

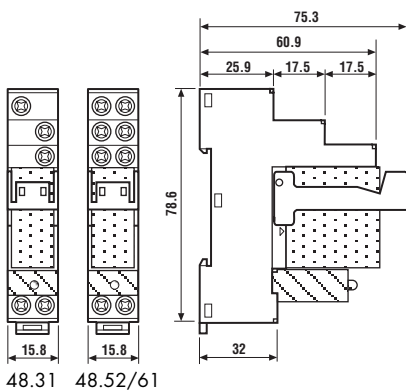
## Features

1 & 2 Pole relay interface modules,  
15.8 mm wide.

Ideal interface for PLC and electronic systems

- 48.31 - 1 Pole 10 A
- 48.52 - 2 Pole 8 A
- 48.61 - 1 Pole 16 A

- AC coils or DC sensitive coils
- Instant ejection of relay using plastic retaining clip
- Supply status indication and EMC coil suppression module as standard
- Identification label
- UL Listed
- 35 mm rail (EN 50022) mounting



### 48.31



- 1 pole 10 A
- 35 mm rail mounting

### 48.52

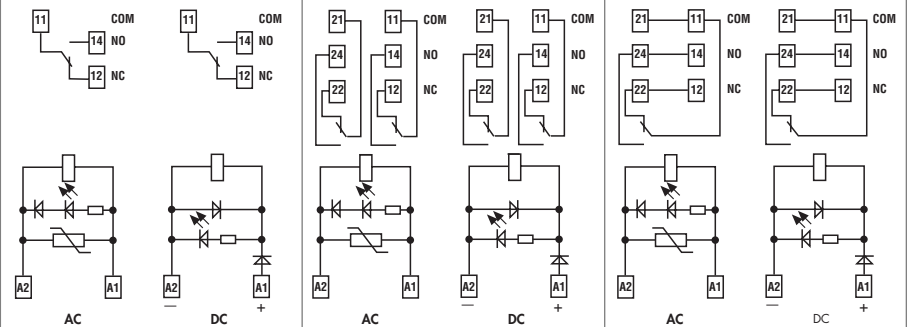


- 2 pole 8 A
- 35 mm rail mounting

### 48.61



- 1 pole 16 A
- 35 mm rail mounting



### Contact specification

|  |             |             |             |
|--|-------------|-------------|-------------|
| Contact configuration                        | 1 CO (SPDT) | 2 CO (DPDT) | 1 CO (SPDT) |
| Rated current/Maximum peak current A         | 10/20       | 8/15        | 16/30       |
| Rated voltage/Maximum switching voltage V AC | 250/400     | 250/250     | 250/400     |
| Rated load AC1 VA                            | 2,500       | 2,000       | 4,000       |
| Rated load AC15 (230 V AC) VA                | 500         | 400         | 750         |
| Single phase motor rating (230 V AC) kW      | 0.37        | 0.3         | 0.55        |
| Breaking capacity DC1: 30/110/220V A         | 10/0.3/0.12 | 8/0.3/0.12  | 16/0.3/0.12 |
| Minimum switching load mW (V/mA)             | 300 (5/5)   | 300 (5/5)   | 500 (10/5)  |
| Standard contact material                    | AgNi        | AgNi        | AgCdO       |

### Coil specification

|                                      |                 |   |   |   |
|--------------------------------------|-----------------|---|---|---|
| Nominal voltage (U <sub>N</sub> )    | V AC (50/60 Hz) | 12 - 24 - 110 - 120 - 230               | 12 - 24 - 110 - 120 - 230               | 12 - 24 - 110 - 120 - 230               |
|                                      | V DC            | 12 - 24 - 125                           | 12 - 24 - 125                           | 12 - 24 - 125                           |
| Rated power AC/sens. DC VA (50 Hz)/W |                 | 1.2/0.5                                 | 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>               | (0.8...1.1)U <sub>N</sub>               |
|                                      | sens. DC        | (0.73...1.75)U <sub>N</sub>             | (0.73...1.75)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> | 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> | 0.2 U <sub>N</sub> / 0.1 U <sub>N</sub> |

