.58
8870830000	RIM-I 1 R 110/230V	B.61
8870830000	RIM-I 1 R 110/230V	B.64
8870840000	SRC-I QV P	B.46
8870840000	SRC-I QV P	B.50
8870850000	SCM-I QV P	B.57
8870850000	SCM-I QV P	B.63
8871000000	RCIKIT 24VDC 1CO LED	B.44
8871010000	RCIKIT 24VAC 1CO LED	B.44
8871020000	RCIKIT 230VAC 1CO LED	B.44
8871030000	RCIKIT 24VDC 2CO LED	B.48
8871040000	RCIKIT 24VAC 2CO LED	B.48
8871050000	RCIKIT 230VAC 2CO LED	B.48
8875620000	SCM-I CLIP N	B.60
8875620000	SCM-I CLIP N	B.63
8876220000	SCM-I 2CO P	B.57

8880000000

8881580000	RCIKIT 24VDC 1CO LD/PB	B.44
8881590000	RCIKIT 24VAC 1CO LD/PB	B.44

Order No.	Type	Page
8881600000	RCIKIT 230VAC 1CO LD/PB	B.44
8881610000	RCIKIT 24VDC 2CO LD/PB	B.48
8881620000	RCIKIT 24VAC 2CO LD/PB	B.48
8881630000	RCIKIT 230VAC 2CO LD/PB	B.48

8890000000

8897060000	RCIKIT 115VAC 1CO LD/PB	B.44
8897080000	RCIKIT 115VAC 2CO LD/PB	B.48
8897090000	RCIKIT 115VAC 1CO LD	B.44
8897100000	RCIKIT 115VAC 2CO LD	B.48
8897110000	RCIKITP 24VDC 1CO LD	B.45
8897120000	RCIKITP 24VAC 1CO LD	B.45
8897130000	RCIKITP 115VAC 1CO LD	B.45
8897140000	RCIKITP 230VAC 1CO LD	B.45
8897150000	RCIKITP 24VDC 2CO LD	B.49
8897160000	RCIKITP 24VAC 2CO LD	B.49
8897170000	RCIKITP 115VAC 2CO LD	B.49
8897180000	RCIKITP 230VAC 2CO LD	B.49
8897190000	RCIKITP 24VDC 1CO LD/PB	B.45
8897200000	RCIKITP 24VAC 1CO LD/PB	B.45
8897210000	RCIKITP115VAC 1CO LD/PB	B.45
8897220000	RCIKITP230VAC 1CO LD/PB	B.45
8897230000	RCIKITP 24VDC 2CO LD/PB	B.49
8897240000	RCIKITP 24VAC 2CO LD/PB	B.49
8897250000	RCIKITP115VAC 2CO LD/PB	B.49
8897260000	RCIKITP230VAC 2CO LD/PB	B.49

8920000000

8920940000	RCMKIT-I 24VDC 2CO LD	B.56
8920950000	RCMKIT-I 24VAC 2CO LD	B.56
8920960000	RCMKIT-I 115VAC 2CO LD	B.56
8920970000	RCMKIT-I 230VAC 2CO LD	B.56
8920980000	RCMKIT-I 24VDC 3CO LD	B.59
8920990000	RCMKIT-I 24VAC 3CO LD	B.59
8921010000	RCMKIT-I 115VAC 3CO LD	B.59
8921020000	RCMKIT-I 230VAC 3CO LD	B.59
8921030000	RCMKIT-I 24VDC 4CO LD	B.62
8921040000	RCMKIT-I 24VAC 4CO LD	B.62
8921050000	RCMKIT-I 115VAC 4CO LD	B.62
8921060000	RCMKIT-I 230VAC 4CO LD	B.62
8921080000	RCMKITP-I 24VDC 2CO LD	B.56
8921090000	RCMKITP-I 24VAC 2CO LD	B.56
8921100000	RCMKITP-I 115VAC 2CO LD	B.56
8921110000	RCMKITP-I 230VAC 2CO LD	B.56
8921120000	RCMKITP-I 24VDC 4CO LD	B.62
8921130000	RCMKITP-I 24VAC 4CO LD	B.62
8921140000	RCMKITP-I 115VAC 4CO LD	B.62
8921150000	RCMKITP-I 230VAC 4CO LD	B.62

