

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 AgSnO₂ material the maximum peak current is 120 A - 5 ms on normally open contact.

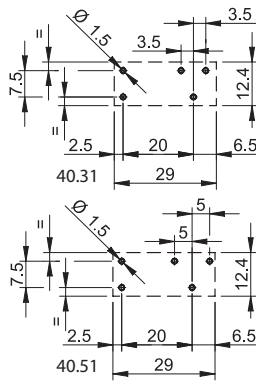
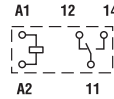
FOR UL RATINGS SEE:
"General technical information" page V

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

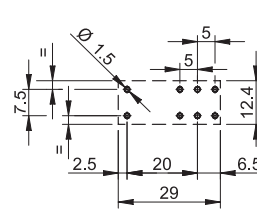
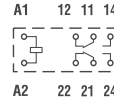
Pin length 3.5 mm for PCB only
Pin length 5.3 mm for PCB or sockets

See ordering information

40.52



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

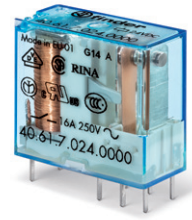


Copper side view

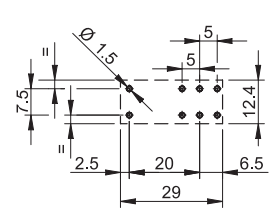
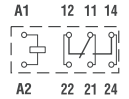
Pin length 5.3 mm for PCB or sockets

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

Contact specification

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

Coil specification

Nominal voltage (U _N)	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 _N /(0.73...1.5)U _N		
Holding voltage	DC	0.4 U _N	0.4 U _N	0.4 U _N
Must drop-out voltage	DC	0.1 U _N	0.1 U _N	0.1 U _N

Technical data

Mechanical life	cycles	10 · 10 ⁶	10 · 10 ⁶	10 · 10 ⁶
Electrical life at rated load AC1	cycles	200 · 10 ³	100 · 10 ³	100 · 10 ³
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 AgSnO₂ material the maximum peak current is 120 A - 5 ms on normally open contact.

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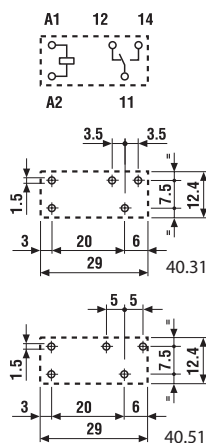
"General technical information" page V

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



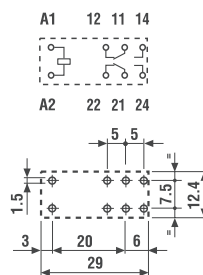
Copper side view

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



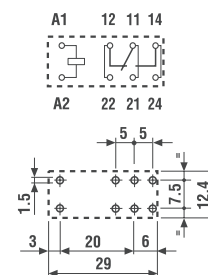
Copper side view

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 _N)	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 _N	(0.8...1.1)U _N	(0.8...1.1)U _N
	DC/sens. DC	—	(0.73...1.5)U _N /(0.73...1.5)U _N	—
Holding voltage	AC/DC	0.8 U _N /—	0.8 U _N /0.4 U _N	0.8 U _N /—
Must drop-out voltage	AC/DC	0.2 U _N /—	0.2 U _N /0.1 U _N	0.2 U _N /—

Technical data

Mechanical life	cycles	10 · 10 ⁶	10 · 10 ⁶	10 · 10 ⁶
Electrical life at rated load AC1	cycles	200 · 10 ³	100 · 10 ³	100 · 10 ³
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.