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)

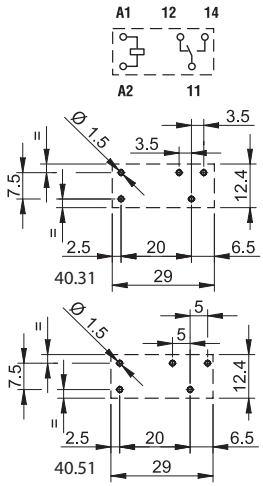
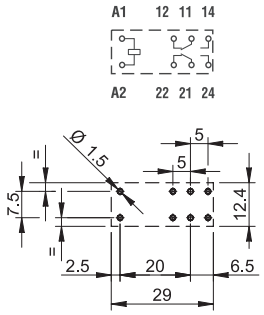
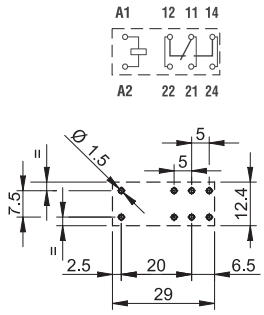
- Pin length 3.5 mm for PCB mount
- Pin length 5.3 mm for Plug-in mount
- DC coils (650 mW or 500 mW)
- Cadmium-free contact material available
- 8 mm Creepage and Clearance, 6 kV (1.2/50µs) between coil and contact
- Meets EN 60335-1 glow wire requirements
- 95 series sockets for PCB or 35 mm rail mounting (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 $AgSnO_2$ 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	40.52	40.61
	• 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	• 2 CO 8 A • 5.0 mm pin pitch • PCB or 95 Series socket mount	• 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	Copper side view Pin length 5.3 mm for PCB or sockets See ordering information	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	(0.73…1.5)U_N/(0.73…1.5)U_N	(0.73…1.5)U_N/(0.8…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	$10 \cdot 10^6$	$10 \cdot 10^6$	$10 \cdot 10^6$
Electrical life at rated load AC1 cycles	$200 \cdot 10^3$	$100 \cdot 10^3$	$100 \cdot 10^3$
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.

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A

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)

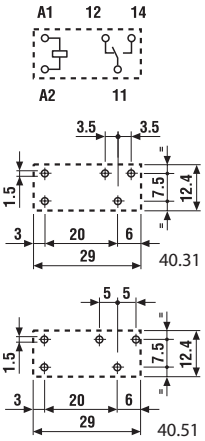
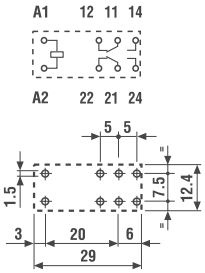
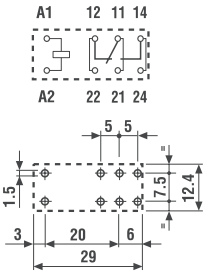
Type 40.61
- 1 CO 16 A (5.0 mm pin pitch)

- 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 $AgSnO_2$ 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	40.52	40.61
	• 1 CO 10 A • 3.5 mm pin pitch (40.31), 5.0 mm pin pitch (40.51) • PCB or 95 Series socket mount	• 2 CO 8 A • 5.0 mm pin pitch • PCB or 95 Series socket mount	• 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	Copper side view Pin length 5.3 mm for PCB or sockets	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	$10 \cdot 10^6$	$10 \cdot 10^6$	$10 \cdot 10^6$
Electrical life at rated load AC1 cycles	$200 \cdot 10^3$	$100 \cdot 10^3$	$100 \cdot 10^3$
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.

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