



**finder**<sup>®</sup>  
SWITCH TO THE FUTURE

**48**  
SERIES

# Relay Interface Modules 8 - 10 - 16 A



Control panels



Carousel  
warehouses



Medical and  
dentistry



Shipyards



Elevators and  
lifts



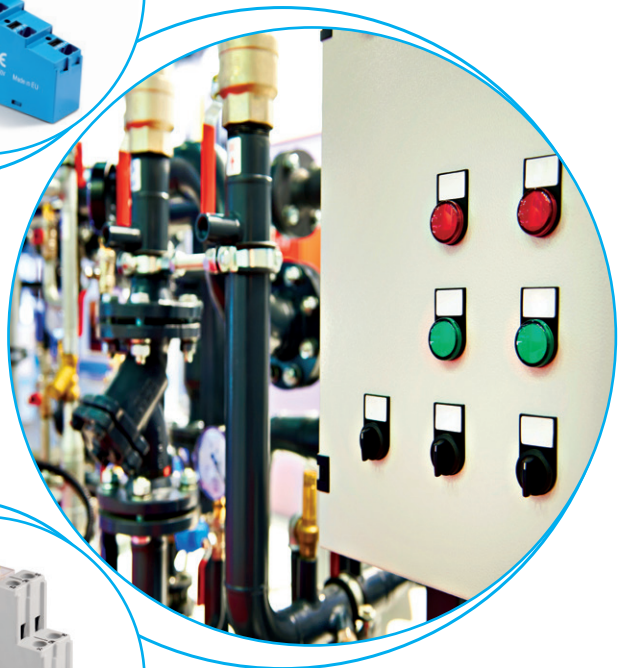
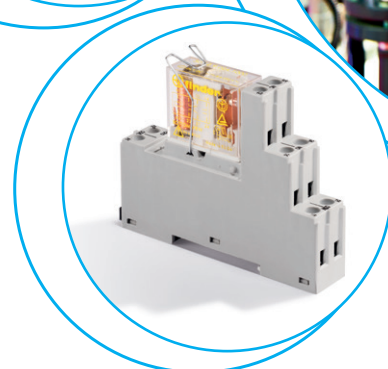
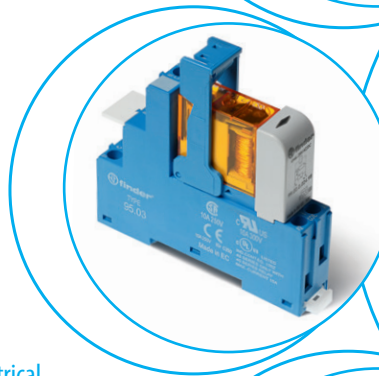
Panels for electrical  
distribution



Building  
automation



Hoists and cranes





**2 CO relay interface modules,  
15.8 mm wide**

**Type 48.12**

**Ideal for safety applications**

- 2 CO 8 A
- Screw terminals
- Relay with forcibly guided contacts according to EN 61810-3 Type B (previously EN 50205)

**Type 48.32**

**Ideal for energy applications**

- 2 CO 8 A
- Breaking capacity DC inductive (L/R=40 ms)
  - 110 V = 0.5 A
  - 220 V = 0.2 A
- Screw terminals

- DC coils
- Identification label
- UL Listing (certain relay / socket combinations)
- 35 mm rail (EN 60715) mounting
- Cadmium-free contact material

48.12/32  
Screw terminal



According to EN 61810-3 only 1 NO and 1 NC (11-14 and 21-22 or 11-12 and 21-24) shall be used as forcibly guided contacts (Type 48.12).

For outline drawing see page 11

**Contact specification**

|   |           |             |             |
|---|-----------|-------------|-------------|
| Contact configuration                       |           | 2 CO (DPDT) | 2 CO (DPDT) |
| Rated current/Maximum peak current          | A         | 8/15        | 8/15        |
| Rated voltage/<br>Maximum switching voltage | V AC      | 250/400     | 250/400     |
| Rated load AC1                              | VA        | 2000        | 2000        |
| Rated load AC15 (230 V AC)                  | VA        | 500         | 500         |
| Single phase motor rating (230 V AC)        | kW        | 0.37        | 0.37        |
| Breaking capacity DC1: 30/110/220 V         | A         | 8/0.65/0.4  | 8/0.65/0.4  |
| Minimum switching load                      | mW (V/mA) | 50 (5/5)    | 50 (5/5)    |
| Standard contact material                   |           | AgNi+Au     | AgNi+Au     |

**Coil specification**

|                                   |      |                            |                            |
|-----------------------------------|------|----------------------------|----------------------------|
| Nominal voltage (U <sub>N</sub> ) | V DC | 12 - 24                    | 24                         |
| Rated power DC                    | W    | 0.7                        | 0.7                        |
| Operating range                   | DC   | (0.75...1.2)U <sub>N</sub> | (0.75...1.2)U <sub>N</sub> |
| Holding voltage                   | DC   | 0.4 U <sub>N</sub>         | 0.4 U <sub>N</sub>         |
| Must drop-out voltage             | DC   | 0.1 U <sub>N</sub>         | 0.1 U <sub>N</sub>         |

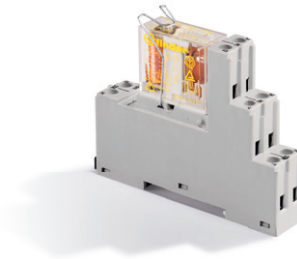
**Technical data**

|  |        |                       |                       |
|--|--------|-----------------------|-----------------------|
| Mechanical life DC                               | cycles | 10 · 10 <sup>6</sup>  | 10 · 10 <sup>6</sup>  |
| Electrical life at rated load AC1                | cycles | 100 · 10 <sup>3</sup> | 100 · 10 <sup>3</sup> |
| Operate/release time                             | ms     | 10/4                  | 10/4                  |
| Insulation between coil and contacts (1.2/50 μs) | kV     | 6 (8 mm)              | 6 (8 mm)              |
| Dielectric strength between open contacts        | V AC   | 1500                  | 1500                  |
| Ambient temperature range                        | °C     | -40...+70             | -40...+70             |
| Protection category                              |        | IP 20                 | IP 20                 |

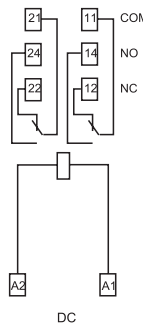
**Approvals relay** (according to type)