8930000000

8937830000	MOS 24VDC/12-300VDC 1A	A.71
8937920000	MOS 5VTTL/24VDC 0,1A	A.76
8937930000	MOS 12-28VDC/5VTTL	A.77
8937940000	MOS 24VDC/5-33VDC 10A	A.70
8937970000	MOS 24VDC/8-30VDC 2A	A.72
8937980000	MOS 24VDC/5-48VDC 0,5A	A.74
8937990000	MOS 12-28VDC 100kHz	A.75

8950000000

8950700000	TOS 5VDC/48VDC 0,1A	A.59
8950710000	TOS 12VDC/48VDC 0,1A	A.59
8950720000	TOS 24VDC/48VDC 0,1A	A.59
8950730000	TOS 48-60VDC/48VDC 0,1A	A.59
8950740000	TOS 110VDC/48VDC 0,1A	A.59
8950750000	TOS 220VDC/48VDC 0,1A	A.59
8950760000	TOP 5VDC/48VDC 0,1A	A.59
8950770000	TOP 12VDC/48VDC 0,1A	A.59
8950780000	TOP 24VDC/48VDC 0,1A	A.59
8950790000	TOP 48-60VDC/48VDC 0,1A	A.59
8950800000	TOP 110VDC/48VDC 0,1A	A.59
8950810000	TOP 220VDC/48VDC 0,1A	A.59
8950820000	TOS 24VAC/48VDC 0,1A	A.59
8950830000	TOS 48-60VAC/48VDC 0,1A	A.59
8950840000	TOS 120VAC/48VDC 0,1A	A.59
8950850000	TOS 230VAC/48VDC 0,1A	A.59
8950860000	TOP 24VAC/48VDC 0,1A	A.59
8950870000	TOP 48-60VAC/48VDC 0,1A	A.59
8950880000	TOP 120VAC/48VDC 0,1A	A.59
8950890000	TOP 230VAC/48VDC 0,1A	A.59
8950900000	TOS 5VDC/48VDC 0,5A	A.61
8950910000	TOS 12VDC/48VDC 0,5A	A.61
8950920000	TOS 24VDC/48VDC 0,5A	A.61
8950930000	TOS 48-60VDC/48VDC 0,5A	A.61
8950940000	TOS 110VDC/48VDC 0,5A	A.61
8950950000	TOS 220VDC/48VDC 0,5A	A.61
8950960000	TOP 5VDC/48VDC 0,5A	A.61
8950970000	TOP 12VDC/48VDC 0,5A	A.61
8950980000	TOP 24VDC/48VDC 0,5A	A.61
8950990000	TOP 48-60VDC/48VDC 0,5A	A.61
8951000000	TOP 110VDC/48VDC 0,5A	A.61
8951010000	TOP 220VDC/48VDC 0,5A	A.61
8951020000	TOS 24VAC/48VDC 0,5A	A.61
8951030000	TOS 48-60VAC/48VDC 0,5A	A.61
8951040000	TOS 120VAC/48VDC 0,5A	A.61
8951050000	TOS 230VAC/48VDC 0,5A	A.61

Order No.	Type	Page
8951060000	TOP 24VAC/48VDC 0,5A	A.61
8951070000	TOP 48-60VAC/48VDC 0,5A	A.61
8951080000	TOP 120VAC/48VDC 0,5A	A.61
8951090000	TOP 230VAC/48VDC 0,5A	A.61
8951100000	TOS 5VDC/230VAC 0,1A	A.63
8951110000	TOS 12VDC/230VAC 0,1A	A.63
8951120000	TOS 24VDC/230VAC 0,1A	A.63
8951130000	TOS 48-60VDC/230VAC 0,1A	A.63
8951140000	TOS 110VDC/230VAC 0,1A	A.63
8951150000	TOS 220VDC/230VAC 0,1A	A.63
8951160000	TOP 5VDC/230VAC 0,1A	A.63
8951170000	TOP 12VDC/230VAC 0,1A	A.63
8951180000	TOP 24VDC/230VAC 0,1A	A.63
8951190000	TOP 48-60VDC/230VAC 0,1A	A.63
8951200000	TOP 110VDC/230VAC 0,1A	A.63
8951210000	TOP 220VDC/230VAC 0,1A	A.63
8951220000	TOS 24VAC/230VAC 0,1A	A.63
8951230000	TOS 48-60VAC/230VAC 0,1A	A.63
8951240000	TOS 120VAC/230VAC 0,1A	A.63
8951250000	TOS 230VAC/230VAC 0,1A	A.63
8951260000	TOP 24VAC/230VAC 0,1A	A.63
8951270000	TOP 48-60VAC/230VAC 0,1A	A.63
8951280000	TOP 120VAC/230VAC 0,1A	A.63
8951290000	TOP 230VAC/230VAC 0,1A	A.63
8952130000	PSSR 24VDC/3PH AC 20A	C.12
8952140000	PSSR 230VAC/3PH AC 20A	C.13
8957020000	RCM270AB2	B.67
8957030000	RCM270AC4	B.67
8957090000	RCM370AB2	B.69
8957100000	RCM370AC4	B.69
8957120000	RCM370BB0	B.69
8957160000	RCM570AB2	B.71
8957170000	RCM570AC4	B.71
8957180000	RCM570AE8	B.71
8957190000	RCM570BB0	B.71

