

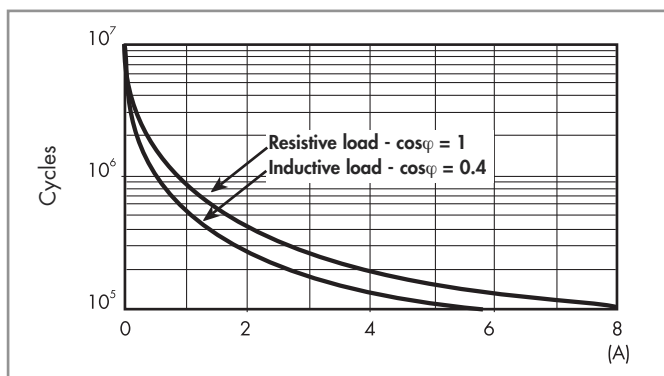
## Technical data

### Insulation according to EN 61810-1

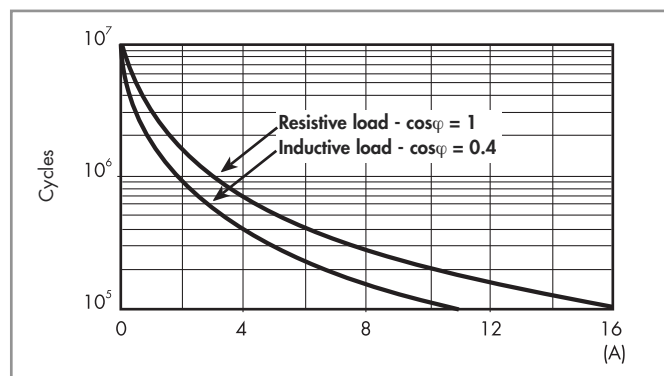
|                                                    |                         | 1 pole              |     | 2 pole              |     |
|----------------------------------------------------|-------------------------|---------------------|-----|---------------------|-----|
| Nominal voltage of supply system                   | V AC                    | 230/400             |     | 230/400             |     |
| Rated insulation voltage                           | V AC                    | 250                 | 400 | 250                 | 400 |
| Pollution degree                                   |                         | 3                   | 2   | 3                   | 2   |
| <b>Insulation between coil and contact set</b>     |                         |                     |     |                     |     |
| Type of insulation                                 |                         | Reinforced (8 mm)   |     | Reinforced (8 mm)   |     |
| Overvoltage category                               |                         | III                 |     | III                 |     |
| Rated impulse voltage                              | kV (1.2/50 μs)          | 6                   |     | 6                   |     |
| Dielectric strength                                | V AC                    | 4,000               |     | 4,000               |     |
| <b>Insulation between adjacent contacts</b>        |                         |                     |     |                     |     |
| Type of insulation                                 |                         | —                   |     | Basic               |     |
| Overvoltage category                               |                         | —                   |     | III                 |     |
| Rated impulse voltage                              | kV (1.2/50 μs)          | —                   |     | 4                   |     |
| Dielectric strength                                | V AC                    | —                   |     | 2,000               |     |
| <b>Insulation between open contacts</b>            |                         |                     |     |                     |     |
| Type of disconnection                              |                         | Micro-disconnection |     | Micro-disconnection |     |
| Dielectric strength                                | V AC/kV (1.2/50 μs)     | 1,000/1.5           |     | 1,000/1.5           |     |
| <b>Conducted disturbance immunity</b>              |                         |                     |     |                     |     |
| Burst (5...50)ns, 5 kHz, on A1 - A2                |                         | EN 61000-4-4        |     | level 4 (4 kV)      |     |
| Surge (1.2/50 μs) on A1 - A2 (differential mode)   |                         | EN 61000-4-5        |     | level 3 (2 kV)      |     |
| <b>Other data</b>                                  |                         | <b>46.61</b>        |     | <b>46.52</b>        |     |
| Bounce time: NO/NC                                 | ms                      | 2/6                 |     | 1/4                 |     |
| Vibration resistance (10...150)Hz: NO/NC           | g                       | 20/12               |     | 20/15               |     |
| Shock resistance                                   | g                       | 20                  |     | 20                  |     |
| Power lost to the environment                      | without contact current | W                   | 0.6 | 0.6                 |     |
|                                                    | with rated current      | W                   | 1.6 | 2                   |     |
| Recommended distance between relays mounted on PCB | mm                      | ≥ 5                 |     |                     |     |

