

**Power relays 1 and 2 pole for direct PCB or socket mount**

**Type 40.31/51**

- 1 CO 12 A (3.5 mm pin pitch)
- 1 CO 12 A (5.0 mm pin pitch)

**Type 40.52**

- 2 CO 8 A (5.0 mm pin pitch)

**Type 40.61**

- 1 CO 16 A (5.0 mm pin pitch)

- Pin length 3.5 mm for PCB mount
- Pin length 5.3 mm for Plug-in mount
- DC coils (650 mW or 500 mW)
- Cadmium-free contact material available
- 8 mm Creepage and Clearance, 6 kV (1.2/50µs) between coil and contact
- Meets EN 60335-1 glow wire requirements
- 95 series sockets for PCB or 35 mm rail mounting (EN 60715) with Screw, Screwless or Push-in terminals
- Coil Indication and EMC suppression modules 99 series and Timer module 86.30 options
- Environmental protection:  
RT II - flux proof (Standard)  
RT III - wash tight (Option)

\* Mounted on sockets ≤ 10 A

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

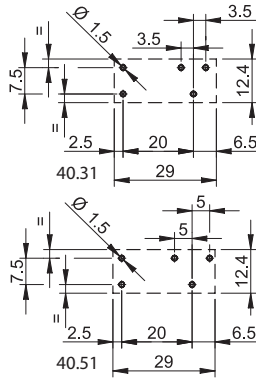
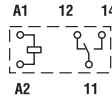
FOR UL RATINGS SEE:  
"General technical information" page V

For outline drawing see page 12

**40.31/51**



- 1 CO 12 A on PCB, 10 A with socket
- 3.5 mm pin pitch (40.31), 5.0 mm pin pitch (40.51)
- PCB or 95 Series socket mount



Copper side view

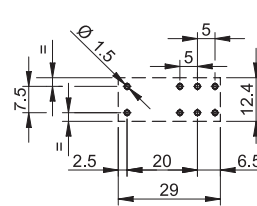
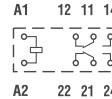
Pin length 3.5 mm for PCB only  
Pin length 5.3 mm for PCB or sockets

See ordering information

**40.52**



- 2 CO 8 A
- 5.0 mm pin pitch
- PCB or 95 Series socket mount

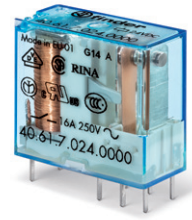


Copper side view

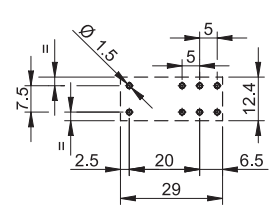
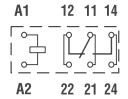
Pin length 5.3 mm for PCB or sockets

See ordering information

**40.61**



- 1 CO 16 A
- 5.0 mm pin pitch
- PCB or 95 Series socket mount



Copper side view

Pin length 3.5 mm for PCB only  
Pin length 5.3 mm for PCB or sockets

See ordering information

<b>Contact specification</b>		40.31/51	40.52	40.61
Contact configuration		1 CO (SPDT)	2 CO (DPDT)	1 CO (SPDT)
Rated current/Maximum peak current	A	12*/20	8/15	16/30**
Rated voltage/Maximum switching voltage	V AC	250/400	250/400	250/400
Rated load AC1	VA	3000	2000	4000
Rated load AC15 (230 V AC)	VA	1000	750	1000
Single phase motor rating (230 V AC)	kW	0.55	0.37	0.55
Breaking capacity DC1: 30/110/220 V	A	12/0.6/0.25	8/0.6/0.25	16/0.6/0.25
Minimum switching load	mW (V/mA)	300 (5/5)	300 (5/5)	500 (10/5)
Standard contact material		AgNi	AgNi	AgCdO
<b>Coil specification</b>				
Nominal voltage (U <sub>N</sub> )	V AC (50/60 Hz)	—	—	—
	V DC	5 - 6 - 7 - 9 - 12 - 14 - 18 - 21 - 24 - 28 - 36 - 48 - 60 - 90 - 110 - 125		
Rated power DC/sensitive DC	W	0.65/0.5	0.65/0.5	0.65/0.5
Operating range	AC	—	—	—
	DC/sensitive DC	(0.73...1.5)U <sub>N</sub> /(0.73...1.5)U <sub>N</sub>		
Holding voltage	DC	0.4 U <sub>N</sub>	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>	0.1 U <sub>N</sub>
<b>Technical data</b>				
Mechanical life	cycles	10 · 10 <sup>6</sup>	10 · 10 <sup>6</sup>	10 · 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	7/3 (10/3 sensitive)	7/3 (12/4 sensitive)	7/3 (10/3 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	1000	1000	1000
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.