8970000000

8973450000	MOS FEED THROUGH	A.78
8973460000	MOS SUPPLY	A.78

9000000000

9008320000	SDS 0.5X3.0X80	C.14
9008330000	SDS 0.6X3.5X100	A.51
9008330000	SDS 0.6X3.5X100	A.66
9008330000	SDS 0.6X3.5X100	A.78
9008330000	SDS 0.6X3.5X100	A.90
9008470000	SDK PH0	A.51
9008540000	SDK PZ2	C.14

Addresses worldwide

Let's connect.

AE United Arab Emirates

Weidmuller Middle East FZE
Warehouse Q3-79
SAIF-Zone
P.O. BOX 8591
Sharjah
Tel. +971 65572723
Fax +971 65572724
wme.info@weidmueller.com

AO Angola
Please contact
Phambili Interface
South Africa

AR Argentina
CPI SA
Bauness 2660
C1431DOF Buenos Aires
Tel. +54 11 4523 8008
Fax +54 11 4522 0546
info@cpi.com.ar
www.cpi.com.ar

AT Austria
Weidmüller GmbH
IZ NOE Süd Straße 2b, Obj M 59
2355 Wiener Neudorf
Tel. +43 2236 67080
Fax +43 2236 6708-899
office.at@weidmueller.com
www.weidmueller.com

AU Australia
Weidmüller Pty. Ltd.
PO BOX 6944
Huntingwood 2148
Huntingwood Drive 43
Huntingwood NSW 2148
Tel. +61 2 9671 9999
Fax +61 2 9671 9911
info@weidmueller.com.au
www.weidmueller.com.au

AZ Azerbaijan
Representative Office
Rashad Mahmudov
Demirchi Tower, 4th floor
37, Khojali ave.
AZ 1025 Baku
Tel. +994 12 488 80 36
Fax +994 12 488 80 37
rashad.mahmudov@
weidmueller.com

BA Bosnia and Herzegovina
Please contact
our Representative Office
Weidmüller Interface GmbH & Co. KG
Serbia

or

BIG electric d.o.o
Mladena Stojanovića 117A
78000 Banja Luka
Tel. +387 51926277
Fax +387 51926277
bigelectric@blic.net
www.bigelectric.ba

BE Belgium
Weidmüller Benelux B. V.
Mechelsesteenweg 519 bus 6 en 7
1930 Nossegem
Tel. +32 2 752 40 70
Fax +32 2 751 36 06
info@weidmueller.be
www.weidmueller.be

BG Bulgaria
Weid-Bul EOOD
Bul. „Kliment Ohridski" 13
1756 Sofia
Tel. +359 2 963 2560
Fax +359 2 963 1098
sofia@weidbul.com
www.weidbul.com

BH Bahrain
Khayber Trading Company
P.O Box 1976
Manama
Tel. +973 720747
Fax +973 720331
khayber@batelco.com.bh

BR Brazil
Weidmuller Conexel do Brasil
Conexões Elétricas Ltda.
Av. Presidente Juscelino, 642 - Piraporinha
Diadema, São Paulo
09950-370
Tel. +55 (11) 4366-9600
Fax +55 (11) 4362-1677
vendas@weidmueller.com.br
www.weidmueller.com.br