### Technical data

|  |        |  |                         |  |
|--|--------|--|-------------------------|--|
| Mechanical life AC/DC                            | cycles | 10 · 10 <sup>6</sup> /20 · 10 <sup>6</sup> | 10 · 10 <sup>6</sup> /— | 10 · 10 <sup>6</sup> /20 · 10 <sup>6</sup> |
| Electrical life at rated load AC1                | cycles | 200 · 10 <sup>3</sup>                      | 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)   | 7/4 (AC) - 12/12 (DC)                      |
| Insulation between coil and contacts (1.2/50 μs) | kV     | 6 (8 mm)                                   | 6 (8 mm)                | 6 (8 mm)                                   |
| Dielectric strength between open contacts        | V AC   | 1,000                                      | 1,000                   | 1,000                                      |
| Ambient temperature range                        | °C     | -40...+70                                  | -40...+70               | -40...+70                                  |
| Protection category                              |        | IP 20                                      | IP 20                   | IP 20                                      |

### Approvals relay (according to type)



## Features

**2 Pole relay interface module,  
15.8 mm wide.**

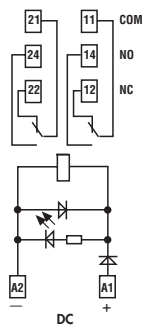
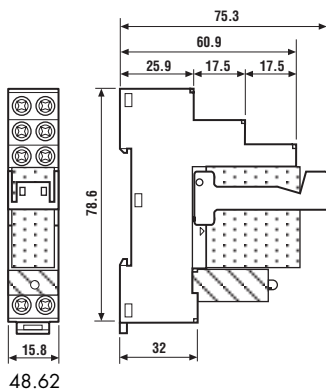
**Ideal interface for PLC and electronic systems**

### 48.62 - 2 Pole 10 A

- DC sensitive coil
- Instant ejection of relay using plastic retaining clip
- Supply status indication and EMC coil suppression module as standard
- Identification label
- Cadmium Free contacts
- UL Listed
- 35 mm rail (EN 50022) mounting