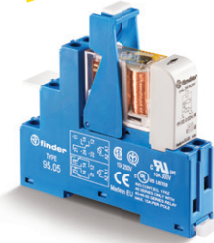
**48.12**



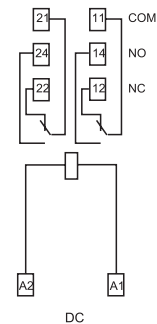
- 2 CO 8 A
- Screw terminals



**NEW 48.32**



- 2 CO 8 A
- Screw terminals



B

1 CO relay interface modules,  
15.8 mm wide

Ideal interface for PLC and electronic systems

**Type 48.P3**

- 1 CO 10 A
- Push-in terminals

**Type 48.31**

- 1 CO 10 A
- Screw terminals

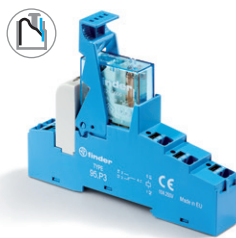
- AC coils or DC sensitive coils
- Supply status indication and EMC coil suppression module as standard
- Identification label
- UL Listing (certain relay/socket combinations)
- 35 mm rail (EN 60715) mounting
- Cadmium-free contact material

48.P3  
Push-in terminal

48.31  
Screw terminal

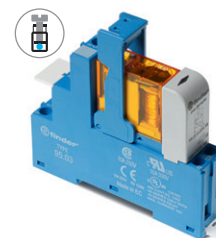


**48.P3**

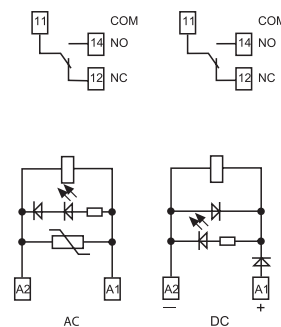
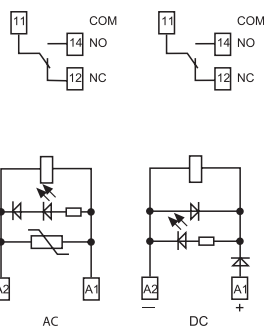


- 1 CO 10 A
- Push-in terminals

**48.31**



- 1 CO 10 A
- Screw terminals



For outline drawing see page 11

**Contact specification**

|   |           |             |             |
|---|-----------|-------------|-------------|
| Contact configuration                   |           | 1 CO (SPDT) | 1 CO (SPDT) |
| Rated current/Maximum peak current      | A         | 10/20       | 10/20       |
| Rated voltage/Maximum switching voltage | V AC      | 250/400     | 250/400     |
| Rated load AC1                          | VA        | 2500        | 2500        |
| Rated load AC15 (230 V AC)              | VA        | 500         | 500         |
| Single phase motor rating (230 V AC)    | kW        | 0.37        | 0.37        |
| Breaking capacity DC1: 30/110/220 V     | A         | 10/0.3/0.12 | 10/0.3/0.12 |
| Minimum switching load                  | mW (V/mA) | 300 (5/5)   | 300 (5/5)   |
| Standard contact material               |           | AgNi        | AgNi        |

**Coil specification**

|                                   |                 |   |   |
|-----------------------------------|-----------------|---|---|
| Nominal voltage (U <sub>N</sub> ) | V AC (50/60 Hz) | 12 - 24 - 110 - 120 - 230               | 12 - 24 - 110 - 120 - 230               |
|                                   | V DC            | 12 - 24 - 125                           | 12 - 24 - 125                           |
| Rated power AC/sens. DC           | VA (50 Hz)/W    | 1.2/0.5                                 | 1.2/0.5                                 |
| Operating range                   | AC              | (0.8...1.1)U <sub>N</sub>               | (0.8...1.1)U <sub>N</sub>               |
|                                   | sens. DC        | (0.73...1.5)U <sub>N</sub>              | (0.73...1.5)U <sub>N</sub>              |
| Holding voltage                   | AC/DC           | 0.8 U <sub>N</sub> / 0.4 U <sub>N</sub> | 0.8 U <sub>N</sub> / 0.4 U <sub>N</sub> |
| Must drop-out voltage             | AC/DC           | 0.2 U <sub>N</sub> / 0.1 U <sub>N</sub> | 0.2 U <sub>N</sub> / 0.1 U <sub>N</sub> |

**Technical data**

|  |        |                       |                       |
|--|--------|-----------------------|-----------------------|
| Mechanical life                                  | cycles | 10 · 10 <sup>6</sup>  | 10 · 10 <sup>6</sup>  |
| Electrical life at rated load AC1                | cycles | 200 · 10 <sup>3</sup> | 200 · 10 <sup>3</sup> |
| Operate/release time                             | ms     | 7/4 (AC) - 12/12 (DC) | 7/4 (AC) - 12/12 (DC) |
| Insulation between coil and contacts (1.2/50 μs) | kV     | 6 (8 mm)              | 6 (8 mm)              |
| Dielectric strength between open contacts        | V AC   | 1000                  | 1000                  |
| Ambient temperature range                        | °C     | -40...+70             | -40...+70             |
| Protection category                              |        | IP 20                 | IP 20                 |

Approvals relay (according to type)



**2 CO relay interface modules,  
15.8 mm wide**  
**Ideal interface for PLC and electronic systems**

**Type 48.P5**

- 2 CO 8 A
- Push-in terminals

**Type 48.52**

- 2 CO 8 A
- Screw terminals

- AC coils or DC sensitive coils
- Supply status indication and EMC coil suppression module as standard
- Identification label
- UL Listing (certain relay/socket combinations)
- 35 mm rail (EN 60715) mounting
- Cadmium-free contact material

48.P5  
Push-in terminal



48.52  
Screw terminal



For outline drawing see page 11

**Contact specification**

|   |           |             |             |
|---|-----------|-------------|-------------|
| Contact configuration                       |           | 2 CO (DPDT) | 2 CO (DPDT) |
| Rated current/Maximum peak current          | A         | 8/15        | 8/15        |
| Rated voltage/<br>Maximum switching voltage | V AC      | 250/400     | 250/400     |
| Rated load AC1                              | VA        | 2000        | 2000        |
| Rated load AC15 (230 V AC)                  | VA        | 400         | 400         |
| Single phase motor rating (230 V AC)        | kW        | 0.3         | 0.3         |
| Breaking capacity DC1: 30/110/220 V         | A         | 8/0.3/0.12  | 8/0.3/0.12  |
| Minimum switching load                      | mW (V/mA) | 300 (5/5)   | 300 (5/5)   |
| Standard contact material                   |           | AgNi        | AgNi        |

