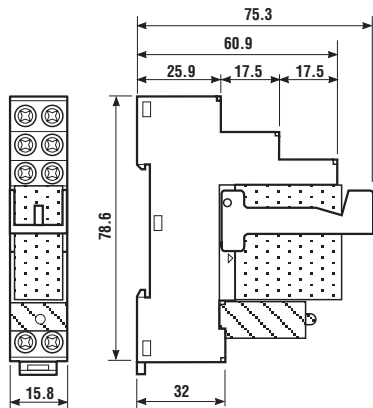


- Relay interface modules for use with PLC systems, 15.5 mm wide
- AC or sensitive DC coil versions available
- Instant removal of relay using plastic retaining clip
- Supply status indication or coil protection module provided
- Identification label
- 35 mm rail (EN 50022) mounting

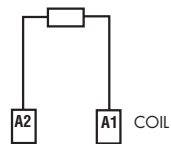
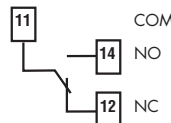


\* for 400 V applications, requirements for pollution degree 2 are met.

### 48.31



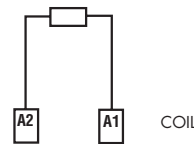
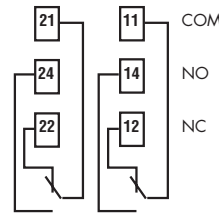
- 1 pole, 10 A  
- 35 mm rail (EN 50022) mounting



### 48.52



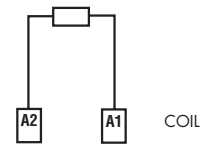
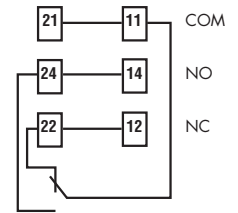
- 2 pole, 8 A  
- 35 mm rail (EN 50022) mounting



### 48.61



- 1 pole, 16 A  
- 35 mm rail (EN 50022) mounting



Contact specifications				
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 in AC1	VA	2,500	2,000	4,000
Rated load in AC15 (230 VAC)	VA	500	400	750
Single phase motor rating (230 VAC)	kW/HP	0.37/0.6	0.3/0.4	0.55/0.8
Breaking capacity in 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 specifications				
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 (50 Hz)	(0.8...1.1)U <sub>N</sub>	(0.8...1.1)U <sub>N</sub>	(0.8...1.1)U <sub>N</sub>
	DC/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>5</sup> /20 · 10 <sup>6</sup>	10 · 10 <sup>6</sup> /—	10 · 10 <sup>5</sup> /20 · 10 <sup>6</sup>
Electrical life at rated load AC1	cycles	200 · 10 <sup>3</sup>	150 · 10 <sup>3</sup>	100 · 10 <sup>3</sup>
Operate/release time (bounce included)	ms	10/10 - (15/12 sens.)	10/10 - (15/12 sens.)	10/10 - (15/12 sens.)
Insulation according to EN 61810-5		3.6 kV/3	3.6 kV/3	3.6 kV/3
Insulation between coil and contacts (1.2/50µs)		6 (8mm)	6 (8mm)	6 (8mm)
Dielectric strenght between open contacts		V AC	1,000	1,000
Ambient temperature range		°C	-40...+70	-40...+70
Protection category		IP 20	IP 20	IP 20

**Approvals (relay):** (according to type)

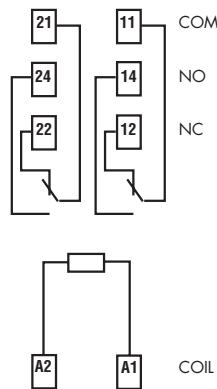
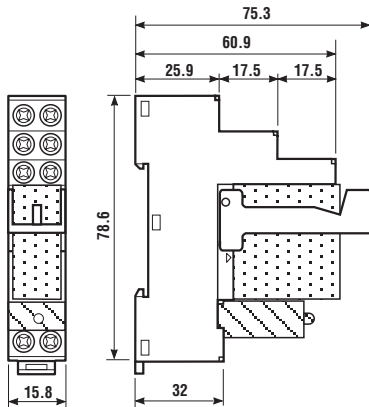


## 48.62

- Relay interface modules for use with PLC systems, 15.5mm wide
- AC or sensitive DC coil versions available
- Instant removal of relay using plastic retaining clip
- Supply status indication or coil protection module provided
- Identification label
- 35 mm rail (EN 50022) mounting



- 2 pole, 10 A
- 35 mm rail (EN 50022) mounting



\* for 400 V applications requirements for pollution degree 2 are met.