BW Botswana
Please contact
Phambili Interface
South Africa

BY Belarus
TECHNIKON Ltd.
Nezavisimosti pr. 177-9
220125 Minsk
Tel. +375 17 393-11-77
Fax +375 17 3930080
wm@technikon.by

CA Canada
W Interconnections Canada Inc.
10 Spy Court
Markham Ontario L3R 5H6
Tel. +1 (905) 475-1507
Ext. 9836
Fax +1 (905) 475-2798
support@weidmuller.ca
www.weidmuller.ca

CG Congo
Please contact
Phambili Interface
South Africa

CH Switzerland
Weidmüller Schweiz AG
Rundbuckstraße 2
8212 Neuhausen am Rheinfall SH
Tel. +41 52 674 07 07
Fax +41 52 674 07 08
info@weidmueller.ch
www.weidmueller.ch

CL Chile
ATS - INTECH
María Luisa Santander 0475
Santiago
Providencia 7500859
Tel. +56 2 341 1271
Fax +56 2 341 1275
felipe@atsintech.com
www.atsintech.com

CPI CHILE LTDA
Av. Presidente Frei Montalva 6001, 47 complejo el cortijo
Santiago - Conchali
Tel. +562 963 8440
Fax +562 963 8440
cpi@cpichile.cl
www.cpichile.cl

CN China
Weidmüller Interface (Shanghai) Co. Ltd.
100 Yutong Road
25 F, BM Intercontinental Business Center
200070 Shanghai
Tel. +86 21-22195008
Fax +86 512-68417505
customer.hotline@
weidmueller.com.cn
www.cnweidmuller.com

CO Colombia
Automatización Avanzada S. A.
Carrera 97 No., 24 c - 23 Bodega 4
110911 Bogotá-D.C.
Tel. +57 (1) 547-8510
Fax +57 (1) 422-3044
comercial@
automatizacionavanzada.com
www.
automatizacionavanzada.com

CR Costa Rica
ELVATRON S. A.
la Uruca 400 Norte Banco Costa Rica
San Jose Costa Rica
Tel. +506 2961-060
Fax +506 5200-609
dirk.haase@elvatron.com
www.elvatron.com

CZ Czech Republic
Weidmüller s.r.o.
Lomnického 5/1705
140 00 Praha 4
Tel. +420 244 001 400
Fax +420 244 001 499
office@weidmueller.cz
www.weidmueller.cz

DE Germany
Weidmüller GmbH & Co. KG
Ohmstraße 9
32758 Detmold
Postfach 30 54
32720 Detmold
Tel. +49 5231 1428-0
Fax +49 5231 14-292083
weidmueller@weidmueller.de
www.weidmueller.de

DK Denmark
Weidmüller Danmark
Vallensbækvej 18A
2605 Brøndby
Tel. +45 27747800
kundeservice@weidmuller.dk
www.weidmuller.dk

EC Ecuador
Elsystec S. A., Electricidad Sistemas y Tecnología
Vasco de Contreras N35-251 y Mañosca
Quito - Pichincha
Tel. +593 22456510
Fax +593 22456755
Elsystec@uio.satnet.net

EE Estonia
Please contact
our Representative Office
Weidmüller Interface GmbH & Co. KG
Latvia

or

Soots Interface OÜ
Pärnu mnt 142
11317 Tallinn
Tel. +372 609 6933
Fax
info@sootsinterface.ee
www.sootsinterface.ee

EG Egypt
Standard Electric (OMEGA)
1, Abdelhamid Badawy Street
Heliopolis
Cairo
Tel. +202 21805111
Fax +202 21805600
stdelec@rite.com

ES Spain
Weidmüller, S. A.
Narcis Monturiol 11-13, Pol. Ind. Sudoeste
8960 Sant Just Desvern - Barcelona
Tel. +34 934 803 386
Fax +34 933 718 055
weidmuller@weidmuller.es
www.weidmuller.es

FI Finland
Weidmüller Suomi, Weidmüller Aktiebolagetin sivuliike
Koy Plaza Vivace
Äyritie 8C
FI 1510 Vantaa
Tel. +358 20 7351300
Fax +358 800 114 667
asiakaspalvelu@weidmuller.fi
www.weidmuller.fi

FR France
Weidmüller E. U. R. L.
12, Chaussée Jules César
BP 263 Osny
95523 Cergy-Pontoise Cedex
Tel. +33 1 34 24 55 00
Fax +33 1 34 24 55 01
mail@weidmuller.fr

GB Great Britain
Weidmüller Ltd.
Klippon House
Centurion Court Office Park, Meridian East, Meridian Business Park
Leicester
LE19 1TP
Tel. +44 116 282 3470
Fax +44 116 289 3582
marketing@weidmuller.co.uk
www.weidmuller.co.uk

GE Georgia
Please contact
our Representative Office
Rashad Mahmudov
Azerbaijan.

GH Ghana
Please contact
Weidmüller Interface GmbH & Co. KG
South Africa

GR Greece
G.A. Solutions
Ippokratous 11 Metamorfosi
144 52 Athen
Tel. +30 210 2823233
Fax +30 210 2823233
info@weidmuller.gr
www.weidmuller.gr

GT Guatemala
Prestelectro, Prestegard Electro, S.A.
Avenida Petapa 44-22, Zona 12
Guatemala City
Tel. +502 2442-3346
Fax +502 2476-8945
ventas@prestelectro.com

HK Hong Kong
Weidmuller (Hong Kong) Limited Co. Ltd.
Unit 1617, Metropolis Tower
No. 10 Metropolis Drive, Hunghom, Kowloon
Tel. +852 3154 8088
Fax +852 31548099
Info-hk@weidmueller.com.hk

HR Croatia
ElektroPARTNER d.o.o.
Slavonska avenija 24/6
HR-10000 Zagreb
Tel. +385 (1) 6184 793
Fax +385 (1) 6184 795
elektropartner@zg.t-com.hr
www.elektropartner.hr

HU Hungary
Weidmüller Kereskedelmi Kft.
Budapest
Gubacsi út 6.
1097
Tel. +36 1 382 7700
Fax +36 1 382 7701
info@weidmueller.hu
www.weidmueller.hu

ID Indonesia
PT. Nego Electrindo
Ruko Mega Grosir Cempaka Mas Blok I No. 20 – 22
Jakarta 10640
Tel. +62 21 42882255
Fax +62 21 42882266
sales@negoelectrindo.co.id

IE Ireland
Please contact
Weidmüller Ltd.
Great Britain

IL Israel
A. U. Shay Ltd.
23/25, Embar Street
49222 Petach-Tikva
P.O. Box 1 00 49
49222 Petach-Tikva
Tel. +972 3-923-3601
Fax +972 3-923-4601
shay@uriel-shay.com
www.uriel-shay.com

ATEKA Ltd.
4, Ha Tavor lane Industrial area Segula
49691 Petach-Tikva
P.O. Box 4710
Petach-Tikva
Tel. +972 73-200-1311
Fax +972 3-924 4245
marketing@ateka.co.il
www.ateka.co.il

IN India
Representative Office
Weidmüller Electronics India Pvt. Ltd.
12th Lane North Avenue, Opp Joggers Park,
Kalyani Nagar, Pune
411 006
Tel. +91 20-41290090
wmi.pune@weidmueller.in
www.weidmueller.com

IS Iceland
Samey Automation Center
Lyngas 13
210 Garoabaer
Tel. +354 510 5200
Fax +354 5 10 5201
Samey@samey.is
www.samey.is

IT Italy
Weidmüller S. r.l.
Via Albert Einstein 4
20092 Cinisello Balsamo Milano
Tel. +39 02 660681
Fax +39 02 6124945
weidmuller@weidmuller.it
www.weidmuller.it

JM Jamaica
Please contact
W Interconnections Inc.
United States

JO Jordan
Trans Jordan for Electro
PO Box 33 06 07
Amman
Tel. +962 6 533 2020
Fax +962 6 533 5800
transjordan@batelco.jo

JP Japan
Nihon Weidmüller Co. Ltd.
Sphere Tower Tennoz 2-2-8
Higashi-Shinagawa, Shinagawa-ku
Tokyo
140-0002
Tel. +81 3 6711 5300
Fax +81 3 6711 5333
weidmullerjapan@weidmuller.co.jp
www.weidmuller.co.jp

KE Kenya
Please contact
Phambili Interface
South Africa

KR Korea
Weidmuller Korea Co. Ltd.
9th floor, Wonbang B/D
Samseong 2-Dong, Gangnam-Gu
Seoul 143-42
Tel. +82 2-516-0003
Fax +82 2-516-0090
info@weidmuller.co.kr
www.weidmuller.co.kr

KZ Kazakhstan
Please contact
OOO Weidmüller
Russia

LT Lithuania
Please contact
our Representative Office
Weidmüller Interface GmbH & Co. KG
Latvia

or

ELEKTROS IRANGA
Tinklu g. 29 a
LT-5319 Panevezys
Tel. +370 (45) 582 828
Fax
info@eliranga.lt

LU Luxembourg
Please contact
Weidmüller Benelux B. V.
Netherlands

LV Latvia
SIA Abi4
Daugavgrivas 31b
Riga, LV-1007
Tel. +371 674 70999
Fax +371 676 24562
abi_4@tvnet.lv

Representative Office
Weidmüller Interface GmbH & Co. KG
Udens str. 12-118
Riga, LV-1007
Tel. +371 29254766
Fax +371 674 65637
Ilgonis.rudaks@weidmueller.com
www.weidmueller.com

You can find all Weidmüller addresses and your local contact on the internet at: www.weidmueller.com/countries

Let's connect.

Sales company
Representation abroad
without representation abroad

MD Moldova
BERHORD A & D srl
79/1, str. Milescu Spartaru
MD-2075 Chisinau
Moldova
Tel. +373 (22) 815002
Fax +373 (22) 815007
atiuleanu@berhord.com
www.ad.berhord.com

ME Montenegro
Please contact
our Representative Office
Weidmüller Interface GmbH & Co. KG
Serbia.

MG Madagascar
Please contact
Phambili Interface
South Africa

MK Macedonia
Please contact
our Representative Office
Weidmüller Interface GmbH & Co. KG
Serbia

or

ELEKTRO - SMK dooel
UL. III Makedonska brigada b.b.
1000 Skopje
Tel. +389 22460295
Fax
Elektro-smk@telekabel.net.mk

MT Malta
E. S. S., Electrical Supplies & Services Ltd.
San Gwakkin Road
Mriehel

Tel. +356 21255777
Fax +356 21255999
robert.agius@ess.com.mt

MU Mauritius
Mubelo Electrical Ltd.
Office 26, Gateway building,
St Jean Road
Quatre Bornes
Mauritius
Tel. +230 4670989
Fax +230 4654051
richard.mubelo@orange.mu

MW Malawi
Please contact
Phambili Interface
South Africa

MX Mexico
W Interconnections S. A. DE C. V.
Blvd. Hermanos Serdán 698,
Col. San Rafael Oriente
72029 Puebla
Tel. +52 (222) 268 6227
Fax +52 (222) 286 6242
clientes@weidmuller.com.mx

MY Malaysia
Connect Plus Technology Sdn Bhd
No. 43, Jalan PJS 11/22,
Bandar Sunway
46150 Petaling Jaya
Selangor Darul Ehsan
Tel. +60 3 5633 7363
Fax +60 3 5633 6562
paul@cptech.com.my
www.cptech.com.my

MZ Mozambique
Please contact
Phambili Interface
South Africa

NA Namibia
Please contact
Phambili Interface
South Africa

NG Nigeria
Please contact
Weidmüller Interface GmbH & Co. KG
South Africa

NL Netherlands
Weidmüller Benelux B. V.
Franciscusweg 221
1216 SE Hilversum
P.O. Box 1505
1200 BM Hilversum
Tel. +31 35 626 12 61
Fax +31 35 623 20 44
info@weidmuller.nl
www.weidmuller.nl

NO Norway
Sivilingeniør J.F. Knudtzen AS
Billlingstadsletta 97
1396 Billingstad
PO Box 160
1378 Nesbru
Tel. +47 66 98 33 50
Fax +47 66 98 09 55
firmapost@jfknudtzen.no
www.jfknudtzen.no

NZ New Zealand
Cuthbert S. Steward Ltd.
27 Te Puni Street
Petone
PO Box 38496
Wellington Mail Centre 5054
Tel. (04) 568 6156
Fax (09) 489 1752
csl@cuthbertstewart.co.nz

Cuthbert S. Steward Ltd
4 Fred Thomas Drive
Aon Building, Ground Floor,
South Entry
Takapuna
PO Box 100 338
North Shore City 745
Tel. (09) 489 1751
Fax (04) 568 6056
cslak@cuthbertstewart.co.nz

