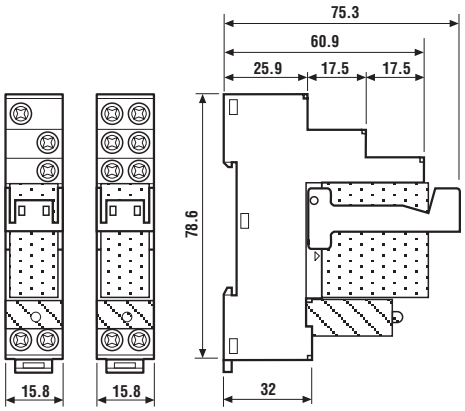
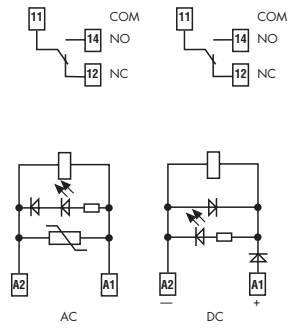
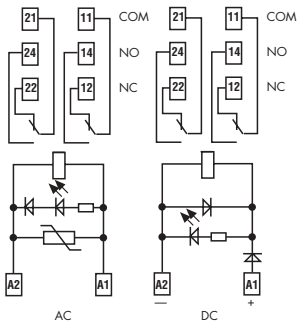
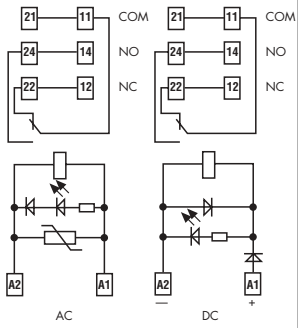
- *Relay interface modules for use with PLC systems, 15.8 mm wide*
- *AC or sensitive DC coil versions available*
- *Instant removal of relay using plastic retaining clip*
- *Supply status indication or coil suppression module provided*
- *Identification label*
- *35 mm rail (EN 50022) mounting*



48.31 48.52/61

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

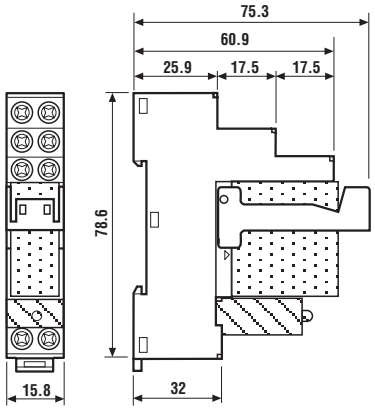
	48.31	48.52	48.61
			
	- 1 pole, 10 A - 35 mm rail mounting	- 2 pole, 8 A - 35 mm rail mounting	- 1 pole, 16 A - 35 mm rail mounting
			
Contact specifications			
Contact configuration	1 CO (SPDT)	2 CO (DPDT)	1 CO (SPDT)
Rated current/Maximum peak current A	10/20	8/15	16/30
Rated voltage/Maximum switching 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 V AC) VA	500	400	750
Single phase motor rating (230 V AC) kW	0.37	0.3	0.55
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_N) 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_N	(0.8...1.1)U_N	(0.8...1.1)U_N
sens. DC	(0.73...1.75)U_N	(0.73...1.75)U_N	(0.8...1.5)U_N
Holding voltage AC/DC	0.8 U_N /0.4 U_N	0.8 U_N /0.4 U_N	0.8 U_N /0.4 U_N
Must drop-out voltage AC/DC	0.2 U_N /0.1 U_N	0.2 U_N /0.1 U_N	0.2 U_N /0.1 U_N
Technical data			
Mechanical life AC/DC cycles	10 · 10^6/20 · 10^6	10 · 10^6/—	10 · 10^6/20 · 10^6
Electrical life at rated load AC1 cycles	200 · 10^3	150 · 10^3	100 · 10^3
Operate/release time ms	7/4 (AC) - 12/12 (DC)	7/4 (AC) - 12/12 (DC)	7/4 (AC) - 12/12 (DC)
Insulation according to EN 61810-1 ed. 2	4 kV/3	4 kV/2	4 kV/3
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):	ABS BEAB GOST RINA cULus NF VDE		

48

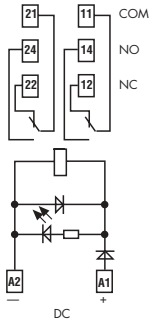
48.62

- *Relay interface modules for use with PLC systems, 15.8 mm wide*
- *AC or sensitive DC coil versions available*
- *Instant removal of relay using plastic retaining clip*
- *Supply status indication or coil suppression module provided*
- *Identification label*
- *35 mm rail (EN 50022) mounting*

