

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)

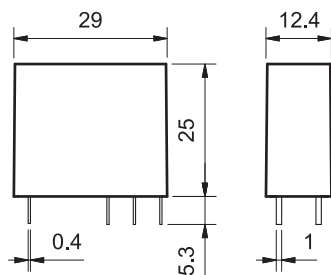
PCB mount

- 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 μ s) 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

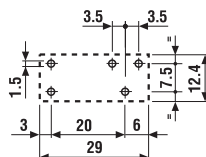
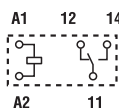


FOR UL HORSEPOWER AND PILOT DUTY RATINGS
SEE "General technical information" page V

40.31



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

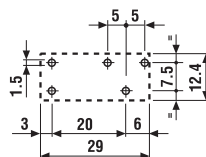
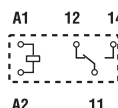


Copper side view

40.51



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

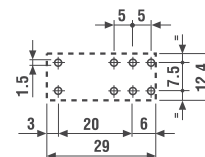
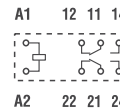


Copper side view

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_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	1.2/0.65/0.5	1.2/0.65/0.5	1.2/0.65/0.5
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...1.75) U_N	(0.73...1.5) U_N /(0.73...1.75) U_N	(0.73...1.5) U_N /(0.73...1.75) 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 /20 · 10 ⁶	10 · 10 ⁶ /20 · 10 ⁶
Electrical life at rated load AC1 cycles	200 · 10 ³	200 · 10 ³	100 · 10 ³
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 μ s) 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

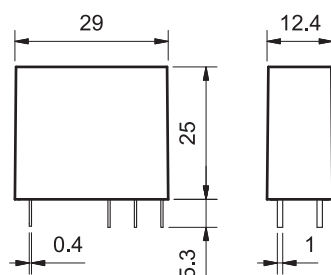
PCB mount

- 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



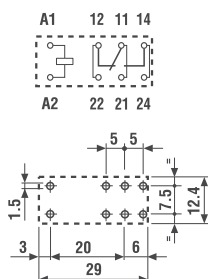
FOR UL HORSEPOWER AND PILOT DUTY RATINGS
 SEE "General technical information" page V



- 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

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

Coil specification

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

Technical data

Mechanical life AC/DC	cycles	10 · 10 ⁶ / 20 · 10 ⁶	See relays
Electrical life at rated load AC1	cycles	100 · 10 ³	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)



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

*** Nominal voltage (U_N):
 5 - 6 - 7 - 9 - 12 - 14 - 18 - 21 -
 24 - 28 - 36 - 48 - 60 - 90 -
 110 - 125 V DC

Ordering information

Example: 40 series PCB relay, 2 CO (DPDT), 230 V AC coil.

4

0

.

5

2

.

8

.

2

3

0

.

0

0

0

0

Series —

Type —

1 = PCB - 3.5 mm pinning, flat
3 = PCB - 3.5 mm pinning
4 = PCB - 3.5 mm pinning
5 = PCB - 5 mm pinning
6 = PCB - 5 mm pinning

No. of poles —

1 = 1 pole
for: 40.11, 10 A/16 A
40.31, 10 A
40.41, 10 A
40.51, 10 A
40.61, 16 A

2 = 2 pole
for: 40.52, 8 A

Coil version —

6 = AC/DC bistable
7 = Sensitive DC
8 = AC (50/60 Hz)
9 = DC

Coil voltage —

See coil specifications

A: Contact material
0 = Standard AgNi
for 40.31/51/52,
AgCdO for 40.61
2 = AgCdO (standard
for 40.11/41)
4 = AgSnO₂
5 = AgNi + Au (5 µm)

B: Contact circuit
0 = CO (nPDT)
3 = NO (nPST)

D: Special versions
0 = Standard
1 = Wash tight (RT III)
3 = High temperature (+ 125 °C) wash tight

C: Options
0 = None
16 = With rated current 16 A (for 40.11)

Selecting features and options: only combinations in the same row are possible.
Preferred selections for best availability are shown in **bold**.

Type	Coil version	A	B	C	D
40.11	sensitive DC	2 - 4	0	0	0
40.11	sensitive DC	2 - 4	0	16	/
40.41	sensitive DC	0 - 2	0 - 3	0	0
40.31/51	AC-sens. DC	0 - 2 - 5	0 - 3	0	0 - 1
40.31/51	DC	0 - 2 - 5	0 - 3	0	0 - 1 - 3
40.52	AC-sens. DC	0 - 2 - 5	0 - 3	0	0 - 1
40.52	DC	0 - 2 - 5	0 - 3	0	0 - 1 - 3
40.61	AC-sens. DC	0 - 4	0 - 3	0	0 - 1
40.61	DC	0 - 4	0 - 3	0	0 - 1 - 3
40.31/51/ 52/61	bistable	0	0	0	0