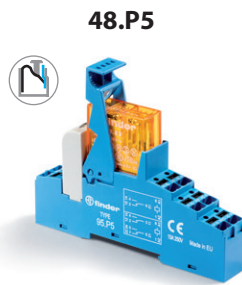
**Coil specification**

|                                   |                 |   |   |
|-----------------------------------|-----------------|---|---|
| Nominal voltage (U <sub>N</sub> ) | V AC (50/60 Hz) | 12 - 24 - 110 - 120 - 230               | 12 - 24 - 110 - 120 - 230               |
|                                   | V DC            | 12 - 24 - 125                           | 12 - 24 - 125                           |
| Rated power AC/sens. DC           | VA (50 Hz)/W    | 1.2/0.5                                 | 1.2/0.5                                 |
| Operating range                   | AC              | (0.8...1.1)U <sub>N</sub>               | (0.8...1.1)U <sub>N</sub>               |
|                                   | sens. DC        | (0.73...1.5)U <sub>N</sub>              | (0.73...1.5)U <sub>N</sub>              |
| Holding voltage                   | AC/DC           | 0.8 U <sub>N</sub> / 0.4 U <sub>N</sub> | 0.8 U <sub>N</sub> / 0.4 U <sub>N</sub> |
| Must drop-out voltage             | AC/DC           | 0.2 U <sub>N</sub> / 0.1 U <sub>N</sub> | 0.2 U <sub>N</sub> / 0.1 U <sub>N</sub> |

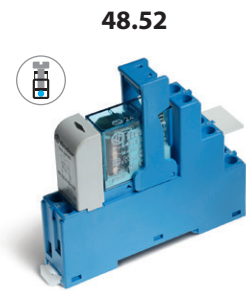
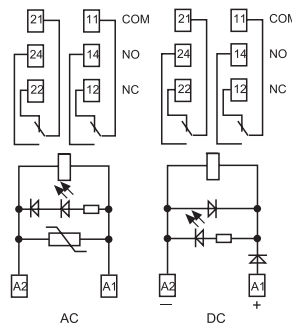
**Technical data**

|  |        |                       |                       |
|--|--------|-----------------------|-----------------------|
| Mechanical life                                  | cycles | 10 · 10 <sup>6</sup>  | 10 · 10 <sup>6</sup>  |
| Electrical life at rated load AC1                | cycles | 100 · 10 <sup>3</sup> | 100 · 10 <sup>3</sup> |
| Operate/release time                             | ms     | 7/4 (AC) - 12/12 (DC) | 7/4 (AC) - 12/12 (DC) |
| Insulation between coil and contacts (1.2/50 µs) | kV     | 6 (8 mm)              | 6 (8 mm)              |
| Dielectric strength between open contacts        | V AC   | 1000                  | 1000                  |
| Ambient temperature range                        | °C     | -40...+70             | -40...+70             |
| Protection category                              |        | IP 20                 | IP 20                 |

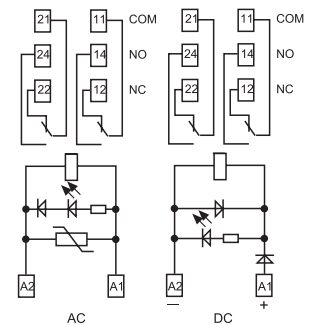
**Approvals relay** (according to type)



- 2 CO 8 A
- Push-in terminals



- 2 CO 8 A
- Screw terminals



**1 CO relay interface modules,  
15.8 mm wide**  
**Ideal interface for PLC and electronic systems**

**Type 48.P6**

- 1 CO 16 A
- Push-in terminals

**Type 48.61**

- 1 CO 16 A
- Screw terminals

- AC coils or DC sensitive coils
- Supply status indication and EMC coil suppression module as standard
- Identification label
- UL Listing (certain relay/socket combinations)
- 35 mm rail (EN 60715) mounting
- Cadmium-free contact material available

48.P6  
Push-in terminal

48.61  
Screw terminal



For outline drawing see page 11

**Contact specification**

|   |           |             |             |
|---|-----------|-------------|-------------|
| Contact configuration                       |           | 1 CO (SPDT) | 1 CO (SPDT) |
| Rated current/Maximum peak current          | A         | 16*/30      | 16*/30      |
| Rated voltage/<br>Maximum switching voltage | V AC      | 250/400     | 250/400     |
| Rated load AC1                              | VA        | 4000        | 4000        |
| Rated load AC15 (230 V AC)                  | VA        | 750         | 750         |
| Single phase motor rating (230 V AC)        | kW        | 0.55        | 0.55        |
| Breaking capacity DC1: 30/110/220 V         | A         | 16/0.3/0.12 | 16/0.3/0.12 |
| Minimum switching load                      | mW (V/mA) | 500 (10/5)  | 500 (10/5)  |
| Standard contact material                   |           | AgCdO       | AgCdO       |

**Coil specification**

|                                   |                 |   |   |
|-----------------------------------|-----------------|---|---|
| Nominal voltage (U <sub>N</sub> ) | V AC (50/60 Hz) | 12 - 24 - 110 - 120 - 230               | 12 - 24 - 110 - 120 - 230               |
|                                   | V DC            | 12 - 24 - 125                           | 12 - 24 - 125                           |
| Rated power AC/sens. DC           | VA (50 Hz)/W    | 1.2/0.5                                 | 1.2/0.5                                 |
| Operating range                   | AC              | (0.8...1.1)U <sub>N</sub>               | (0.8...1.1)U <sub>N</sub>               |
|                                   | sens. DC        | (0.8...1.5)U <sub>N</sub>               | (0.8...1.5)U <sub>N</sub>               |
| Holding voltage                   | AC/DC           | 0.8 U <sub>N</sub> / 0.4 U <sub>N</sub> | 0.8 U <sub>N</sub> / 0.4 U <sub>N</sub> |
| Must drop-out voltage             | AC/DC           | 0.2 U <sub>N</sub> / 0.1 U <sub>N</sub> | 0.2 U <sub>N</sub> / 0.1 U <sub>N</sub> |

**Technical data**

|  |        |                       |                       |
|--|--------|-----------------------|-----------------------|
| Mechanical life                                  | cycles | 10 · 10 <sup>6</sup>  | 10 · 10 <sup>6</sup>  |
| Electrical life at rated load AC1                | cycles | 100 · 10 <sup>3</sup> | 100 · 10 <sup>3</sup> |
| Operate/release time                             | ms     | 7/4 (AC) - 12/12 (DC) | 7/4 (AC) - 12/12 (DC) |
| Insulation between coil and contacts (1.2/50 μs) | kV     | 6 (8 mm)              | 6 (8 mm)              |
| Dielectric strength between open contacts        | V AC   | 1000                  | 1000                  |
| Ambient temperature range                        | °C     | -40...+70             | -40...+70             |
| Protection category                              |        | IP 20                 | IP 20                 |

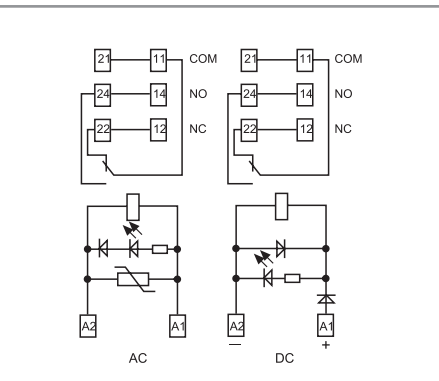
**Approvals relay** (according to type)

**48.P6**

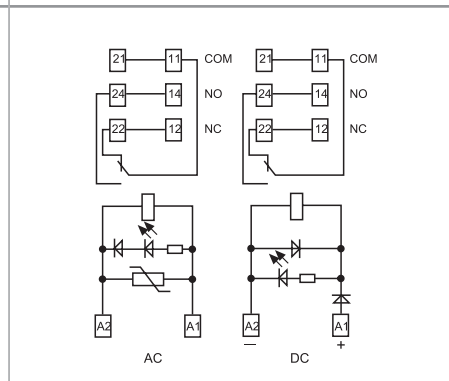
- 1 CO 16 A
- Push-in terminals

**48.61**

- 1 CO 16 A
- Screw terminals



\* For currents > 10 A, contact terminals must be connected in parallel (21 with 11, 24 with 14, 22 with 12).



\* For currents > 10 A, contact terminals must be connected in parallel (21 with 11, 24 with 14, 22 with 12).



**2 CO relay interface modules,  
15.8 mm wide**  
**Ideal interface for PLC and electronic systems**

**Type 48.P8**

- 2 CO 10 A
- Push-in terminals

**Type 48.62**

- 2 CO 10 A
- Screw terminals

- DC sensitive coils
- Supply status indication and EMC coil suppression module as standard
- Identification label
- UL Listing (certain relay/socket combinations)
- 35 mm rail (EN 60715) mounting
- Cadmium-free contact material

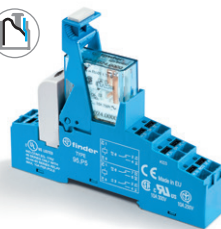
48.P8  
Push-in terminal



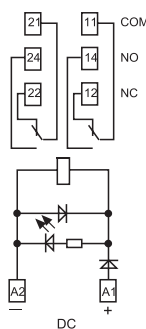
48.62  
Screw terminal



**48.P8**



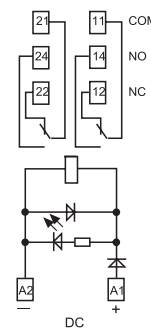
- 2 CO 10 A
- Push-in terminals



**48.62**



- 2 CO 10 A
- Screw terminals



For outline drawing see page 11

**Contact specification**

|   |           |             |             |
|---|-----------|-------------|-------------|
| Contact configuration                       |           | 2 CO (DPDT) | 2 CO (DPDT) |
| Rated current/Maximum peak current          | A         | 10/20       | 10/20       |
| Rated voltage/<br>Maximum switching voltage | V AC      | 250/400     | 250/400     |
| Rated load AC1                              | VA        | 2500        | 2500        |
| Rated load AC15 (230 V AC)                  | VA        | 750         | 750         |
| Single phase motor rating (230 V AC)        | kW        | 0.37        | 0.37        |
| Breaking capacity DC1: 30/110/220 V         | A         | 10/0.6/0.25 | 10/0.6/0.25 |
| Minimum switching load                      | mW (V/mA) | 300 (5/5)   | 300 (5/5)   |
| Standard contact material                   |           | AgNi        | AgNi        |

**Coil specification**

|                                   |                 |                           |                           |
|-----------------------------------|-----------------|---------------------------|---------------------------|
| Nominal voltage (U <sub>N</sub> ) | V AC (50/60 Hz) | —                         | —                         |
|                                   | V DC            | 12 - 24 - 125             | 12 - 24 - 125             |
| Rated power AC/sens. DC           | VA (50 Hz)/W    | —/0.5                     | —/0.5                     |
| Operating range                   | AC              | —                         | —                         |
|                                   | sens. DC        | (0.8...1.5)U <sub>N</sub> | (0.8...1.5)U <sub>N</sub> |
| Holding voltage                   | AC/DC           | —/0.4 U <sub>N</sub>      | —/0.4 U <sub>N</sub>      |
| Must drop-out voltage             | AC/DC           | —/0.1 U <sub>N</sub>      | —/0.1 U <sub>N</sub>      |

**Technical data**

|  |        |                       |                       |
|--|--------|-----------------------|-----------------------|
| Mechanical life                                  | cycles | 10 · 10 <sup>6</sup>  | 10 · 10 <sup>6</sup>  |
| Electrical life at rated load AC1                | cycles | 100 · 10 <sup>3</sup> | 100 · 10 <sup>3</sup> |
| Operate/release time                             | ms     | 12/12 (DC)            | 12/12 (DC)            |
| Insulation between coil and contacts (1.2/50 μs) | kV     | 6 (8 mm)              | 6 (8 mm)              |
| Dielectric strength between open contacts        | V AC   | 1000                  | 1000                  |
| Ambient temperature range                        | °C     | -40...+70             | -40...+70             |
| Protection category                              |        | IP 20                 | IP 20                 |

**Approvals relay** (according to type)



## Ordering information

Example: 48 series, 35 mm rail (EN 60715) mount, Push-in terminal relay interface module, 2 CO 8 A contacts, 24 V sensitive DC coil, green LED + diode, 99.02 coil indication.

B

4 8 . P

5 . 7 . 0 2 4 . 0 0

5 0

**Series**

**Type**  
Screw terminal  
1 = 35 mm rail (EN 60715) mount, forcibly guided contacts relay  
3 = 35 mm rail (EN 60715) mount  
5 = 35 mm rail (EN 60715) mount  
6 = 35 mm rail (EN 60715) mount  
Push-in terminal  
P = 35 mm rail (EN 60715) mount

**Type**  
Screw terminal  
1 = for 48.31, 1 pole, 10 A  
48.61, 1 pole, 16 A  
2 = for 48.12/48.32 (DC only), 48.52, 2 poles, 8 A  
48.62 (DC only), 2 poles, 10 A  
Push-in terminal  
3 = for 48.P3, 1 pole, 10 A  
5 = for 48.P5, 2 pole, 8 A  
6 = for 48.P6, 1 pole, 16 A  
8 = for 48.P8 (DC only), 2 pole, 10 A

**Coil version**  
7 = Sensitive DC  
8 = AC (50/60 Hz)  
9 = DC (for 48.12 only)

**Coil voltage**  
See coil specifications

**A: Contact material**  
0 = Standard AgNi for 48.P3/P5/P8/31/52/62  
AgCdO, Standard for 48.P6/61  
4 = AgSnO<sub>2</sub>, for 48.P6/P8/61/62 only  
5 = AgNi + Au, for 48.12 and 48.P3/P5/31/52 only  
Standard for 48.32

**B: Contact circuit**  
0 = CO (nPDT)

**D: Special versions**  
0 = Standard  
7 = Standard (for 48.12 only)

**C: Options**  
0 = Standard (for 48.12 only)  
5 = Standard for DC: green LED + diode (polarity +A1)  
6 = Standard for AC and 48.32: green LED + Varistor

**Selecting features and options: only combinations in the same row are possible.**  
Preferred selections for best availability are shown in **bold**.

| Type           | Coil version | A            | B        | C        | D        |
|----------------|--------------|--------------|----------|----------|----------|
| 48.12          | DC           | <b>5</b>     | <b>0</b> | <b>0</b> | <b>7</b> |
| 48.32          | DC           | <b>5</b>     | <b>0</b> | <b>6</b> | <b>0</b> |
| 48.P3/P5/31/52 | AC           | <b>0 - 5</b> | 0        | <b>6</b> | 0        |
| 48.P3/P5/31/52 | Sensitive DC | <b>0 - 5</b> | 0        | <b>5</b> | 0        |
| 48.P6/61       | AC           | <b>0 - 4</b> | 0        | <b>6</b> | 0        |
| 48.P6/61       | Sensitive DC | <b>0 - 4</b> | 0        | <b>5</b> | 0        |
| 48.P8/62       | Sensitive DC | <b>0 - 4</b> | 0        | <b>5</b> | 0        |

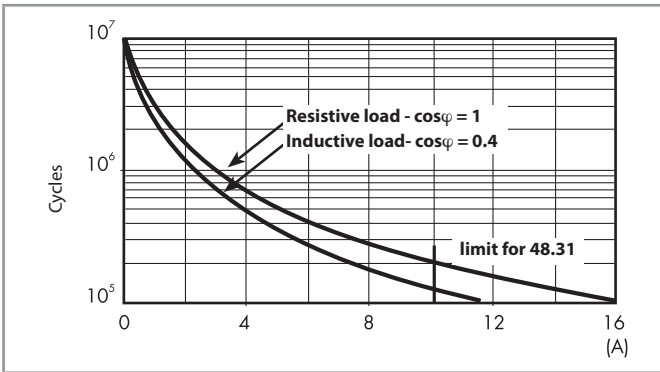
## Technical data

|   |                                 | 48.12/31/32/61/P3/P6                             | 48.52/P5                | 48.12/31/61/62/P3/P6/P8          |                   |
|---|---------------------------------|--|-------------------------|----------------------------------|-------------------|
| Insulation according to EN 61810-1  | insulation rated voltage        | V  | 250                     | 400                              |                   |
|   | rated impulse withstand voltage | kV   | 4                       | 4                                |                   |
|   | pollution degree                |  | 3                       | 2                                |                   |
|   | overvoltage category            |  | III                     | III                              |                   |
| Insulation between coil and contacts (1.2/50 μs)                            | kV                              | 6 (8 mm)   |                         |                                  |                   |
| Dielectric strength between open contacts                                   | V AC                            | 1000; 1500 (48.12/32)                            |                         |                                  |                   |
| Dielectric strength between adjacent contacts                               | V AC                            | 2000 (48.P5/52); 2500 (48.P8/62) 3000 (48.12/32) |                         |                                  |                   |
| <b>Insulation between coil terminals</b>                                    |                                 |  |                         |                                  |                   |
| Rated impulse voltage (surge) differential mode (according to EN 61000-4-5) | kV(1.2/50 μs)                   | 2  |                         |                                  |                   |
| <b>Other data</b>   |                                 |  |                         |                                  |                   |
| Bounce time: NO/NC  | ms                              | 2/5; 2/10 (48.12/32)                             |                         |                                  |                   |
| Vibration resistance (10...200)Hz: NO/NC                                    | g                               | 20/5 (for 1 pole)                                |                         | 15/3; 20/6 (48.12/32) for 2 pole |                   |
| Power lost to the environment   | without contact current         | W  | 0.7                     |                                  |                   |
|   | with rated current              | W  | 1.2 (48.12/31/32/P3)    | 2 (48.52/P5/61/62/P6/P8)         |                   |
| Wire strip length   | mm                              | 8  |                         |                                  |                   |
| Screw torque (only for 48.12/31/32/52/61/81)                                | Nm                              | 0.5  |                         |                                  |                   |
| Min. wire size  | <b>Screw terminal</b>           |  | <b>Push-in terminal</b> |                                  |                   |
|   |                                 | solid cable                                      | stranded cable          | solid cable                      | stranded cable    |
|   | mm <sup>2</sup>                 | 0.5  | 0.5                     | 0.5                              | 0.5               |
|   | AWG                             | 21   | 21                      | 21                               | 21                |
| Max. wire size  | <b>Screw terminal</b>           |  | <b>Push-in terminal</b> |                                  |                   |
|   |                                 | solid cable                                      | stranded cable          | solid cable                      | stranded cable    |
|   | mm <sup>2</sup>                 | 1 x 6 / 2 x 2.5                                  | 1 x 4 / 2 x 2.5         | 2 x 1.5 / 1 x 2.5                | 2 x 1.5 / 1 x 2.5 |
|   | AWG                             | 1 x 10 / 2 x 14                                  | 1 x 12 / 2 x 14         | 2 x 16 / 1 x 14                  | 2 x 16 / 1 x 14   |

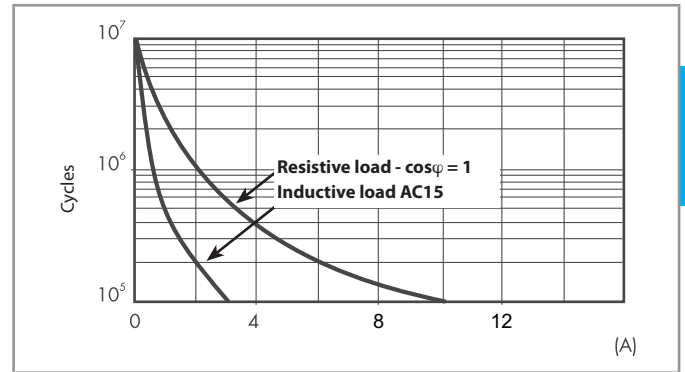


**Contact specification**

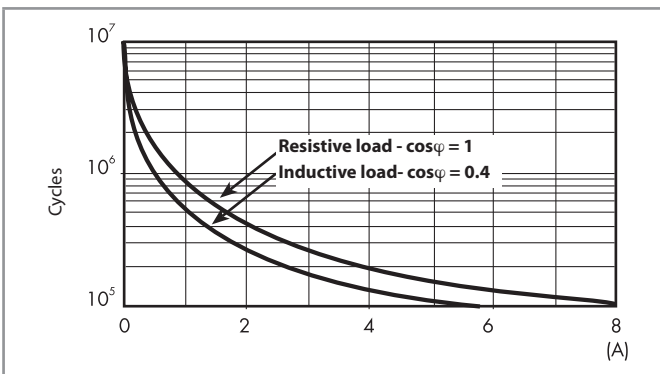
**F 48 - Electrical life (AC) v contact current**  
Types 48.P3/P6/31/61



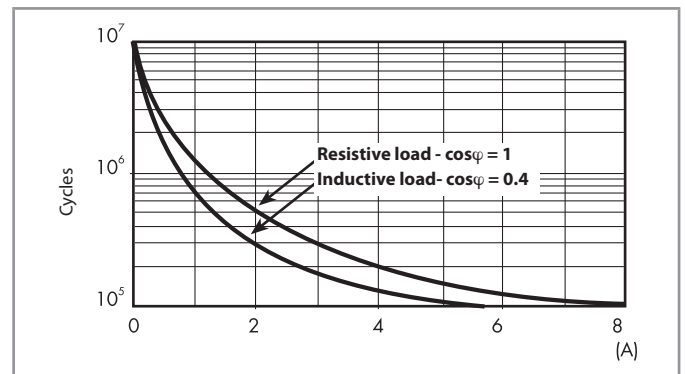
**F 48 - Electrical life (AC) v contact current**  
Types 48.P8/62



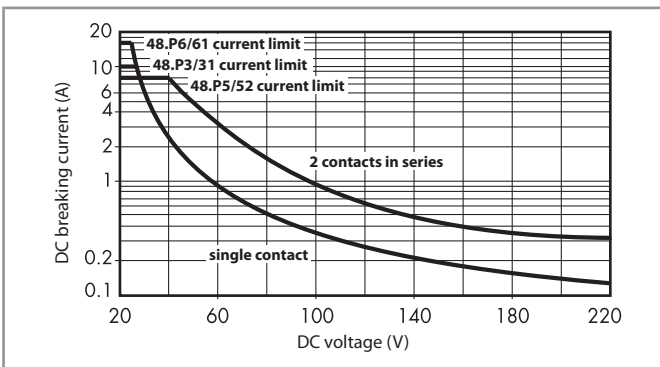
**F 48 - Electrical life (AC) v contact current**  
Types 48.P5/52



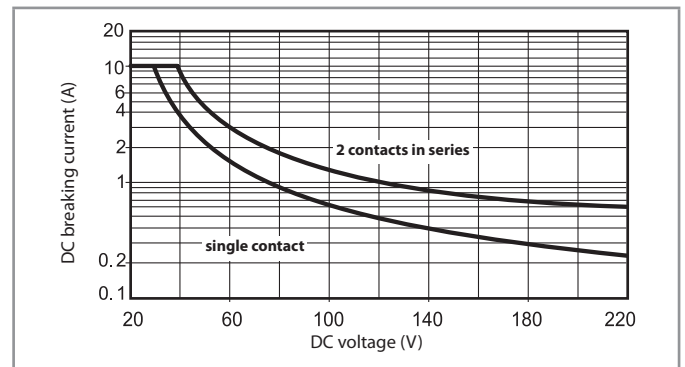
**F 48 - Electrical life (AC) v contact current**  
Type 48.12/32



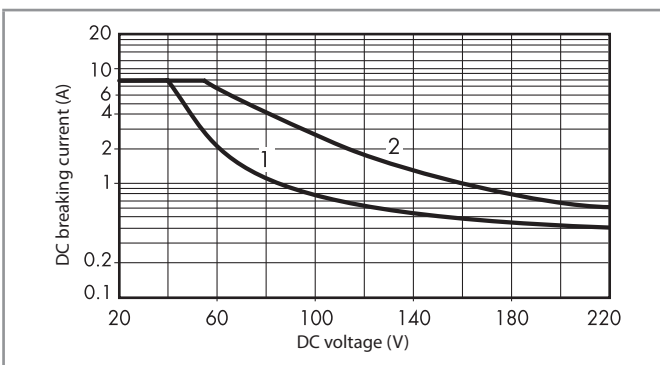
**H 48 - Maximum DC1 breaking capacity**  
Types 48.P3/P5/P6/31/52/61



**H 48 - Maximum DC1 breaking capacity**  
Types 48.P8/62



**H 48 - Maximum DC1 breaking capacity**  
Type 48.12/32



- When switching a resistive load (DC1) having voltage and current values under the curve, an electrical life of  $\geq 100 \cdot 10^3$  can be expected.
  - In the case of DC13 loads, the connection of a diode in parallel with the load will permit a similar electrical life as for a DC1 load.
- Note: the release time for the load will be increased.

## Coil specifications

### DC coil data (0.5 W sensitive)

| Nominal voltage<br>$U_N$ | Coil code | Operating range |           | Rated coil consumption<br>I at $U_N$ |
|--------------------------|-----------|-----------------|-----------|--------------------------------------|
|                          |           | $U_{min}^*$     | $U_{max}$ |                                      |
| V                        |           | V               | V         | mA                                   |
| 12                       | 7.012     | 8.8             | 18        | 41                                   |
| 24                       | 7.024     | 17.5            | 36        | 22.2                                 |
| 125                      | 7.125     | 91              | 188       | 4                                    |

\*  $U_{min} = 0.8 U_N$  for 48.61, 48.62, 48.P6, 48.P8

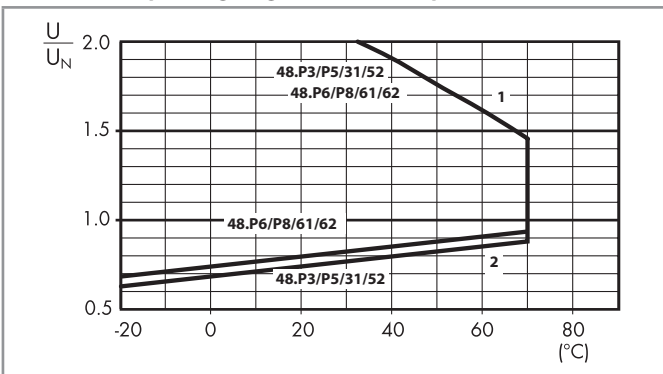
### AC coil data

| Nominal voltage<br>$U_N$ | Coil code | Operating range |           | Rated coil consumption<br>I at $U_N$ (50 Hz) |
|--------------------------|-----------|-----------------|-----------|--|
|                          |           | $U_{min}$       | $U_{max}$ |  |
| V                        |           | V               | V         | mA   |
| 12                       | 8.012     | 9.6             | 13.2      | 90.5   |
| 24                       | 8.024     | 19.2            | 26.4      | 46   |
| 110                      | 8.110     | 88              | 121       | 10.1   |
| 120                      | 8.120     | 96              | 132       | 11.8   |
| 230                      | 8.230     | 184             | 253       | 7.0  |

### DC coil data, (0.7 W standard) - Type 48.12/48.32, (48.32 available only 24 V DC)

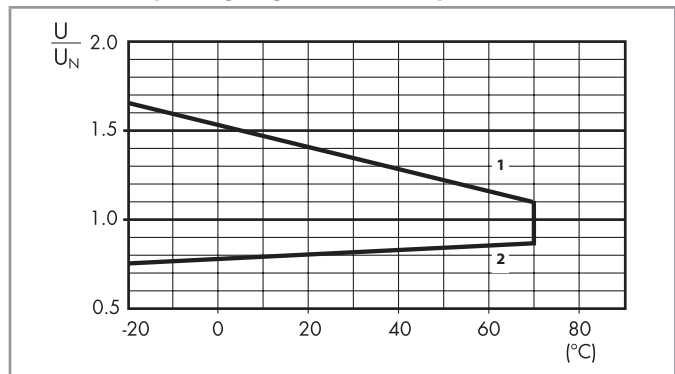
| Nominal voltage<br>$U_N$ | Coil code | Operating range |           | Resistance<br>R | Rated coil consumption<br>I at $U_N$ |
|--------------------------|-----------|-----------------|-----------|-----------------|--------------------------------------|
|                          |           | $U_{min}$       | $U_{max}$ |                 |                                      |
| V                        |           | V               | V         | $\Omega$        | mA                                   |
| 12                       | 9.012     | 9               | 14.4      | 205             | 58.5                                 |
| 24                       | 9.024     | 18              | 28.8      | 820             | 29.3                                 |

### R 48 - DC coil operating range v ambient temperature



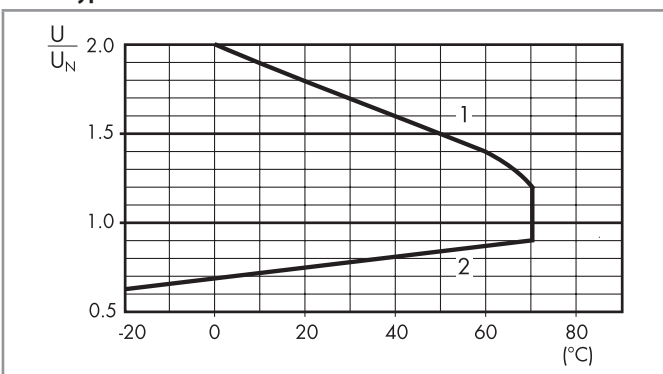
- 1 - Max. permitted coil voltage.
- 2 - Min. pick-up voltage with coil at ambient temperature.

### R 48 - AC coil operating range v ambient temperature



- 1 - Max. permitted coil voltage.
- 2 - Min. pick-up voltage with coil at ambient temperature.

### R 48 - DC coil operating range v ambient temperature Type 48.12/32



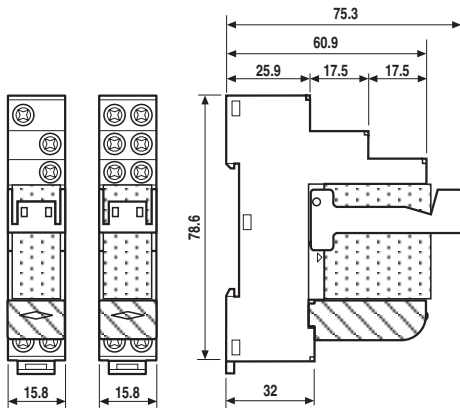
- 1 - Max. permitted coil voltage.
- 2 - Min. pick-up voltage with coil at ambient temperature.

**Combinations**

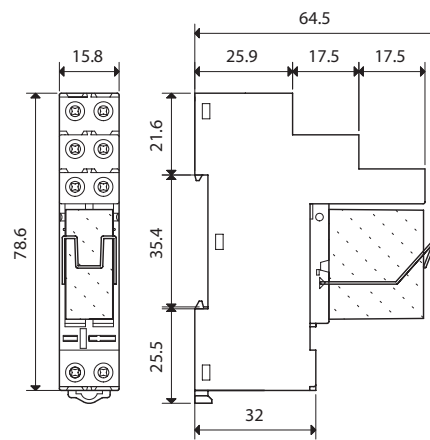
| Code  | Type of socket | Type of relay | Module | Retaining clip |
|-------|----------------|---------------|--------|----------------|
| 48.12 | 95.05.7        | 50.12         | —      | 095.71         |
| 48.32 | 95.05          | 50.12         | 99.02  | 095.01         |
| 48.31 | 95.03          | 40.31         | 99.02  | 095.01         |
| 48.52 | 95.05          | 40.52         | 99.02  | 095.01         |
| 48.61 | 95.05          | 40.61         | 99.02  | 095.01         |
| 48.62 | 95.05          | 40.62         | 99.02  | 095.01         |
| 48.P3 | 95.P3          | 40.31         | 99.02  | 095.91.3       |
| 48.P5 | 95.P5          | 40.52         | 99.02  | 095.91.3       |
| 48.P6 | 95.P5          | 40.61         | 99.02  | 095.91.3       |
| 48.P8 | 95.P5          | 40.62         | 99.02  | 095.91.3       |

**B**

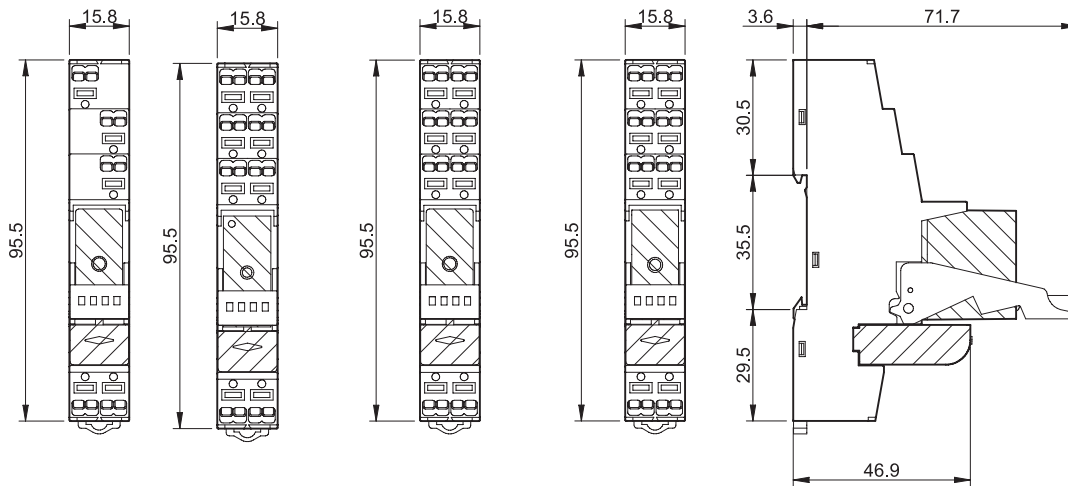
**Outline drawings**



Types 48.31 48.32 / 48.52 / 48.61 / 48.62  
Screw terminal



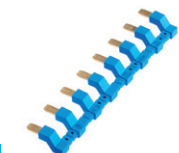
Type 48.12  
Screw terminal



Types 48.P3      48.P5      48.P6      48.P8  
Push-in terminal

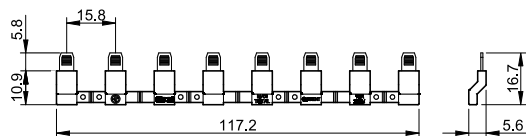


Accessories

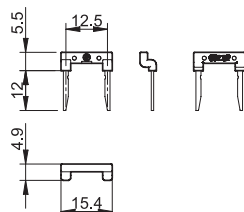


097.58

|  |              |
|--|--------------|
| <b>8-way jumper link</b> for type 48.P3/P5/P6/P8 | 097.58       |
| Rated values                                     | 10 A - 250 V |

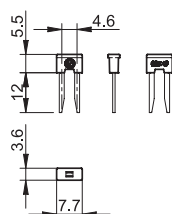


|  |              |
|--|--------------|
| <b>2-way jumper link</b> for type 48.P3/P5/P6/P8 | 097.52       |
| Rated values                                     | 10 A - 250 V |



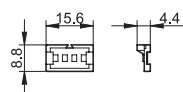
097.52

|  |              |
|--|--------------|
| <b>2-way jumper link</b> for type 48.P3/P5/P6/P8 | 097.42       |
| Rated values                                     | 10 A - 250 V |



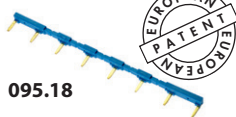
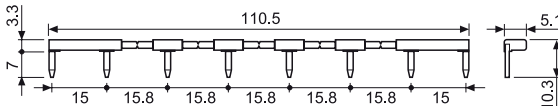
097.42

|   |        |
|---|--------|
| <b>Marker tag holder</b> for type 48.P3/P5/P6/P8 and 48.12/31/32/52/61/62 | 097.00 |
|---|--------|



097.00

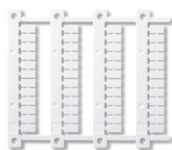
|   |               |                  |
|---|---------------|------------------|
| <b>8-way jumper link</b> for screw terminal version | 095.18 (blue) | 095.18.0 (black) |
| Rated values  | 10 A - 250 V  |                  |



095.18



|  |        |
|--|--------|
| <b>Sheet of marker tags (CEMBRE Thermal transfer printers)</b> , plastic, 48 tags, 6 x 12 mm | 060.48 |
|--|--------|



060.48

Packaging codes

How to code and identify retaining clip and packaging options for sockets.

Example:

4 8 . P 5 . 7 . 0 2 4 . 0 0 5 0 S P A

A Standard packaging  
B Blister packaging

SP Plastic retaining clip