<b>Contact specification</b>		
Contact configuration		2 CO (DPDT)
Rated current/Maximum peak current	A	10/20
Rated voltage/Maximum switching voltage	V AC	250/400*
Rated load in AC1	VA	2,500
Rated load in AC15 (230 VAC)	VA	500
Single phase motor rating (230 VAC)	kW/HP	0.37/0.6
Breaking capacity in DC1: 30/110/220V	A	10/0.3/0.12
Minimum switching load	mW (V/mA)	300 (5/5)
Standard contact material		AgNi
<b>Coil specifications</b>		
Nominal voltage (U <sub>N</sub> )	V AC (50/60 Hz)	—
	V DC	12 - 24 - 125
Rated power AC/sens. DC	VA (50 Hz)/W	—/0.5
Operating range	AC (50 Hz)	—
	DC/sens. DC	(0.8...1.7)U <sub>N</sub>
Holding voltage	AC/DC	0.8 U <sub>N</sub> /—
Must drop-out voltage	AC/DC	0.2 U <sub>N</sub> /—
<b>Technical data</b>		
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 (bounce included)	ms	10/10
Insulation according to EN 61810-5		3.6 kV/3
Insulation between coil and contacts (1.2/50µs)	kV	6 (8mm)
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: a 48 series 35 mm rail (EN 50022) mount relay interface module with 2 CO (DPDT) 6 A, coil rated 24 V sensitive DC, green LED + diode.

4 8 . 5 2 . 7 . 0 2 4 . 0 0 5 0

**Series**

**Type**

- 3 = 35 mm rail mount
- 5 = 35 mm rail mount
- 6 = 35 mm rail mount

**No. of poles**

- 1 = 1 CO (SPDT) for 48.31, 10 A  
48.61, 16 A
- 2 = 2 CO (DPDT) for 48.52, 8 A  
48.62, 10 A, DC only

**Coil version**

- 7 = Sensitive DC
- 8 = AC (50/60 Hz)

**Coil voltage**

see coil specifications

**A: Contact material**

0 = Standard

**B: Contact circuit**

0 = Standard

**D: Special applications**

0 = Standard

**C: Options**

- 5 = Standard for DC:  
green LED + diode (polarity +A1)
- 6 = Standard for AC:  
green LED + Varistor

## TECHNICAL DATA

### INSULATION

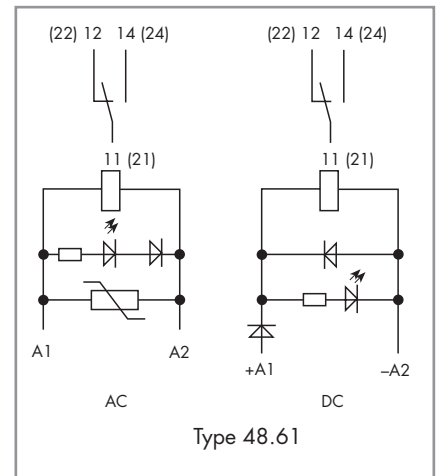
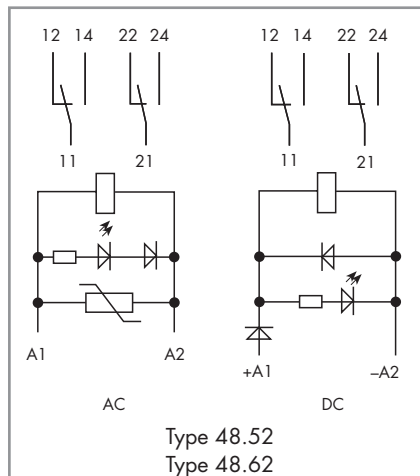
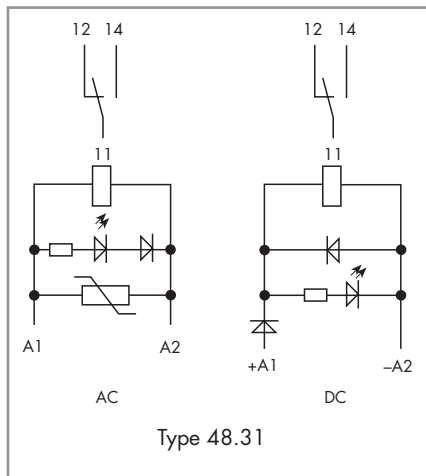
INSULATION according to EN 61810-5	insulation rated voltage	V	250
	rated impulse withstand voltage	kV	3.6
	pollution degree		3 (48.31/61/62) 2 (48.52)
	overvoltage category		III