OM Oman
DAN INTERNATIONAL LLC.
Ghala St. 111
BP 2901
Seeb
Tel. +968 5036 77
Fax +968 5037 55
yedu@danintl.com

PE Peru
IMPEXINCA S.A.C.
Calle Ortiz de Zevallos No. 105, Urb. San Antonio
18
Lima, Miraflores
Tel. +51 1 447 5608
info@impexinca.pe
www.impexinca.pe

J & W CIA. S. A.
Calle 6 Mz. D Lte. 23, Urb. Ind. Grimanesa
01
Callao
Tel. +51 1 572 2539
Fax +51 1 572 0152
contacto@jwcia.com
www.jwcia.com

PH Philippines
Enclosure Systems Specialists Inc.
2276 Don Chino Roces Avenue Extension
Room 103/105 Narra Building
1231 Makati City
Tel. +63 2 813 8580
Fax +63 2 813 8596
sales_encsys@pldtdsl.net
www.enclosuresystemsph.com

PK Pakistan
Automation Controls (Pak)
Apartment No. 33 C III,
Chenab Block, Allama Iqbal Town
Lahore
Tel. +92 42 37809948
Fax +92 42 37809950
nadeem@acpak.com.pk
www.acpak.com.pk

PL Poland
Weidmüller Sp. z. o. o.
ul. Ogrodowa 58
00-876 Warszawa
Tel. +48 22 510 09 40
Fax +48 22 510 09 41
biuro@weidmuller.com.pl
www.weidmuller.pl

PR Puerto Rico
Please contact
W Interconnections Inc.
United States

PT Portugal
Weidmüller Sistemas de Interface S. A.
Estrada Outeiro Polima, R. Augusto Dias da Silva, Lote B - Esct. 2
São Domingos de Rana
2785-515 Abóboda
Tel. +351 214 459 191
Fax +351 214 455 871
weidmuller@weidmuller.pt
www.weidmuller.pt

PY Paraguay
Please contact
CPI SA
Argentina

RO Romania
Representative Office
Weidmüller Interface GmbH & Co. KG
Ionescu Crum Street, No. 1, 1st Tower, 1st Floor, Office 4
500446 Brasov - Brasov Business Park
Tel. +40 (268) 446 222
Fax +40 (262) 205 410
claudiu.totea@weidmueller.com
www.weidmueller.com

RS Serbia
Representative Office
Weidmüller Interface GmbH & Co. KG
Ustanicka 189, III sprat lokal 7a
11050 Beograd
Tel. +381 112885274
Fax +381 112885274
zoran.rabrenovic@weidmueller.com

RU Russia
OOO Weidmüller
7/10 Khlebozavodskiy Passage,
Moskau
115230
Tel. +7 (495) 771-69-40
Fax +7 (495) 771-69-41
Info@weidmueller.ru
www.weidmueller.ru

SA Saudi Arabia
Please contact
Weidmüller Middle East FZE
United Arab Emirates

SE Sweden
Weidmüller AB
Axel Danielssons väg 271
BOX 31025
SE-200 49 Malmö
Tel. +46 77-143 00 44
Fax +46 40-37 48 60
info@weidmuller.se
www.weidmuller.se

SG Singapore
Weidmüller Pte. Ltd.
70 Bendemeer Road
04-03 Luzerne Building
Singapore 339940
Tel. +65 6841 5311
Fax +65 6841 5377
info@weidmuller.com.sg
www.weidmuller.com.sg

SI Slovenia
Elektrospoji d. o. o.
Stegne 27
SI- 1000 Ljubljana
Osrednjeslovenska
Tel. +386 1 511 3810
Fax +386 1 511 1604
info@elektrospoji.si
www.elektrospoji.si

SK Slovakia
ELEKTRIS s.r.o.
Elektrárenská 1
831 04 Bratislava
Tel. +421 2/4920 0113
Fax +421 2/4920 0119
bratislava@elektris.sk

SV El Salvador
Prestegard Electro
11 Avenida Norte No. 240
Edificio Salazar No. 2
San Salvador
Tel. +503 2271 1690
Fax +503 2221 3851
prestegard@navegante.com.sv

