

Plug-in mount
10 A General purpose relay

Type 60.12

- 2 pole, 10 A

Type 60.13

- 3 pole, 10 A

- 2 & 3 pole changeover contacts
- Cadmium Free contacts (preferred version)
- AC coils & DC coils
- UL Listing (certain relay/socket combinations)
- Contact material options
- Lockable test button with mechanical flag indicator (preferred version)
- 90 series sockets
- Coil EMC suppression
- Timer accessories 86 series
- European Patent

FOR UL RATINGS SEE:

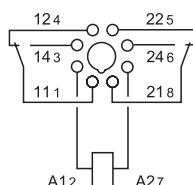
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For outline drawing see page 8

60.12



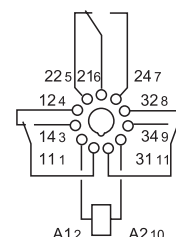
- 2 pole, 10 A
- 8 pin plug-in



60.13



- 3 pole, 10 A
- 11 pin plug-in



Contact specification

Contact configuration		2 CO (DPDT)	3 CO (3PDT)
Rated current/Maximum peak current	A	10/20	10/20
Rated voltage/ Maximum switching voltage	V AC	250/400	250/400
Rated load AC1	VA	2500	2500
Rated load AC15 (230 V AC)	VA	500	500
Single phase motor rating (230 V AC)	kW	0.37	0.37
Breaking capacity DC1: 30/110/220 V	A	10/0.4/0.15	10/0.4/0.15
Minimum switching load	mW (V/mA)	500 (10/5)	500 (10/5)
Standard contact material		AgNi	AgNi

Coil specification

Nominal voltage (U _N)	V AC (50/60 Hz)	6 - 12 - 24 - 48 - 60 - 110 - 120 - 230 - 240 - 400	
	V DC	6 - 12 - 24 - 48 - 60 - 110 - 125 - 220	
Rated power AC/DC	VA (50 Hz)/W	2.2/1.3	2.2/1.3
Operating range	AC	(0.8...1.1)U _N	(0.8...1.1)U _N
	DC	(0.8...1.1)U _N	(0.8...1.1)U _N
Holding voltage	AC/DC	0.8 U _N / 0.5 U _N	0.8 U _N / 0.5 U _N
Must drop-out voltage	AC/DC	0.2 U _N / 0.1 U _N	0.2 U _N / 0.1 U _N

Technical data

Mechanical life AC/DC	cycles	20 · 10 ⁶ / 50 · 10 ⁶	20 · 10 ⁶ / 50 · 10 ⁶
Electrical life at rated load AC1	cycles	200 · 10 ³	200 · 10 ³
Operate/release time	ms	11/4	11/4
Insulation between coil and contacts (1.2/50 μs)	kV	4	3.6
Dielectric strength between open contacts	V AC	1000	1000
Ambient temperature range	°C	-40...+70	-40...+70
Environmental protection		RT I	RT I

Approvals (according to type)



Plug-in mount - 6 A**Bifurcated contacts for low level switching****Type 60.12 - 52xx**

- 2 pole, 6 A

Type 60.13 - 52xx

- 3 pole, 6 A

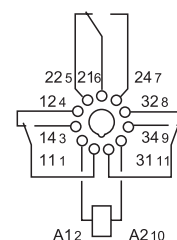
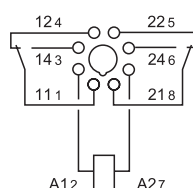
- 2 & 3 pole changeover contacts
- Cadmium Free contacts (Gold plated Silver Nickel)
- AC coils & DC coils
- Lockable test button with mechanical flag indicator (preferred version)
- 90 series sockets
- Coil EMC suppression
- Timer accessories 86 series
- European Patent

60.12 - 52xx

- 2 pole, 6 A
- Bifurcated contacts with AgNi + Au
- 8 pin plug-in

60.13 - 52xx

- 3 pole, 6 A
- Bifurcated contacts with AgNi + Au
- 11 pin plug-in



FOR UL RATINGS SEE:

"General technical information" page V

For outline drawing see page 8

Contact specification

Contact configuration		2 CO (DPDT)	3 CO (3PDT)
Rated current/Maximum peak current	A	6/10	6/10
Rated voltage/Maximum switching voltage	V AC	250/400	250/400
Rated load AC1	VA	1500	1500
Rated load AC15 (230 V AC)	VA	250	250
Single phase motor rating (230 V AC)	kW	0.185	0.185
Breaking capacity DC1: 30/110/220 V	A	6/0.3/0.12	6/0.3/0.12
Minimum switching load	mW (V/mA)	50 (5/5)	50 (5/5)
Standard contact material		AgNi + Au	AgNi + Au