- 2 pole 10 A
- 35 mm rail mounting

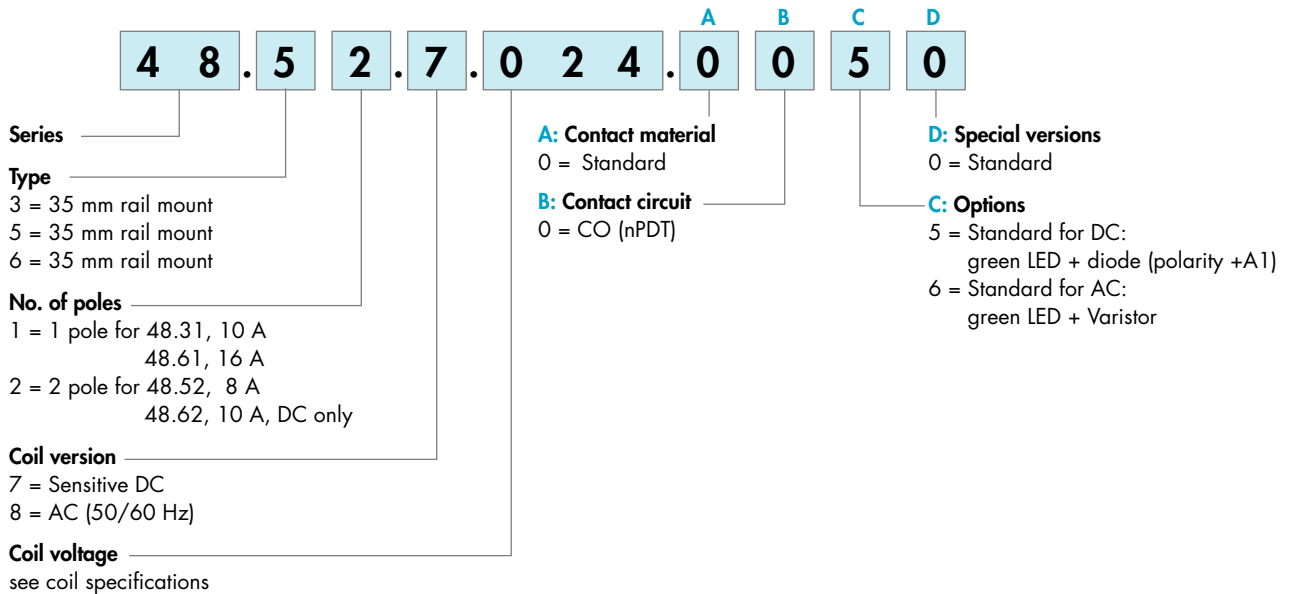


48

| Contact specification                            |                 |                        |
|--|-----------------|------------------------|
| Contact configuration                            |                 | 2 CO (DPDT)            |
| Rated current/Maximum peak current               | A               | 10/20                  |
| Rated voltage/Maximum switching voltage          | V AC            | 250/400                |
| Rated load AC1                                   | VA              | 2,500                  |
| Rated load AC15 (230 V AC)                       | VA              | 500                    |
| Single phase motor rating (230 V AC)             | kW              | 0.37                   |
| Breaking capacity DC1: 30/110/220V               | A               | 10/0.3/0.12            |
| Minimum switching load                           | mW (V/mA)       | 300 (5/5)              |
| Standard contact material                        |                 | AgNi                   |
| Coil specification                               |                 |                        |
| Nominal voltage ( $U_N$ )                        | V AC (50/60 Hz) | —                      |
|  | V DC            | 12 - 24 - 125          |
| Rated power AC/sens. DC                          | VA (50 Hz)/W    | —/0.5                  |
| Operating range                                  | AC              | —                      |
|  | sens. DC        | $(0.8 \dots 1.5)U_N$   |
| Holding voltage                                  | AC/DC           | —/0.4 $U_N$            |
| Must drop-out voltage                            | AC/DC           | —/0.1 $U_N$            |
| Technical data                                   |                 |                        |
| Mechanical life AC/DC                            | cycles          | —/20 · 10 <sup>6</sup> |
| Electrical life at rated load AC1                | cycles          | 100 · 10 <sup>3</sup>  |
| Operate/release time                             | ms              | 12/12 (DC)             |
| Insulation between coil and contacts (1.2/50 μs) | kV              | 6 (8 mm)               |
| Dielectric strength between open contacts        | V AC            | 1,000                  |
| Ambient temperature range                        | °C              | -40...+70              |
| Protection category                              |                 | IP 20                  |
| <b>Approvals relay</b> (according to type)       |                 |                        |

## Ordering information

Example: 48 series, 35 mm rail (EN 50022) mount relay interface module, 2 CO (DPDT) 8 A contacts, 24 V sensitive DC coil, green LED + diode.

