

## Features

### 1 & 2 Pole relay range

- 40.31 - 1 Pole 10 A (3.5 mm pin pitch)
- 40.51 - 1 Pole 10 A (5 mm pin pitch)
- 40.52 - 2 Pole 8 A (5 mm pin pitch)

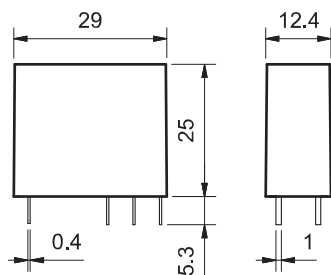
### PCB mount

- direct or via PCB socket

### 35 mm rail mount

- via screw and screwless sockets

- DC coils (standard or sensitive) & AC coils
- Cadmium Free contact material
- 8 mm, 6 kV (1.2/50 μs) isolation, coil-contacts
- UL Listing (certain relay/socket combinations)
- Flux proof: RT II standard, (RT III option)
- 95 series sockets
- Coil EMC suppression
- Timer accessories 86 series



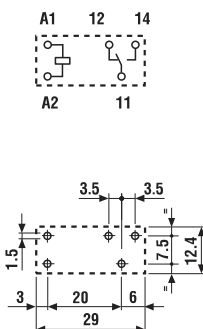
FOR UL RATINGS SEE:

"General technical information" page V

### 40.31



- 3.5 mm contact pin pitch
- 1 Pole 10 A
- PCB or 95 series sockets

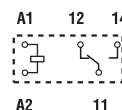


Copper side view

### 40.51



- 5 mm contact pin pitch
- 1 Pole 10 A
- PCB or 95 series sockets

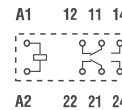


Copper side view

### 40.52



- 5 mm contact pin pitch
- 2 Pole 8 A
- PCB or 95 series sockets



Copper side view

### Contact specification

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

### Coil specification

Nominal voltage (U <sub>N</sub> ) V AC (50/60 Hz)	6 - 12 - 24 - 48 - 60 - 110 - 120 - 230 - 240		
V DC	5 - 6 - 7 - 9 - 12 - 14 - 18 - 21 - 24 - 28 - 36 - 48 - 60 - 90 - 110 - 125		
Rated power AC/DC/sens. DC VA (50 Hz)/W/W	1.2/0.65/0.5	1.2/0.65/0.5	1.2/0.65/0.5
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>
DC/sens. DC	(0.73...1.5)U <sub>N</sub> /(0.73...1.75)U <sub>N</sub>	(0.73...1.5)U <sub>N</sub> /(0.73...1.75)U <sub>N</sub>	(0.73...1.5)U <sub>N</sub> /(0.73...1.75)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> /20 · 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>	200 · 10 <sup>3</sup>	100 · 10 <sup>3</sup>
Operate/release time ms	7/3 - (12/4 sensitive)	7/3 - (12/4 sensitive)	7/3 - (12/4 sensitive)
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...+85	-40...+85	-40...+85
Environmental protection	RT II**	RT II**	RT II**

### Approvals (according to type)



\*\* See general technical information "Guidelines for automatic flow solder processes" page II .

**Features**

- 40.61 - 1 Pole 16 A (5 mm pin pitch)
- 40.xx.6 - Bistable versions of the 40.31, 40.51, 40.52 & 40.61 relays

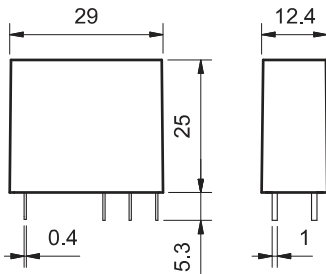
**PCB mount**

- direct or via PCB socket

**35 mm rail mount**

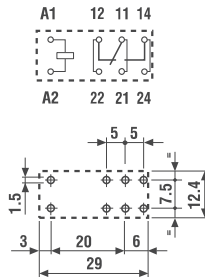
- via screw and screwless sockets

- DC coils & AC coils
- Cadmium Free option available
- 8 mm, 6 kV (1.2/50 µs) isolation, coil-contacts
- UL Listing (certain 40.61 relay/socket combinations)
- Flux proof: RT II standard, (RT III option)
- 95 series sockets
- Coil EMC suppression
- Timer accessories 86 series



- 5 mm contact pin pitch
- 1 Pole 16 A
- PCB or 95 series sockets

- Bistable (single coil) versions of 40.31/51/52/61
- PCB or 95 series sockets



Copper side view

Bistable version (1 coil) types:

- 40.31.6...
- 40.51.6...
- 40.52.6...
- 40.61.6...

For wiring diagrams see page 8

FOR UL RATINGS SEE: "General technical information" page V

**Contact specification**

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

- See relays
- 40.31
- 40.51
- 40.52
- 40.61

\* With the AgSnO<sub>2</sub> material the maximum peak current is 120 A - 5 ms on normally open contact.

**Coil specification**

Nominal voltage (U <sub>N</sub> )	V AC (50/60 Hz)	6-12-24-48-60-110-120-230-240	5 - 6 - 12 - 24 - 48 - 110
	V DC	***See table	5 - 6 - 12 - 24 - 48 - 110
Rated power AC/DC/sens. DC	VA (50 Hz)/W/W	1.2/0.65/0.5	1.0/1.0/-
Operating range	AC	(0.8...1.1)U <sub>N</sub>	(0.8...1.1)U <sub>N</sub>
	DC/sens. DC	(0.73...1.5)U <sub>N</sub> /(0.8...1.5)U <sub>N</sub>	(0.8...1.1)U <sub>N</sub> -
Holding voltage	AC/DC	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>	-

\*\*\* Nominal voltage (U<sub>N</sub>): 5 - 6 - 7 - 9 - 12 - 14 - 18 - 21 - 24 - 28 - 36 - 48 - 60 - 90 - 110 - 125 V DC

**Technical data**

Mechanical life AC/DC	cycles	10 · 10 <sup>6</sup> / 20 · 10 <sup>6</sup>	See relays
Electrical life at rated load AC1	cycles	100 · 10 <sup>3</sup>	40.31
Operate/release time	ms	7/3 - (12/4 sensitive)	40.51
Insulation between coil and contacts (1.2/50 µs)	kV	6 (8 mm)	40.52
Dielectric strength between open contacts V AC		1,000	40.61
Ambient temperature range	°C	-40...+85	Min. impulse duration
Environmental protection		RT II**	≥ 20 ms

**Approvals** (according to type)



\*\* See general technical information "Guidelines for automatic flow solder processes" page II.