- 2 pole, 10 A
- 35 mm rail mounting



48.62



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

48

Contact specifications		
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 V AC)	VA	500
Single phase motor rating (230 V AC)	kW	0.37
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
Coil specifications		
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...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 · 10^6
Electrical life at rated load AC1	cycles	100 · 10^3
Operate/release time	ms	12/12 (DC)
Insulation according to EN 61810-1 ed. 2		4 kV/3
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
Approvals relay (according to type):		GOST RINA

ORDERING INFORMATION

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

4	8	.	5	2	.	7	.	0	2	4	.	0	0	5	0
												A	B	C	D

Series

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

No. of poles
1 = 1 pole for 48.31, 10 A
48.61, 16 A
2 = 2 pole 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 = CO (nPDT)

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

D: Special versions
0 = Standard

TECHNICAL DATA

INSULATION

Insulation according to EN 61810-1 ed. 2		insulation rated voltage	V	250
		rated impulse withstand voltage	kV	4
		pollution degree		3 (48.31/61/62) / 2 (48.52)
		overvoltage category		III
Dielectric strength between adjacent contacts	V AC	2,000 (48.52)		2,500 (48.62)

CONDUCTED DISTURBANCE IMMUNITY

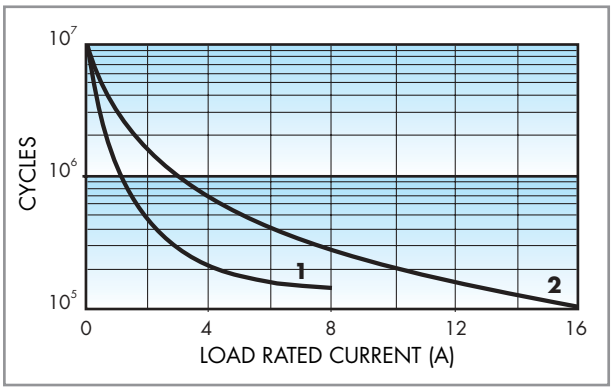
Burst (5...50)ns, 5 kHz, on A1 - A2	EN 61000-4-4	level 4 (4 kV)
Surge (1.2/50 µs) on A1 - A2 (differential mode)	EN 61000-4-5	level 3 (2 kV)

OTHER DATA

Bounce time: NO/NC	ms	2/5			
Vibration resistance (10...55)Hz, max. ± 1 mm: NO/NC	g/g	10/4 (for 1 CO or SPDT)		3/3 (for 2 CO or DPDT)	
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)	1.2 (48.62)
Wire strip length	mm	8			
Screw torque	Nm	0.5			
Max wire size		solid cable		stranded cable	
	mm²	1x6 / 2x2.5		1x4 / 2x2.5	
	AWG	1x10 / 2x14		1x12 / 2x14	

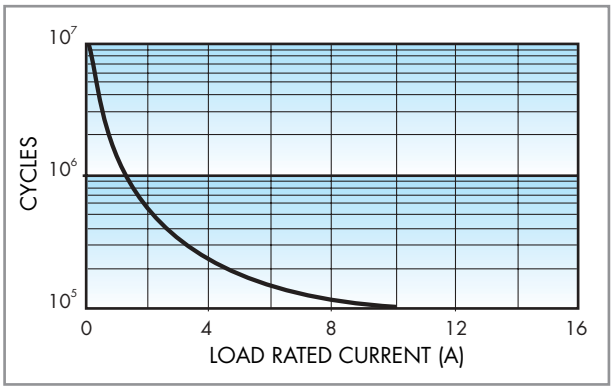
CONTACT SPECIFICATIONS

F 48/1



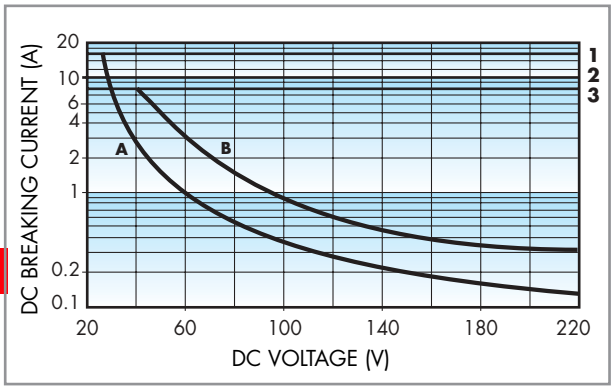
Electrical life vs AC1 load.
1 - Type 48.52 (8 A)
2 - Type 48.31 (10 A)
Type 48.61 (16 A)

