

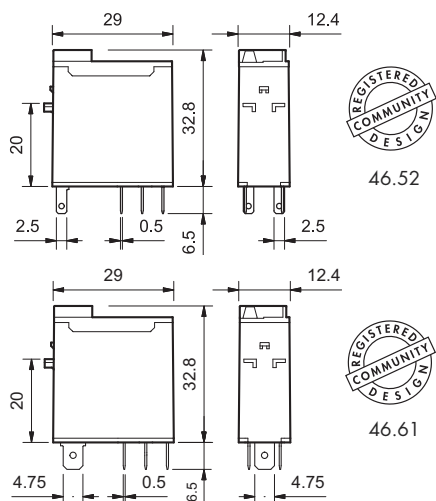
## Features

## 1 & 2 Pole relay range

46.52 - 2 Pole 8 A

46.61 - 1 Pole 16 A

- Socket mount or direct connection via Faston connectors
- AC coils & DC coils
- Available with: lockable test button, mechanical indicator & LED indicator
- 8 mm, 6 kV (1.2/50  $\mu$ s) isolation, coil-contacts
- Cadmium Free contacts
- European Patent



FOR UL RATINGS SEE:

"General technical information" page V

### Contact specification

| Contact configuration                        | 2 CO (DPDT) | 1 CO (SPDT) |
|----------------------------------------------|-------------|-------------|
| Rated current/Maximum peak current A         | 8/15        | 16/25 *     |
| Rated voltage/Maximum switching voltage V AC | 250/440     | 250/440     |
| Rated load AC1 VA                            | 2,000       | 4,000       |
| Rated load AC15 (230 V AC) VA                | 350         | 750         |
| Single phase motor rating (230 V AC) kW      | 0.37        | 0.55        |
| Breaking capacity DC1: 30/110/220 V A        | 6/0.5/0.15  | 12/0.5/0.15 |
| Minimum switching load mW (V/mA)             | 300 (5/5)   | 300 (5/5)   |
| Standard contact material                    | AgNi        | AgNi        |

### Coil specification

|                                   |                 |                                      |                                      |
|-----------------------------------|-----------------|--------------------------------------|--------------------------------------|
| Nominal voltage (U <sub>N</sub> ) | V AC (50/60 Hz) | 12 - 24 - 48 - 110 - 120 - 230 - 240 |                                      |
|                                   | V DC            | 12 - 24 - 48 - 110 - 125             |                                      |
| Rated power                       | VA/W            | 1.2/0.5                              | 1.2/0.5                              |
| Operating range                   | AC              | (0.8...1.1)U <sub>N</sub>            | (0.8...1.1)U <sub>N</sub>            |
|                                   | DC              | (0.73...1.1)U <sub>N</sub>           | (0.73...1.1)U <sub>N</sub>           |
| Holding voltage                   | AC/DC           | 0.8U <sub>N</sub> /0.4U <sub>N</sub> | 0.8U <sub>N</sub> /0.4U <sub>N</sub> |
| Must drop-out voltage             | AC/DC           | 0.2U <sub>N</sub> /0.1U <sub>N</sub> | 0.2U <sub>N</sub> /0.1U <sub>N</sub> |

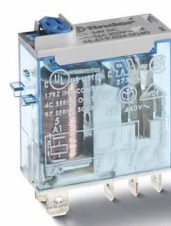
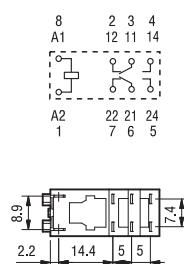
## Technical data

|                                                         |        |                  |                  |
|---------------------------------------------------------|--------|------------------|------------------|
| Mechanical life AC/DC                                   | cycles | $10 \cdot 10^6$  | $10 \cdot 10^6$  |
| Electrical life at rated load AC1                       | cycles | $100 \cdot 10^3$ | $100 \cdot 10^3$ |
| Operate/release time                                    | ms     | 10/3             | 15/5             |
| Insulation between coil and contacts (1.2/50 $\mu$ s)kV |        | 6 (8 mm)         | 6 (8 mm)         |
| Dielectric strength between open contacts V AC          |        | 1,000            | 1,000            |
| Ambient temperature range                               | °C     | -40 ... +70      | -40 ... +70      |
| Environmental protection                                |        | RT II            | RT II            |