## Contact specification

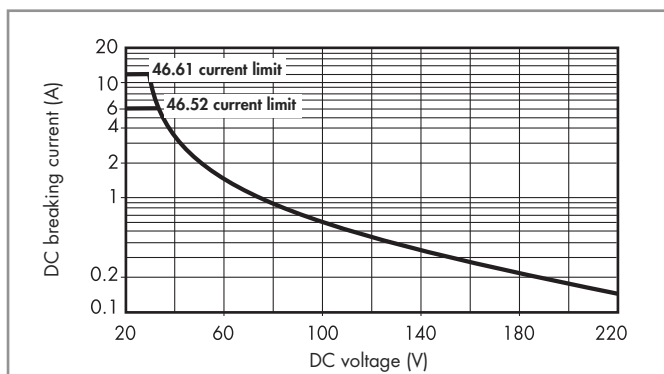
**F 46 - Electrical life (AC) v contact current**  
Type 46.52



**F 46 - Electrical life (AC) v contact current**  
Type 46.61



**H 46 - Maximum DC1 breaking capacity**



- When switching a resistive load (DC1) having voltage and current values under the curve, an electrical life of  $\geq 100 \cdot 10^3$  can be expected.
- In the case of DC13 loads, the connection of a diode in parallel with the load will permit a similar electrical life as for a DC1 load.  
Note: the release time for the load will be increased.

### Coil specifications

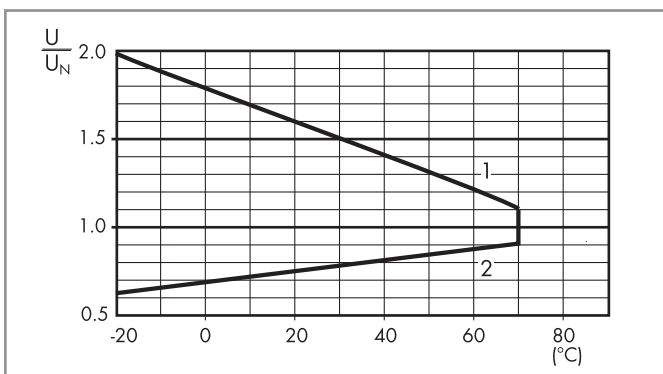
#### DC coil data

| Nominal voltage<br>$U_N$<br>V | Coil code | Operating range<br>$U_{min}$<br>V | $U_{max}$<br>V | Resistance<br>R<br>$\Omega$ | Rated coil consumption<br>I at $U_N$<br>mA |
|-------------------------------|-----------|-----------------------------------|----------------|-----------------------------|--------------------------------------------|
| 12                            | 9.012     | 8.8                               | 13.2           | 300                         | 40                                         |
| 24                            | 9.024     | 17.5                              | 26.4           | 1,200                       | 20                                         |
| 48                            | 9.048     | 35                                | 52.8           | 4,800                       | 10                                         |
| 110                           | 9.110     | 80                                | 121            | 23,500                      | 4.7                                        |
| 125                           | 9.125     | 91.2                              | 138            | 32,000                      | 3.9                                        |