Coil specification

Nominal voltage (U _N)	V AC (50/60 Hz)	6 - 12 - 24 - 48 - 60 - 110 - 120 - 230 - 240 - 400	
	V DC	6 - 12 - 24 - 48 - 60 - 110 - 125 - 220	
Rated power AC/DC	VA (50 Hz)/W	2.2/1.3	2.2/1.3
Operating range	AC	(0.8...1.1)U _N	(0.8...1.1)U _N
	DC	(0.8...1.1)U _N	(0.8...1.1)U _N
Holding voltage	AC/DC	0.8 U _N / 0.5 U _N	0.8 U _N / 0.5 U _N
Must drop-out voltage	AC/DC	0.2 U _N / 0.1 U _N	0.2 U _N / 0.1 U _N

Technical data

Mechanical life AC/DC	cycles	20 · 10 ⁶ / 50 · 10 ⁶	20 · 10 ⁶ / 50 · 10 ⁶
Electrical life at rated load AC1	cycles	250 · 10 ³	250 · 10 ³
Operate/release time	ms	11/4	11/4
Insulation between coil and contacts (1.2/50 μs)	kV	4	3.6
Dielectric strength between open contacts	V AC	1000	1000
Ambient temperature range	°C	-40...+70	-40...+70
Environmental protection		RT I	RT I

Approvals (according to type)

Ordering information

Example: 60 series plug-in relay, 3 CO (3PDT), 12 V DC coil, test button and mechanical indicator.

A

6 0 . 1 3 . 9 . 0 1 2 . 0 0 4 0

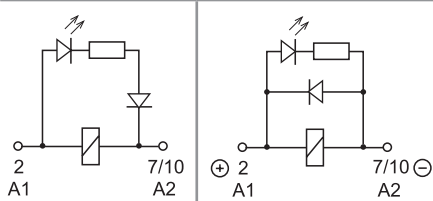
Series	A: Contact material	D: Special versions
Type	0 = Standard	0 = Standard
1 = 8/11 pin plug-in	5 = AgNi + Au	C: Options
6 = Faston 187 (4.8 x 0.8 mm) with flange mount	B: Contact circuit	0 = None
No. of poles	0 = CO (nPDT)	2 = Mechanical indicator
2 = 2 pole	2 = Bifurcated contacts	3 = LED (AC)
3 = 3 pole	60.12/13 - 6 A only	4 = Lockable test button + mechanical indicator
Coil version		5* = Lockable test button + LED (AC)
4 = Current sensing (60.12/13 only)		54* = Lockable test button + LED (AC) + mechanical indicator
8 = AC (50/60 Hz)		6* = LED + diode (DC, polarity positive to pin 2)
9 = DC		7* = Lockable test button + LED + diode (DC, polarity positive to pin 2)
Coil voltage		74* = Lockable test button + LED + diode (DC, polarity positive to pin 2) + mechanical indicator
See coil specifications		* Options not available for 220 V DC and 400 V AC versions.

Selecting features and options: only combinations in the same row are possible.

Preferred selections for best availability are shown in **bold**.

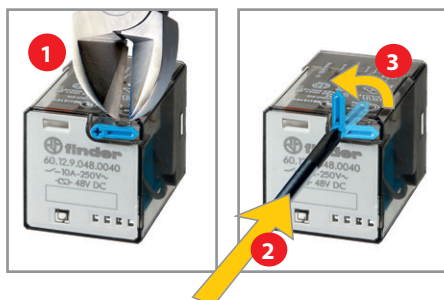
Type	Coil version	A	B	C	D
60.12/13	AC	0	0	0 - 2 - 3 - 4 - 5	0
	AC	0	0	54	/
	AC	5	0 - 2	0 - 2 - 3 - 4 - 5	0
	AC	5	0 - 2	54	/
	DC	0	0	0 - 2 - 4 - 6 - 7	0
	DC	0	0	74	/
	DC	5	0 - 2	0 - 2 - 4 - 6 - 7	0
	DC	5	0 - 2	74	/
	current sensing	0	0	4	0
60.62/63	AC-DC	0 - 5	0	0	0

Descriptions: Options and Special versions



C: Option 3, 5, 54
LED (AC)

C: Option 6, 7, 74
LED + diode (DC, polarity positive to pin 2)



Lockable test button and mechanical flag indicator (0040, 0050, 0054, 0070, 0074)

The dual-purpose Finder test button can be used in two ways:

Case 1) The plastic pip (located directly above the test button) remains intact. In this case, when the test button is pushed, the contacts operate. When the test button is released the contacts return to their former state.

Case 2) The plastic pip is broken-off (using an appropriate cutting tool). In this case, (in addition to the above function), when the test button is pushed and rotated, the contacts are latched in the operating state, and remain so until the test button is rotated back to its former position.

In both cases ensure that the test button actuation is swift and decisive.