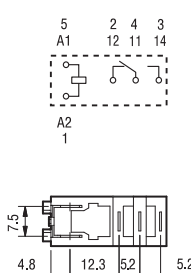
### Approvals (according to type)



- 2 Pole CO, 8 A
- Plug-in/Solder terminals



- 1 Pole CO, 16 A
- Plug-in/Faston 187



\* With the  $\text{AgSnO}_2$  material the maximum peak current is 80 A - 5 ms on normally open contact.

## Ordering information

Example: 46 series Miniature industrial relay, 1 CO (SPDT), 24 V DC coil, lockable test button and mechanical indicator.

A

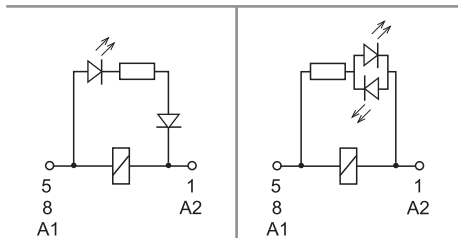
|                                                                                  | 4 | 6 | . | 6 | . | 1 | . | 9 | . | 0 | 2 | 4 | . | 0 | A | 0 | B | 0 | C | 4 | D | 0 |
|----------------------------------------------------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <b>Series</b>                                                                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Type</b>                                                                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 5 = Spade/blade solder terminal (2.5x0.5)mm                                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 6 = Spade/blade terminal Faston 187 (4.8x0.5)mm                                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>No. of poles</b>                                                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1 = 1 pole, 16 A                                                                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 2 = 2 poles, 8 A                                                                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Coil version</b>                                                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 9 = DC                                                                           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 8 = AC (50/60 Hz)                                                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Coil voltage</b>                                                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| See coil specifications                                                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>A: Contact material</b>                                                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 0 = AgNi                                                                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 4 = AgSnO <sub>2</sub> (46.61 only)                                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 5 = AgNi + Au                                                                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>B: Contact circuit</b>                                                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 0 = CO (nPDT)                                                                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>D: Special versions</b>                                                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 0 = Standard                                                                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>C: Options</b>                                                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 2 = Mechanical indicator                                                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 4 = Lockable test button + mechanical indicator                                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 54 = Lockable test button + LED (AC) + mechanical indicator                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 74 = Lockable test button + double LED (DC non-polarized) + mechanical indicator |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

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        |
|-------|--------------|------------------|----------|--------------|----------|
| 46.52 | AC - DC      | <b>0</b> - 5     | <b>0</b> | 2 - <b>4</b> | <b>0</b> |
|       | AC           | 0 - 5            | 0        | 54           | /        |
|       | DC           | 0 - 5            | 0        | 74           | /        |
| 46.61 | AC - DC      | <b>0</b> - 4 - 5 | <b>0</b> | 2 - <b>4</b> | <b>0</b> |
|       | AC           | 0 - 4 - 5        | 0        | 54           | /        |
|       | DC           | 0 - 4 - 5        | 0        | 74           | /        |

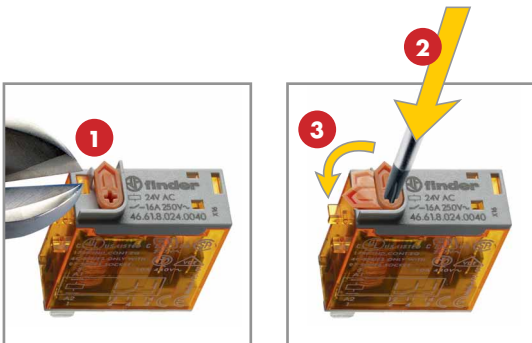
Special versions for Rail Applications on request

## Descriptions: Options



**C: Option 54**  
LED (AC)

**C: Option 74**  
LED (DC, non-polarized)



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

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

**Case 1)** The plastic pip (located directly below 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.