#### AC coil data

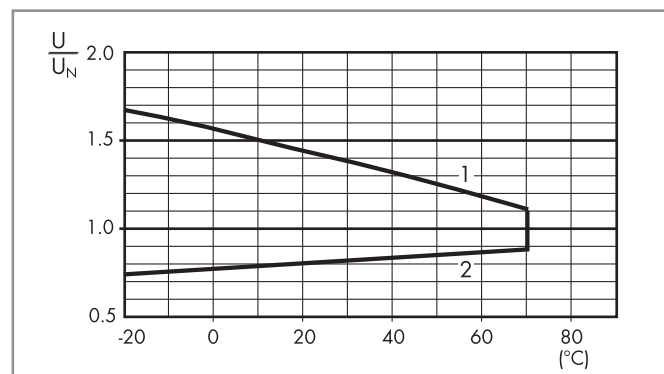
| Nominal voltage<br>$U_N$<br>V | Coil code | Operating range<br>$U_{min}$<br>V | $U_{max}$<br>V | Resistance<br>R<br>$\Omega$ | Rated coil consumption<br>I at $U_N$<br>mA |
|-------------------------------|-----------|-----------------------------------|----------------|-----------------------------|--------------------------------------------|
| 12                            | 8.012     | 9.6                               | 13.2           | 80                          | 90                                         |
| 24                            | 8.024     | 19.2                              | 26.4           | 320                         | 45                                         |
| 48                            | 8.048     | 38.4                              | 52.8           | 1,350                       | 21                                         |
| 110                           | 8.110     | 88                                | 121            | 6,900                       | 9.4                                        |
| 120                           | 8.120     | 96                                | 132            | 9,000                       | 8.4                                        |
| 230                           | 8.230     | 184                               | 253            | 28,000                      | 5                                          |
| 240                           | 8.240     | 192                               | 264            | 31,500                      | 4.1                                        |

R 46 - DC coil operating range v ambient temperature



- 1 - Max. permitted coil voltage.  
2 - Min. pick-up voltage with coil at ambient temperature.

R 46 - AC coil operating range v ambient temperature



- 1 - Max. permitted coil voltage.  
2 - Min. pick-up voltage with coil at ambient temperature.

### Accessories



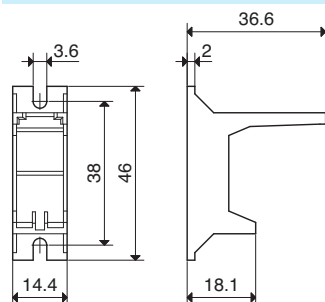
046.05



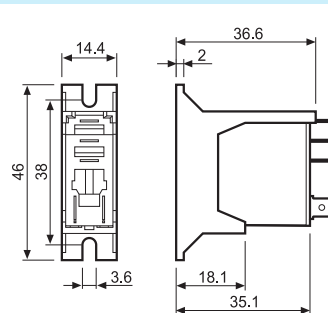
046.05 with relay

Flange mount adaptor for relays types 46.52 and 46.61

046.05



046.05



046.05 with relay



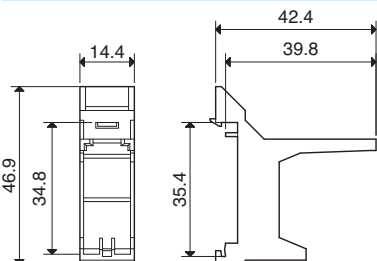
046.07



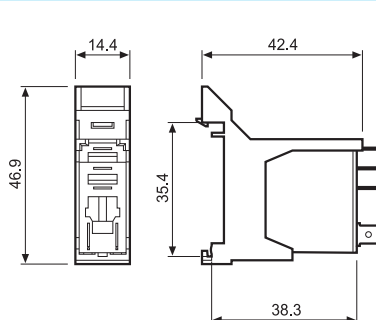
046.07 with relay

35 mm rail adaptor for relays types 46.52 and 46.61

046.07



046.07



046.07 with relay



060.72

Sheet of marker tags for relays types 46.52 and 46.61 (72 tags), 6x12mm

060.72