**Power relays 1 and 2 pole for direct PCB or socket mount**

**Type 40.31/51**

- 1 CO 10 A (3.5 mm pin pitch)
- 1 CO 10 A (5.0 mm pin pitch)

**Type 40.52**

- 2 CO 8 A (5.0 mm pin pitch)

**Type 40.61**

- 1 CO 16 A (5.0 mm pin pitch)

- AC or DC coils according to type
- Cadmium-free contact material
- 8 mm Creepage and Clearance, 6 kV (1.2/50µs) between coil and contact
- Meets EN 60335-1 glow wire requirements
- 95 series sockets for PCB or 35 mm rail mounting (EN 60715) with Screw, Screwless or Push-in terminals
- Coil Indication and EMC suppression modules 99 series and Timer module 86.30 options
- Environmental protection:  
RT II - flux proof (Standard)  
RT III - wash tight (Option)

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

FOR UL RATINGS SEE:

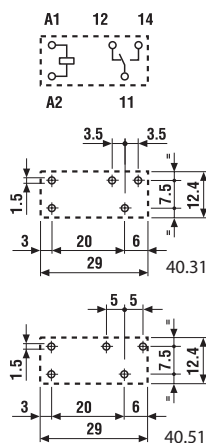
"General technical information" page V

For outline drawing see page 12

**40.31/51**



- 1 CO 10 A
- 3.5 mm pin pitch (40.31), 5.0 mm pin pitch (40.51)
- PCB or 95 Series socket mount



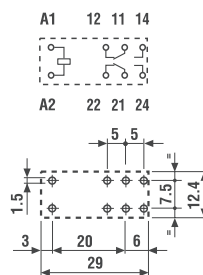
Copper side view

Pin length 5.3 mm for PCB or sockets

**40.52**



- 2 CO 8 A
- 5.0 mm pin pitch
- PCB or 95 Series socket mount



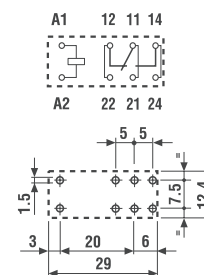
Copper side view

Pin length 5.3 mm for PCB or sockets

**40.61**



- 1 CO 16 A
- 5.0 mm pin pitch
- PCB or 95 Series socket mount



Copper side view

Pin length 5.3 mm for PCB or sockets

**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	250/400	250/400
Rated load AC1	VA	2500	2000	4000
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: 30/110/220 V	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)	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/—/—	1.2/0.65/0.5	1.2/—/—
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...1.5)U <sub>N</sub>	—
Holding voltage	AC/DC	0.8 U <sub>N</sub> /—	0.8 U <sub>N</sub> /0.4 U <sub>N</sub>	0.8 U <sub>N</sub> /—
Must drop-out voltage	AC/DC	0.2 U <sub>N</sub> /—	0.2 U <sub>N</sub> /0.1 U <sub>N</sub>	0.2 U <sub>N</sub> /—

**Technical data**

Mechanical life	cycles	10 · 10 <sup>6</sup>	10 · 10 <sup>6</sup>	10 · 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	7/3	7/3 - (12/4 sensitive)	7/3
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	1000	1000	1000
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.