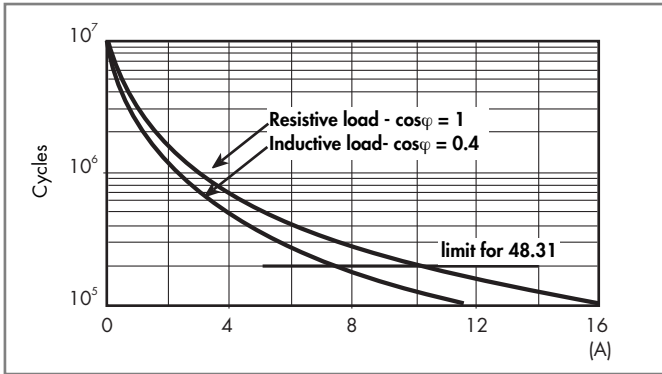


## Technical data

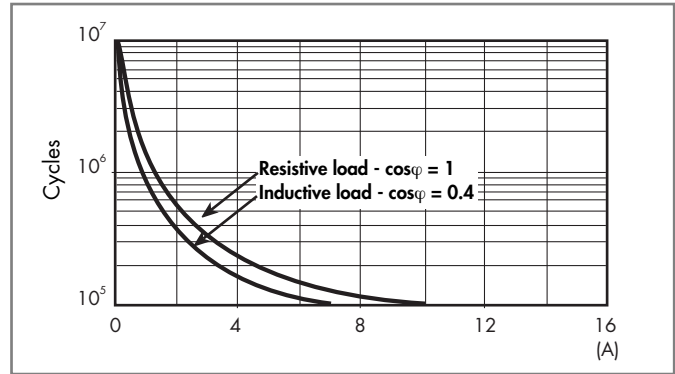
| Insulation  |                                 | 48.31/61/62                  | 48.52          | 48.31/52/61/62    |             |
|---|---------------------------------|------------------------------|----------------|-------------------|-------------|
| Insulation according to EN 61810-1 ed. 2            | insulation rated voltage        | V 250                        | 250            | 400               |             |
|   | rated impulse withstand voltage | kV 4                         | 4              | 4                 |             |
|   | pollution degree                | 3                            | 2              | 2                 |             |
|   | overvoltage category            | III                          | III            | III               |             |
| Insulation between coil and contacts (1.2/50 μs)    | kV                              | 6 (8 mm)                     |                |                   |             |
| Dielectric strength between open contacts           | V AC                            | 1,000                        |                |                   |             |
| Dielectric strength between adjacent contacts       | V AC                            | 2,000 (48.52); 2,500 (48.62) |                |                   |             |
| Conducted disturbance immunity                      |                                 |                              |                |                   |             |
| Burst (5...50)ns, 5 kHz, on A1 - A2                 |                                 | EN 61000-4-4                 | level 4 (4 kV) |                   |             |
| Surge (1.2/50 μs) on A1 - A2 (differential mode)    |                                 | EN 61000-4-5                 | level 3 (2 kV) |                   |             |
| Other data  |                                 |                              |                |                   |             |
| Bounce time: NO/NC                                  | ms                              | 2/5                          |                |                   |             |
| Vibration resistance (5...55)Hz, max. ± 1 mm: NO/NC | g/g                             | 10/4 (for 1 pole)            |                | 15/3 (for 2 pole) |             |
| Power lost to the environment                       | without contact current         | W 0.7                        |                |                   |             |
|   | with rated current              | W                            | 1.2 (48.31)    | 1.3 (48.52)       | 1.2 (48.61) |
| Wire strip length                                   | mm                              | 8                            |                |                   |             |
| Screw torque  | Nm                              | 0.5                          |                |                   |             |
| Max. wire size                                      |                                 | solid cable                  |                | stranded cable    |             |
|   | mm <sup>2</sup>                 | 1x6 / 2x2.5                  |                | 1x4 / 2x2.5       |             |
|   | AWG                             | 1x10 / 2x14                  |                | 1x12 / 2x14       |             |

## Contact specification

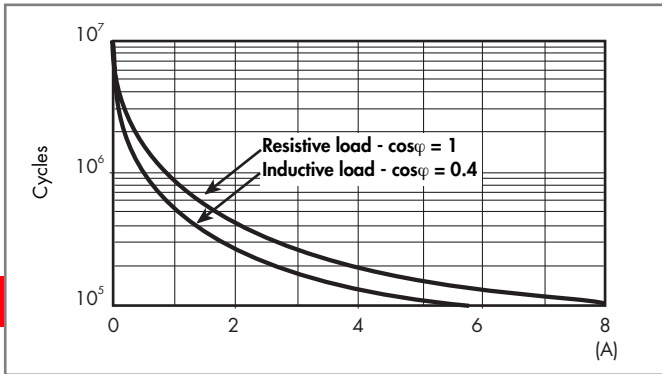
**F 48 - Electrical life (AC) v contact current**  
Types 48.31/61



**F 48 - Electrical life (AC) v contact current**  
Type 48.62

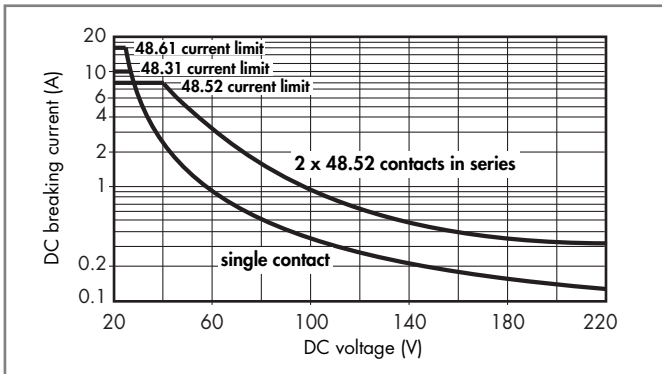


**F 48 - Electrical life (AC) v contact current**  
Types 48.52

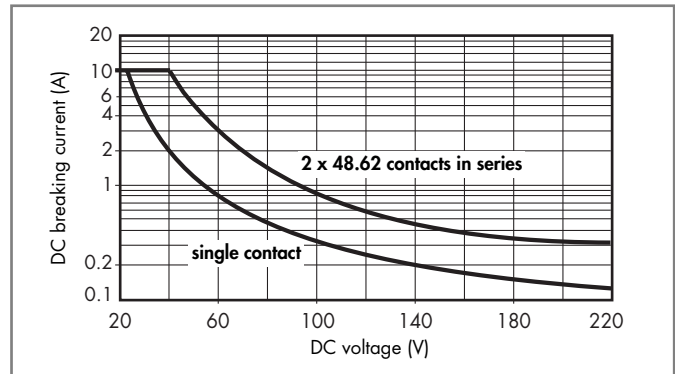


48

**H 48 - Maximum DC1 breaking capacity**  
Types 48.31/52/61



**H 48 - Maximum DC1 breaking capacity**  
Type 48.62



- 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.