SY Syria
Please contact
Weidmüller Middle East FZE
United Arab Emirates

SZ Swaziland
Please contact
Phambili Interface
South Africa

TH Thailand
Pisanu Engineering Co. Ltd.
Kwang Dingaeng, Khet Dingaeng
800/2 Soi Trakulsuk, Asoke-dindaeng Road
Dindaeng, Bangkok
10400
Tel. +66 2 248 2896
Fax +662 105 6301
ecsales@pisanu.co.th
www.pisanu.co.th

Representative Office
Weidmüller Pte. Ltd.
37/F, Sathorn Square Building
98 North Sathorn Road
Bangkok, Silom Bangrak
10500
Tel. +66 2 105 6300
Fax +66 2 642 9220
info@weidmuller.com.sg

TN Tunisia
Please contact
Weidmüller E. U. R. L.
France

TR Turkey
Weidmüller Elektronik Ticaret Ltd. Sirketi
Kavacik Mah. Orhan Veli Kanik Caddesi 9/1
34810 Beykoz / Istanbul
Tel. +90 (216) 537 10 70
Fax +90 (216) 537 10 77
info@weidmuller.com.tr
www.weidmuller.com.tr

TW Taiwan
Weidmuller (Hong Kong) Limited
No. 3, Lane 89, ChaungYang N. Rd
24148 SanChuang City,
Taipei
Tel. +886 921 949 751
roy.lin@weidmueller.com.hk

TZ Tanzania
Please contact
Phambili Interface
South Africa

UA Ukraine
LLC WM UKRAINE
Levanevskogo str. 6
Kiev
3058
Tel. +38 044 490 32 48
Fax
info@wm-ua.com.ua
wm-ua.com.ua/

Representative Office
Weidmueller Interface GmbH & Co. KG
Z, office 303
7-D, Zdolbunivska str.
Kiev, 2081
Mobile +38 050 440 25 24
info.ua@weidmueller.com

US United States
W Interconnections Inc.
821 Southlake Boulevard
Richmond Virginia 23236
Tel. +1 (804) 794-2877
Fax +1 (804) 379-2593
info@weidmuller.com
www.weidmuller.com

UZ Republic of Uzbekistan
Please contact
OOO Weidmüller
Russia

VN Vietnam
AUMI Industrial Equipment & Automation Company Limited
E1, La Thanh Hotel
218 Doi Can Street
Lieu Giai Ward, Ba Dinh District
Hanoi City
Tel. +84 4 37628601
Fax +84 4 62661391
aumi@aumi.com.vn
www.aumi.com.vn

Representative Office
Weidmüller Pte. Ltd.
Level 16 Saigon Tower Building
29 Le Duan Street
District 1
Ho Chi Minh
Tel. +848 3520 7717
Fax +848 3520 7604
info@weidmuller.com.sg

ZA South Africa
Phambili Interface
PO Box 193
1609 Johannesburg, Edenvale
5 Bundo Road, Sebenza
1610 Johannesburg
Tel. +27 (11) 4521930
Fax
info@weidmuller.co.za
www.weidmuller.co.za

Representative Office
Weidmüller Interface GmbH & Co. KG
210 Amarand Avenue, Pegasus Building
181 Pretoria, waterkloof Glen ext 2 -
Tel. +27 12 003 2906
Fax +27 (11) 4526455
Jacques.Vosloo@weidmueller.com
www.weidmueller.com

ZM Zambia
Please contact
Phambili Interface
South Africa

ZW Zimbabwe
Please contact
Phambili Interface
South Africa

We cannot guarantee that there are no mistakes in the publications or software provided by us to the customer for the purpose of making orders. We try our best to quickly correct errors in our printed media.

All orders are based on our general terms of delivery, which can be reviewed on the websites of our group companies where you place your order. On demand we can also send the general terms of delivery to you.

Weidmüller – Your partner in Industrial Connectivity

As experienced experts we support our customers and partners around the world with products, solutions and services in the industrial environment of power, signal and data. We are at home in their industries and markets and know the technological challenges of tomorrow. We are therefore continuously developing innovative, sustainable and useful solutions for their individual needs. Together we set standards in Industrial Connectivity.

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
32758 Detmold, Germany
T +49 5231 14-0
F +49 5231 14-292083
info@weidmueller.com
www.weidmueller.com

Your local Weidmüller partner can be found on our website:
www.weidmueller.com/countries

Made in Germany

4 050118 402872

Order number: 2021220000/06/2015/SMKW