### IMMUNITY

CONDUCTED DISTURBANCE IMMUNITY	BURST (according to EN 61000-4-4) level 4 (4kV)
	SURGE (according to EN 61000-4-5) level 3 (2kV)

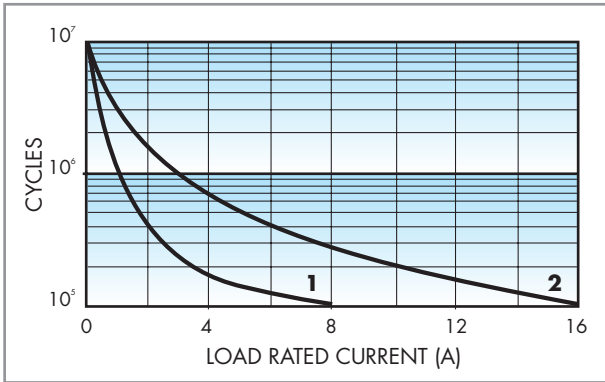
### OTHER DATA

VIBRATION RESISTANCE (10...55Hz): NO/NC	g/g	10/4 (1 CO)	3/3 (2 CO)
POWER LOST IN THE ENVIRONMENT	without contact current	W	
	with rated current	W	1.2 (48.31) 1.3 (48.52) 1.2 (48.61) 1.2 (48.62)



## CONTACT SPECIFICATIONS

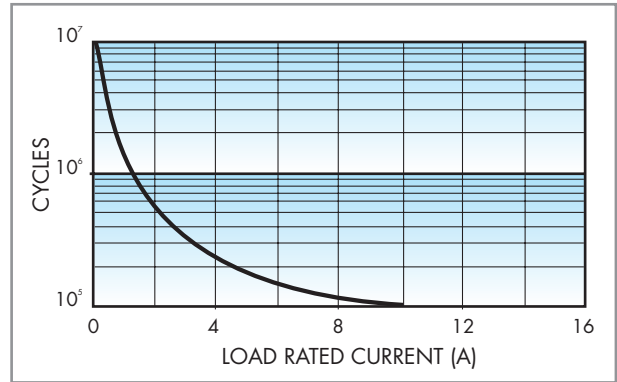
### F 48/1



Electrical life vs AC1 load.

- 1** - Type 48.52 (8 A).
- 2** - Type 48.31 (10 A).
- Type 48.61 (16 A).

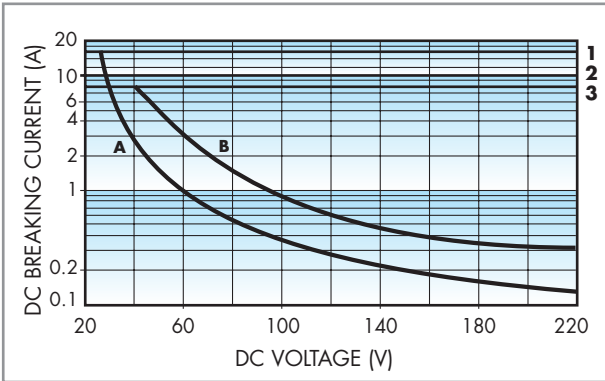
### F 48/2



Electrical life vs AC1 load.

Type 48.62 (10 A).

### H 48/1

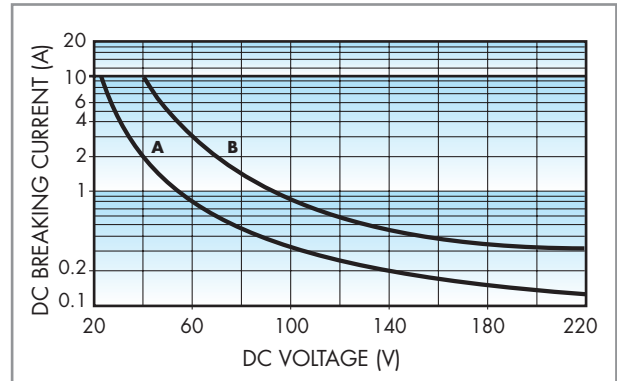


Breaking capacity for DC1 load.

- 1** - Type 48.61.
- 2** - Type 48.31.
- 3** - Type 48.52.
- A** - Load applied to 1 contact
- B** - Load applied to 2 contacts in series

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

### H 48/2



Breaking capacity for DC1 load.

- 1** - Type 48.62.
- A** - Load applied to 1 contact
- B** - Load applied to 2 contacts in series

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

## COIL SPECIFICATIONS

### AC VERSION DATA

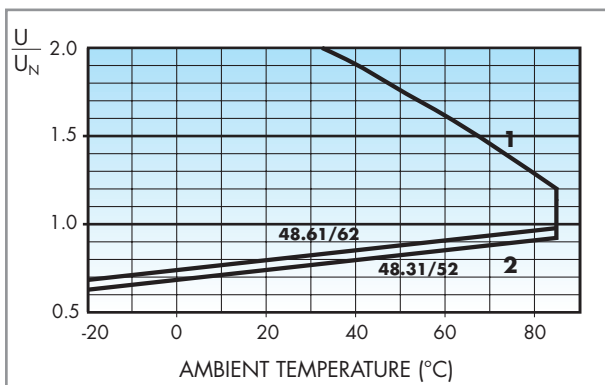
Nominal voltage $U_N$ V	Coil code	Operating range		Rated coil absorption I at $U_N$ (50Hz) mA
		$U_{min}$ V	$U_{max}$ V	
12	<b>8.012</b>	9.6	13.2	90.5
24	<b>8.024</b>	19.2	26.4	46
110	<b>8.110</b>	88	121	10.1
120	<b>8.120</b>	96	132	11.8
230	<b>8.230</b>	184	253	60.2

### DC VERSION DATA (0.5 W sensitive)

Nominal voltage $U_N$ V	Coil code	Operating range		Rated coil absorption I at $U_N$ mA
		$U_{min}^*$ V	$U_{max}$ V	
12	<b>7.012</b>	8.8	21	41
24	<b>7.024</b>	17.5	42	22.2
125	<b>7.152</b>	92	218	4

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

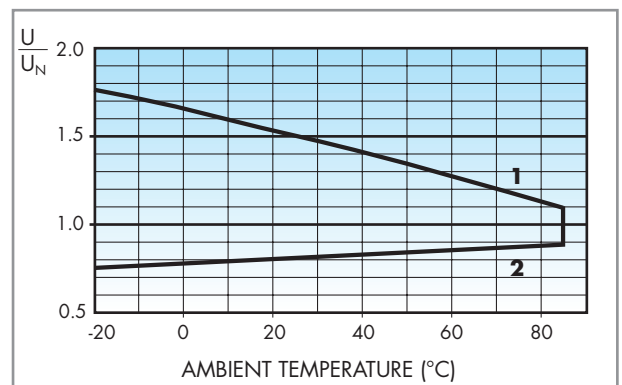
### R 48 sens. DC



Operating range (sensitive DC version) vs ambient temperature.

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

### R 48 AC



Operating range (AC version) vs ambient temperature.

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

## ACCESSORIES



095.18

- RATED VALUES: 10 A - 250 V

**8-way jumper link** for 48 series

095.18