F 48/2



Electrical life vs AC1 load.
Type 48.62 (10 A)

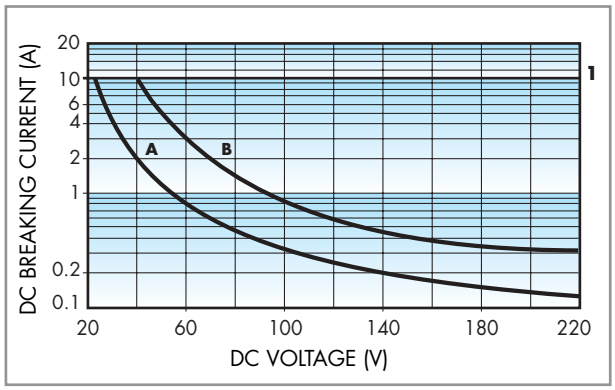
H 48/1



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 ≥ $100 \cdot 10^3$ 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 ≥ $100 \cdot 10^3$ 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

DC VERSION DATA (0.5 W sensitive)

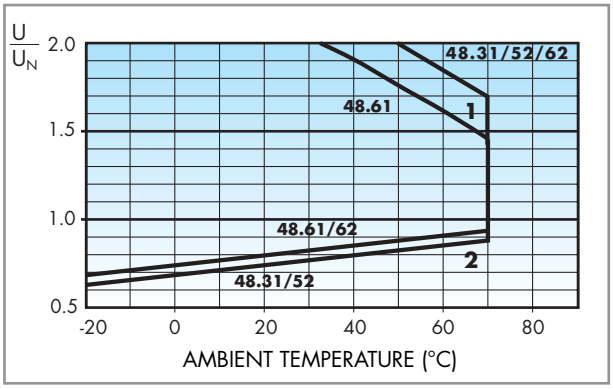
Nominal voltage U_N	Coil code	Operating range U_{min}*	Operating range U_{max}	Rated coil consumption I at U_N
V		V	V	mA
12	**7**.012	8.8	21	41
24	**7**.024	17.5	42	22.2
125	**7**.125	92	218	4

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

AC VERSION DATA

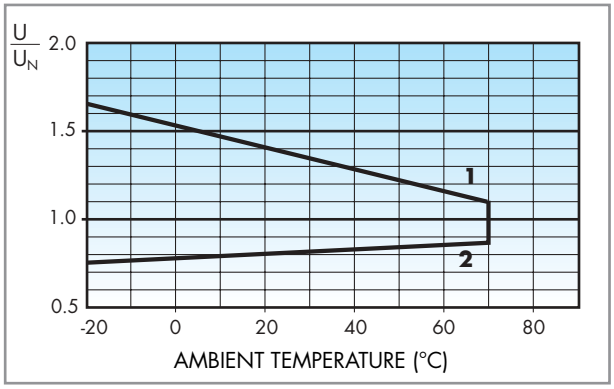
Nominal voltage U_N	Coil code	Operating range U_{min}	Operating range U_{max}	Rated coil consumption I at U_N (50Hz)
V		V	V	mA
12	**8**.012	9.6	13.2	90.5
24	**8**.024	19.2	26.4	46
110	**8**.110	88	121	10.1
120	**8**.120	96	132	11.8
230	**8**.230	184	253	7.0

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.

48

COMBINATIONS

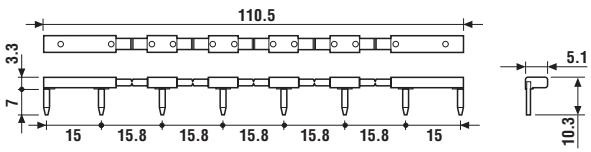
Code	Type of Socket	Type of Relay	Module	Retaining Clip
48.31	95.03	40.31	99.02	095.01
48.52	95.05	40.52	99.02	095.01
48.61	95.05	40.61	99.02	095.01
48.62	95.05	44.62	99.02	095.01

ACCESSORIES


095.18

8-way jumper link	095.18

- Rated values: 10 A - 250 V




060.72

Sheet of marker tags (72 tags), 6x12 mm	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: