

## Features

1 & 2 Pole relay interface modules

5 µm Gold plate contacts for low level switching capability

- 49.31-50x0 - 1 Pole 10 A (screw terminal)
- 49.52-50x0 - 2 Pole 8 A (screw terminal)
- 49.72-50x0 - 2 Pole 8 A (screwless terminal)

- 15.5 mm wide
- Ideal interface for PLC and electronic systems
- AC coils & DC coils
- Instant ejection of relay using plastic retaining clip
- Supply status indication and coil suppression module
- Identification labels
- 35 mm rail (EN 60715) mounting

49.31-50x0 / 49.52  
Screw terminal

49.72-50x0  
Screwless terminal



For outline drawing see page 8

### Contact specification

|  |             |
|--|-------------|
| Contact configuration                        | 1 CO (SPDT) |
| Rated current/Maximum peak current A         | 10/20       |
| Rated voltage/Maximum switching voltage V AC | 250/400     |
| Rated load AC1 VA                            | 2,500       |
| Rated load AC15 (230 V AC) VA                | 500         |
| Single phase motor rating (230 V AC) kW      | 0.37        |
| Breaking capacity DC1: 30/110/220V A         | 10/0.3/0.12 |
| Minimum switching load mW (V/mA)             | 50 (5/2)    |
| Standard contact material                    | AgNi + Au   |

### Coil specification

|  |                 |  |
|--|-----------------|--|
| Nominal voltage (U <sub>N</sub> )        | V AC (50/60 Hz) | 12 - 24 - 110 - 120 - 230                              |
|  | V DC            | 12 - 24 - 125  |
| Rated power AC/DC/sens.DC VA (50 Hz)/W/W |                 | 1.2/0.65/0.5   |
| Operating range                          | AC              | (0.8...1.1)U <sub>N</sub>                              |
|  | DC/sensitiv DC  | (0.73...1.5)U <sub>N</sub> /(0.73...1.5)U <sub>N</sub> |
| Holding voltage                          | AC/DC           | 0.8 U <sub>N</sub> / 0.4 U <sub>N</sub>                |
| Must drop-out voltage                    | AC/DC           | 0.2 U <sub>N</sub> / 0.1 U <sub>N</sub>                |

### Technical data

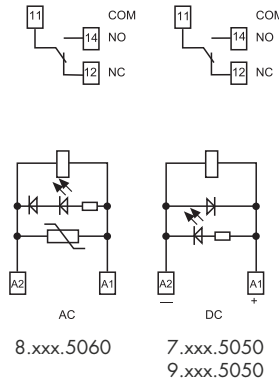
|  |        |                       |
|--|--------|-----------------------|
| Mechanical life                                  | cycles | 10 · 10 <sup>6</sup>  |
| Electrical life at rated load AC1                | cycles | 200 · 10 <sup>3</sup> |
| Operate/release time                             | ms     | 7/4 (AC) - 12/12 (DC) |
| Insulation between coil and contacts (1.2/50 µs) | kV     | 6 (8 mm)              |
| Dielectric strength between open contacts        | V AC   | 1,000                 |
| Ambient temperature range                        | °C     | -40...+70             |
| Protection category                              |        | IP 20                 |

Approvals relay (according to type)

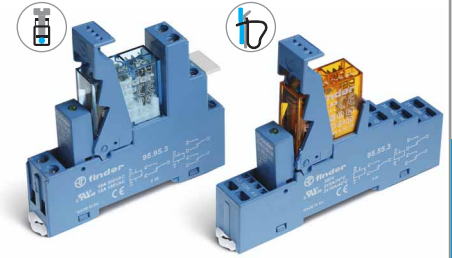
## 49.31-50x0



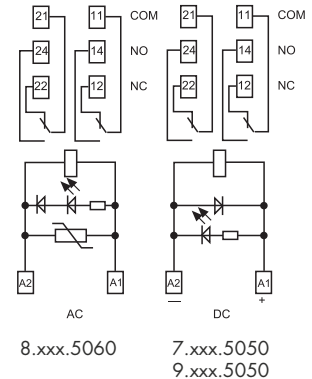
- 1 pole, 10 A
- AgNi + Au contact material
- Screw terminal
- 35 mm rail (EN 60715) mounting



## 49.52/72-50x0



- 2 pole, 8 A
- AgNi + Au contact material
- Screw terminal and screwless terminal
- 35 mm rail (EN 60715) mounting



\* By external parallel connection of the contacts the values within [1 (0.1/1)] can be achieved.

### Features

1 & 2 Pole relay interface modules

AgNi contacts for medium duty switching

49.31-00x0 - 1 Pole 10 A (screw terminal)

49.52-00x0 - 2 Pole 8 A (screw terminal)

49.72-00x0 - 2 Pole 8 A (screwless terminal)

B

- 15.5 mm wide
- Ideal interface for PLC and electronic systems
- AC coils & DC coils
- Instant ejection of relay using plastic retaining clip
- Supply status indication and coil suppression module
- Identification labels
- 35 mm rail (EN 60715) mounting

49.31-00x0 / 49.52  
Screw terminal

49.72-00x0  
Screwless terminal

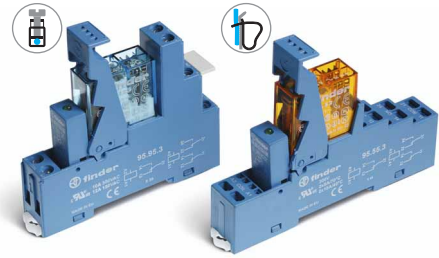


#### 49.31-00x0

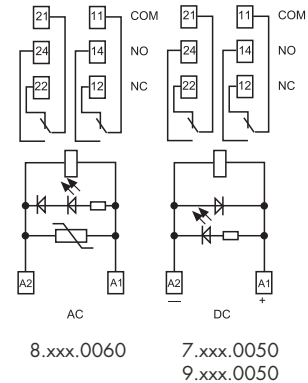
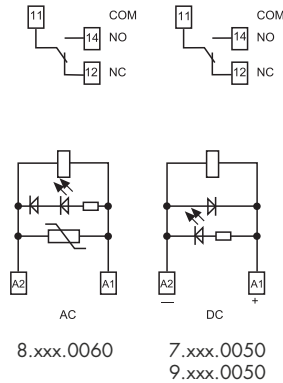


- 1 pole, 10 A
- AgNi contact material
- Screw terminal
- 35 mm rail (EN 60715) mounting

#### 49.52/72-00x0



- 2 pole, 8 A
- AgNi contact material
- Screw terminal and screwless terminal
- 35 mm rail (EN 60715) mounting



For outline drawing see page 8

#### Contact specification

| Contact configuration                        | 1 CO (SPDT) | 2 CO (DPDT) |
|--|-------------|-------------|
| Rated current/Maximum peak current A         | 10/20       | 8/15        |
| Rated voltage/Maximum switching voltage V AC | 250/400     | 250/250     |
| Rated load AC1 VA                            | 2,500       | 2,000       |
| Rated load AC15 (230 V AC) VA                | 500         | 400         |
| Single phase motor rating (230 V AC) kW      | 0.37        | 0.3         |
| Breaking capacity DC1: 30/110/220V A         | 10/0.3/0.12 | 8/0.3/0.12  |
| 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 - 110 - 120 - 230                               | 12 - 24 - 110 - 120 - 230                               |
|--|-----------------|---|---|
|  | V DC            | 12 - 24 - 125   | 12 - 24 - 125   |
| Rated power AC/DC/sens.DC VA (50 Hz)/W/W |                 | 1.2/0.65/0.5  | 1.2/0.65/0.5  |
| Operating range                          | AC              | (0.8...1.1)U <sub>N</sub>                               | (0.8...1.1)U <sub>N</sub>                               |
|  | DC/sensitiv DC  | (0.73...1.5)U <sub>N</sub> / (0.73...1.5)U <sub>N</sub> | (0.73...1.5)U <sub>N</sub> / (0.73...1.5)U <sub>N</sub> |
| Holding voltage AC/DC                    |                 | 0.8 U <sub>N</sub> / 0.4 U <sub>N</sub>                 | 0.8 U <sub>N</sub> / 0.4 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                                  | cycles | 10 · 10 <sup>6</sup>  | 10 · 10 <sup>6</sup>  |
| Electrical life at rated load AC1                | cycles | 200 · 10 <sup>3</sup> | 100 · 10 <sup>3</sup> |
| Operate/release time                             | ms     | 7/4 (AC) - 12/12 (DC) | 7/4 (AC) - 12/12 (DC) |
| Insulation between coil and contacts (1.2/50 μs) | 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             |
| Protection category                              |        | IP 20                 | IP 20                 |

Approvals relay (according to type)



## Features

### 1 & 2 Pole relay interface modules

#### AgCdO contacts for heavy duty switching

- 49.31-20x0 - 1 Pole 10 A (screw terminal)
- 49.52-20x0 - 2 Pole 8 A (screw terminal)
- 49.72-20x0 - 2 Pole 8 A (screwless terminal)

- 15.5 mm wide
- Ideal interface for PLC and electronic systems
- AC coils & DC coils
- Instant ejection of relay using plastic retaining clip
- Supply status indication and coil suppression module
- Identification labels
- 35 mm rail (EN 60715) mounting

49.31-20x0 / 49.52  
Screw terminal

49.72-20x0  
Screwless terminal



For outline drawing see page 8

### Contact specification

|  |             |
|--|-------------|
| Contact configuration                        | 1 CO (SPDT) |
| Rated current/Maximum peak current A         | 10/20       |
| Rated voltage/Maximum switching voltage V AC | 250/400     |
| Rated load AC1 VA                            | 2,500       |
| Rated load AC15 (230 V AC) VA                | 500         |
| Single phase motor rating (230 V AC) kW      | 0.37        |
| Breaking capacity DC1: 30/110/220V A         | 10/0.3/0.12 |
| Minimum switching load mW (V/mA)             | 500 (10/5)  |
| Standard contact material                    | AgCdO       |

### Coil specification

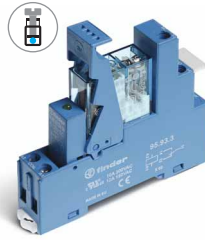
|  |                 |  |
|--|-----------------|--|
| Nominal voltage (U <sub>N</sub> )        | V AC (50/60 Hz) | 12 - 24 - 110 - 120 - 230                              |
|  | V DC            | 12 - 24 - 125  |
| Rated power AC/DC/sens.DC VA (50 Hz)/W/W |                 | 1.2/0.65/0.5   |
| Operating range                          | AC              | (0.8...1.1)U <sub>N</sub>                              |
|  | DC/sensitiv DC  | (0.73...1.5)U <sub>N</sub> /(0.73...1.5)U <sub>N</sub> |
| Holding voltage                          | AC/DC           | 0.8 U <sub>N</sub> / 0.4 U <sub>N</sub>                |
| Must drop-out voltage                    | AC/DC           | 0.2 U <sub>N</sub> / 0.1 U <sub>N</sub>                |

### Technical data

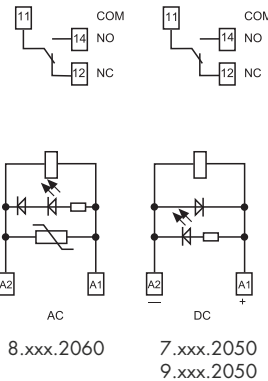
|  |        |                       |
|--|--------|-----------------------|
| Mechanical life                                  | cycles | 10 · 10 <sup>6</sup>  |
| Electrical life at rated load AC1                | cycles | 200 · 10 <sup>3</sup> |
| Operate/release time                             | ms     | 7/4 (AC) - 12/12 (DC) |
| Insulation between coil and contacts (1.2/50 μs) | kV     | 6 (8 mm)              |
| Dielectric strength between open contacts        | V AC   | 1,000                 |
| Ambient temperature range                        | °C     | -40...+70             |
| Protection category                              |        | IP 20                 |

### Approvals relay (according to type)

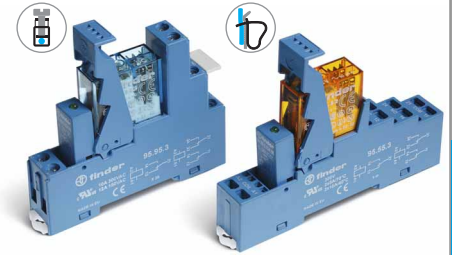
## 49.31-20x0



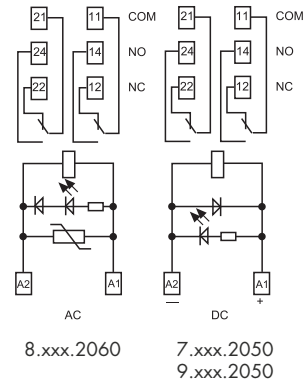
- 1 pole, 10 A
- AgCdO contact material
- Screw terminal
- 35 mm rail (EN 60715) mounting



## 49.52/72-20x0



- 2 pole, 8 A
- AgCdO contact material
- Screw terminal and screwless terminal
- 35 mm rail (EN 60715) mounting



## Features

1 Pole relay interface module

AgCdO contacts for heavy duty switching

49.61-00x0 - 1 Pole 16 A (screw terminal)

49.81-00x0 - 1 Pole 16 A (screwless terminal)

AgSnO<sub>2</sub> contacts for heavy duty, high current inrush switching

49.61-40x0 - 1 Pole 16 A (screw terminal)

49.81-40x0 - 1 Pole 16 A (screwless terminal)

- 15.5 mm wide
- Ideal interface for PLC and electronic systems
- AC coils & DC coils
- Instant ejection of relay using plastic retaining clip
- Supply status indication and coil suppression module
- Identification labels
- 35 mm rail (EN 60715) mounting

49.61  
Screw terminal

49.81-00x0/40x0  
Screwless terminal



For outline drawing see page 8

### Contact specification

|  |             |                    |
|--|-------------|--------------------|
| Contact configuration                        | 1 CO (SPDT) | 1 CO (SPDT)        |
| Rated current/Maximum peak current A         | 16*/30      | 16*/100 (5 ms)     |
| Rated voltage/Maximum switching voltage V AC | 250/400     | 250/400            |
| Rated load AC1 VA                            | 4,000       | 4,000              |
| Rated load AC15 (230 V AC) VA                | 750         | 750                |
| Single phase motor rating (230 V AC) kW      | 0.55        | 0.55               |
| Breaking capacity DC1: 30/110/220V A         | 16/0.3/0.12 | 16/0.3/0.12        |
| Minimum switching load mW (V/mA)             | 500 (5/5)   | 1,000 (10/10)      |
| Standard contact material                    | AgCdO       | AgSnO <sub>2</sub> |

### Coil specification

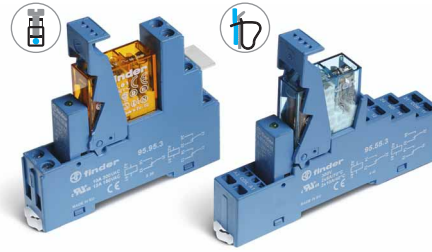
|  |                 |   |   |
|--|-----------------|---|---|
| Nominal voltage (U <sub>N</sub> )        | V AC (50/60 Hz) | 12 - 24 - 110 - 120 - 230                             | 12 - 24 - 110 - 120 - 230                             |
|  | V DC            | 12 - 24 - 125   | 12 - 24 - 125   |
| Rated power AC/DC/sens.DC VA (50 Hz)/W/W |                 | 1.2/0.65/0.5  | 1.2/0.65/0.5  |
| Operating range                          | AC              | (0.8...1.1)U <sub>N</sub>                             | (0.8...1.1)U <sub>N</sub>                             |
|  | DC/sensitiv DC  | (0.73...1.5)U <sub>N</sub> /(0.8...1.5)U <sub>N</sub> | (0.73...1.5)U <sub>N</sub> /(0.8...1.5)U <sub>N</sub> |
| Holding voltage AC/DC                    |                 | 0.8 U <sub>N</sub> / 0.4 U <sub>N</sub>               | 0.8 U <sub>N</sub> / 0.4 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

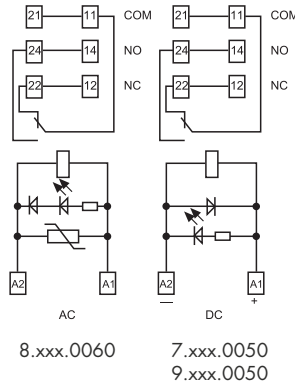
|  |        |                       |                       |
|--|--------|-----------------------|-----------------------|
| Mechanical life                                  | cycles | 10 · 10 <sup>6</sup>  | 10 · 10 <sup>6</sup>  |
| Electrical life at rated load AC1                | cycles | 100 · 10 <sup>3</sup> | 100 · 10 <sup>3</sup> |
| Operate/release time                             | ms     | 7/4 (AC) - 12/12 (DC) | 7/4 (AC) - 12/12 (DC) |
| Insulation between coil and contacts (1.2/50 μs) | 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             |
| Protection category                              |        | IP 20                 | IP 20                 |

Approvals relay (according to type)

## 49.61/81-00x0

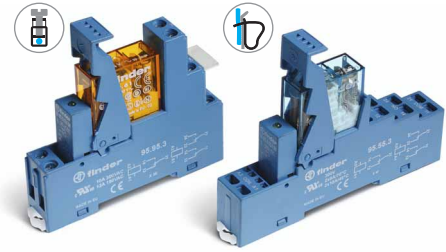


- 1 pole, 16 A\*
- AgCdO contact material
- Screw terminal and screwless terminal
- 35 mm rail (EN 60715) mounting

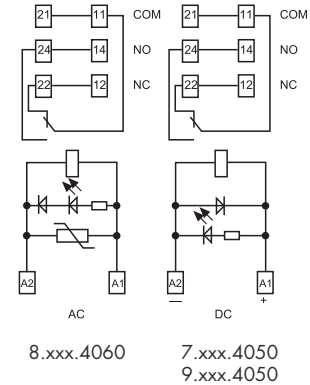


\* For currents >10 A, contact terminals must be connected in parallel (21 with 11, 24 with 14, 22 with 12).

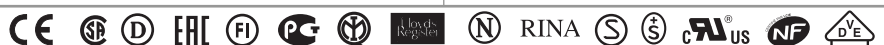
## 49.61/81-40x0



- 1 pole, 16 A\*
- AgSnO<sub>2</sub> contact material
- Screw terminal and screwless terminal
- 35 mm rail (EN 60715) mounting



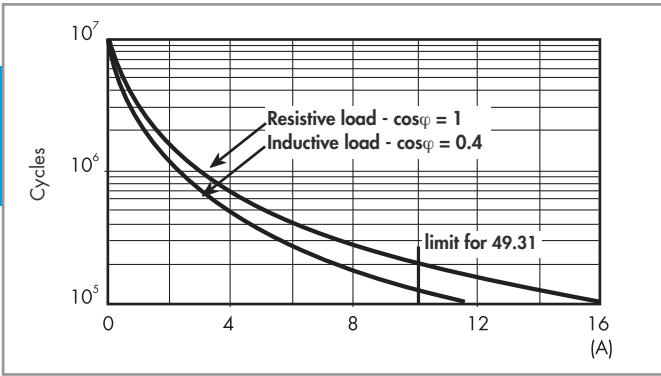
\* For currents >10 A, contact terminals must be connected in parallel (21 with 11, 24 with 14, 22 with 12).



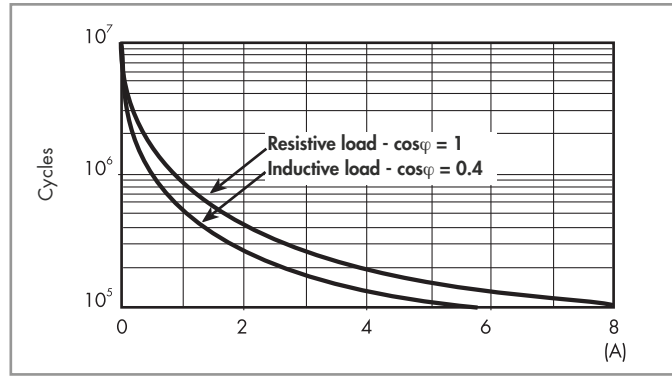


Contact specification

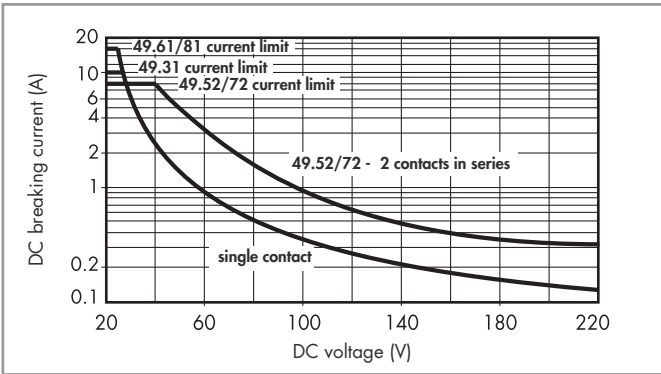
F 49 - Electrical life (AC) v contact current  
Types 49.31/61/81



F 49 - Electrical life (AC) v contact current  
Types 49.52/72



H 49 - Maximum DC1 breaking capacity  
Types 49.31/52/61/72/81



- 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.

B

**Coil specifications**

**DC coil data (0.5 W sensitive)**

| Nominal voltage<br>$U_N$<br>V | Coil code | Operating range  |                | Rated coil consumption<br>I at $U_N$<br>mA |
|-------------------------------|-----------|------------------|----------------|--|
|                               |           | $U_{min}^*$<br>V | $U_{max}$<br>V |  |
| 12                            | 7.012     | 8.8              | 18             | 41   |
| 24                            | 7.024     | 17.5             | 36             | 22.2                                       |
| 125                           | 7.125     | 91.2             | 188            | 4  |

\* $U_{min} = 0.8 U_N$  for 49.61 and 49.81

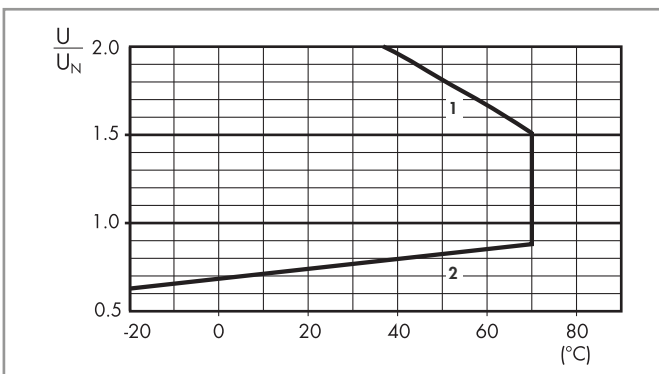
**AC coil data**

| Nominal voltage<br>$U_N$<br>V | Coil code | Operating range |                | Rated coil consumption<br>I at $U_N$ (50Hz)<br>mA |
|-------------------------------|-----------|-----------------|----------------|---|
|                               |           | $U_{min}$<br>V  | $U_{max}$<br>V |   |
| 12                            | 8.012     | 9.6             | 13.2           | 90.5  |
| 24                            | 8.024     | 19.2            | 26.4           | 46  |
| 110                           | 8.110     | 88              | 121            | 10.1  |
| 120                           | 8.120     | 96              | 132            | 11.8  |
| 230                           | 8.230     | 184             | 253            | 7.0   |

**DC coil data (0.65 W)**

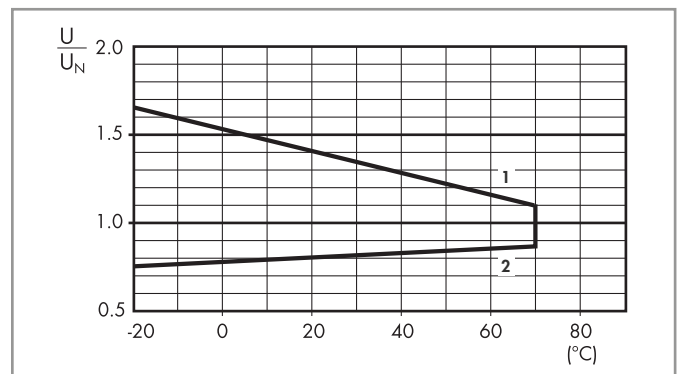
| Nominal voltage<br>$U_N$<br>V | Coil code | Operating range |                | Rated coil consumption<br>I at $U_N$<br>mA |
|-------------------------------|-----------|-----------------|----------------|--|
|                               |           | $U_{min}$<br>V  | $U_{max}$<br>V |  |
| 12                            | 9.012     | 8.8             | 18             | 56   |
| 24                            | 9.024     | 17.5            | 36             | 29   |
| 125                           | 9.125     | 91.2            | 188            | 6  |

**R 49 - DC coil operating range v ambient temperature**  
Standard (650 mW)



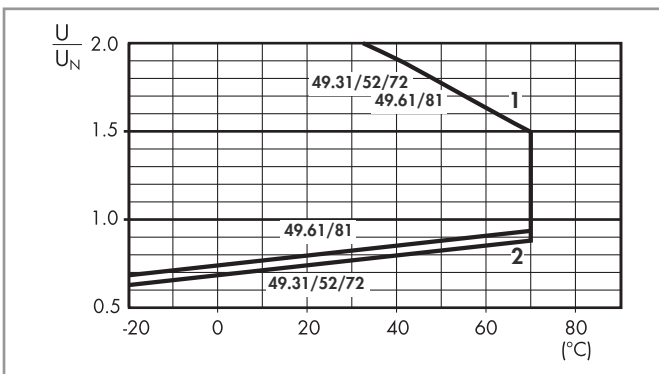
- 1 - Max. permitted coil voltage.
- 2 - Min. pick-up voltage with coil at ambient temperature.

**R 49 - AC coil operating range v ambient temperature**



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

**R 49 - DC coil operating range v ambient temperature**  
Sensitive coil (500 mW)



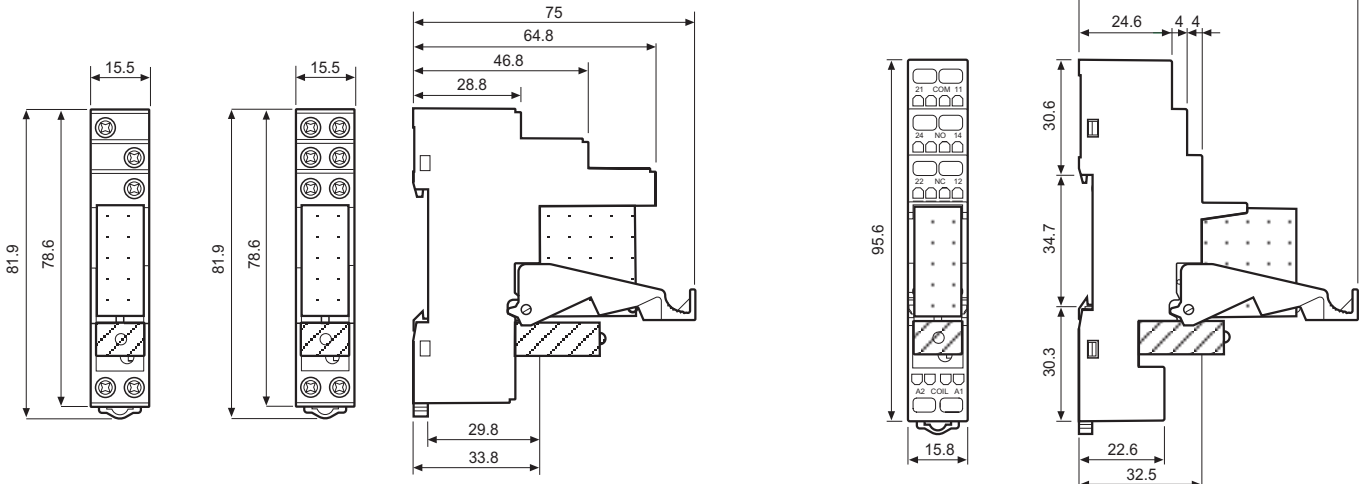
- 1 - Max. permitted coil voltage.
- 2 - Min. pick-up voltage with coil at ambient temperature.

Combinations

| Code  | Type of socket | Type of relay | Module | Retaining clip |
|-------|----------------|---------------|--------|----------------|
| 49.31 | 95.93.3        | 40.31         | 99.80  | 095.91.3       |
| 49.52 | 95.95.3        | 40.52         | 99.80  | 095.91.3       |
| 49.61 | 95.95.3        | 40.61         | 99.80  | 095.91.3       |
| 49.72 | 95.55.3        | 40.52         | 99.80  | 095.91.3       |
| 49.81 | 95.55.3        | 40.61         | 99.80  | 095.91.3       |

B

Outline drawing



49.31                      49.52  
                                    49.61  
49.31-50x0 / 49.31-00x0 /  
49.31-20x0 / 49.52 / 49.61  
Screw terminal



49.72  
49.81  
49.72-50x0 / 49.72-00x0 / 49.72-20x0  
49.81-00x0 / 49.81-40x0  
Screwless terminal



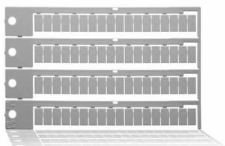
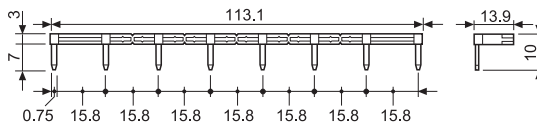
Accessories



095.08



|  |               |                  |
|--|---------------|------------------|
| <b>8-way jumper link</b> for screw terminal versions | 095.08 (blue) | 095.08.0 (black) |
| Rated values   | 10 A - 250 V  |                  |



060.72

|  |        |
|--|--------|
| <b>Sheet of marker tags</b> , plastic, retaining clip 095.91.3, 72 tags, 6x12 mm | 060.72 |
|--|--------|

Packaging codes

How to code and identify retaining clip and packaging options for sockets.

Example:



A Standard packaging  
B Blister packaging

SP Plastic retaining clip