- 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)

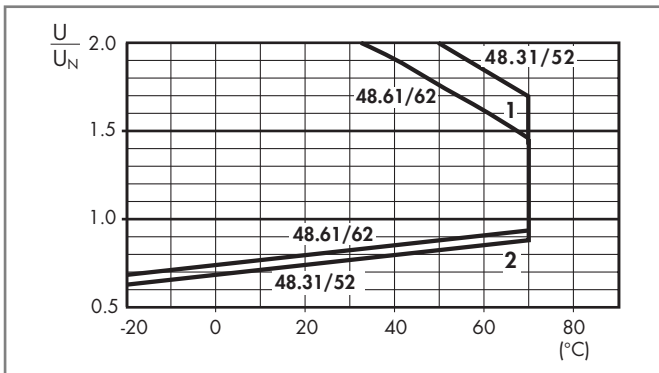
| Nominal voltage<br>$U_N$<br>V | Coil code | Operating range  |                | Rated coil consumption<br>I at $U_N$<br>mA |
|-------------------------------|-----------|------------------|----------------|--|
|                               |           | $U_{min}^*$<br>V | $U_{max}$<br>V |  |
| 12                            | 7.012     | 8.8              | 21             | 41   |
| 24                            | 7.024     | 17.5             | 42             | 22.2                                       |
| 125                           | 7.125     | 92               | 218            | 4  |

\* $U_{min} = 0.8 U_N$  for 48.61 and 48.62

### AC coil data

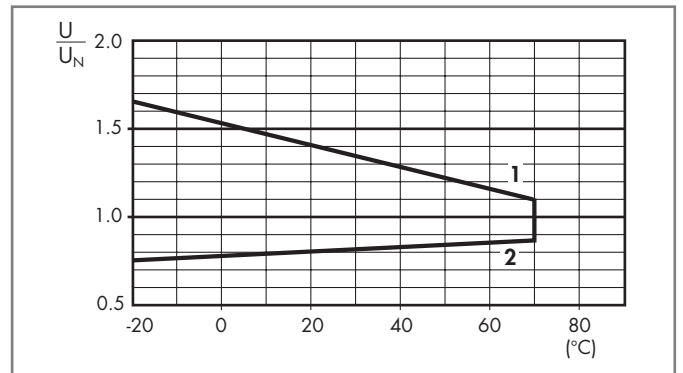
| Nominal voltage<br>$U_N$<br>V | Coil code | Operating range |                | Rated coil consumption<br>I at $U_N$ (50Hz)<br>mA |
|-------------------------------|-----------|-----------------|----------------|---|
|                               |           | $U_{min}$<br>V  | $U_{max}$<br>V |   |
| 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   |

### 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.

## Combinations

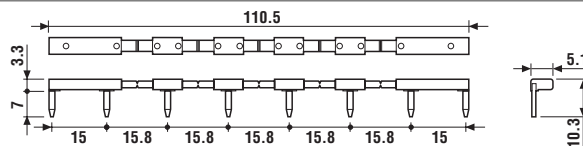
| Code  | Type of socket | Type of relay | Module | Retaining clip |
|-------|----------------|---------------|--------|----------------|
| 48.31 | 95.03          | 40.31         | 99.02  | 095.01         |
| 48.52 | 95.05          | 40.52         | 99.02  | 095.01         |
| 48.61 | 95.05          | 40.61         | 99.02  | 095.01         |
| 48.62 | 95.05          | 44.62         | 99.02  | 095.01         |

## Accessories



095.18

|                          |              |
|--------------------------|--------------|
| <b>8-way jumper link</b> | 095.18       |
| Rated values             | 10 A - 250 V |



060.72

|  |        |
|--|--------|
| <b>Sheet of marker tags, plastic, 72 tags, 6x12 mm</b> | 060.72 |
|--|--------|

## Packaging codes

How to code and identify retaining clip and packaging options for relay interface module.

Code options according to the last three letters:

