

**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:

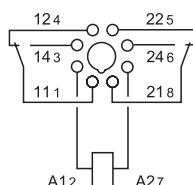
"General technical information" page V

For outline drawing see page 8

**60.12**



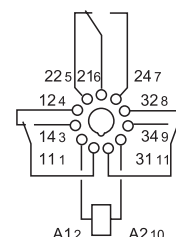
- 2 pole, 10 A
- 8 pin plug-in



**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/<br>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 <sub>N</sub> ) | 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 <sub>N</sub>                           | (0.8...1.1)U <sub>N</sub>               |
|                                   | DC              | (0.8...1.1)U <sub>N</sub>                           | (0.8...1.1)U <sub>N</sub>               |
| Holding voltage                   | AC/DC           | 0.8 U <sub>N</sub> / 0.5 U <sub>N</sub>             | 0.8 U <sub>N</sub> / 0.5 U <sub>N</sub> |
| Must drop-out voltage             | AC/DC           | 0.2 U <sub>N</sub> / 0.1 U <sub>N</sub>             | 0.2 U <sub>N</sub> / 0.1 U <sub>N</sub> |

**Technical data**

|                                                     |        |                                             |                                             |
|-----------------------------------------------------|--------|---------------------------------------------|---------------------------------------------|
| Mechanical life AC/DC                               | cycles | 20 · 10 <sup>6</sup> / 50 · 10 <sup>6</sup> | 20 · 10 <sup>6</sup> / 50 · 10 <sup>6</sup> |
| Electrical life at rated load AC1                   | cycles | 200 · 10 <sup>3</sup>                       | 200 · 10 <sup>3</sup>                       |
| Operate/release time                                | ms     | 11/4                                        | 11/4                                        |
| Insulation between coil<br>and contacts (1.2/50 μs) | kV     | 4                                           | 3.6                                         |
| Dielectric strength<br>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

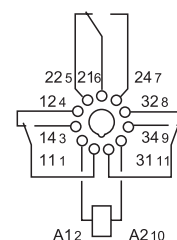
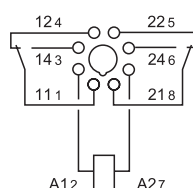
- 2 & 3 pole changeover contacts
- Cadmium Free contacts (Gold plated Silver Nickel)
- AC coils & DC coils
- Lockable test button with mechanical flag indicator (preferred version)
- 90 series sockets
- Coil EMC suppression
- Timer accessories 86 series
- European Patent

**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 <sub>N</sub> ) | 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 <sub>N</sub>                           | (0.8...1.1)U <sub>N</sub>               |
|                                   | DC              | (0.8...1.1)U <sub>N</sub>                           | (0.8...1.1)U <sub>N</sub>               |
| Holding voltage                   | AC/DC           | 0.8 U <sub>N</sub> / 0.5 U <sub>N</sub>             | 0.8 U <sub>N</sub> / 0.5 U <sub>N</sub> |
| Must drop-out voltage             | AC/DC           | 0.2 U <sub>N</sub> / 0.1 U <sub>N</sub>             | 0.2 U <sub>N</sub> / 0.1 U <sub>N</sub> |

**Technical data**

|                                                  |        |                                             |                                             |
|--------------------------------------------------|--------|---------------------------------------------|---------------------------------------------|
| Mechanical life AC/DC                            | cycles | 20 · 10 <sup>6</sup> / 50 · 10 <sup>6</sup> | 20 · 10 <sup>6</sup> / 50 · 10 <sup>6</sup> |
| Electrical life at rated load AC1                | cycles | 250 · 10 <sup>3</sup>                       | 250 · 10 <sup>3</sup>                       |
| 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)