

# Miniature PCB Relays

## 8 - 10 - 12 - 16 A



Medical and  
dentistry



Control panels



Panels for electrical  
distribution



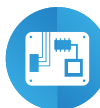
Toys



Automation for  
blinds, grilles  
and shutters



Door and gate  
openers



Electronic  
circuit boards



Vending  
machines





**Power relays 1 and 2 pole for direct PCB or socket mount****Type 40.31/51**

- 1 CO 12 A (3.5 mm pin pitch)
- 1 CO 12 A (5.0 mm pin pitch)

**Type 40.52**

- 2 CO 8 A (5.0 mm pin pitch)

**Type 40.61**

- 1 CO 16 A (5.0 mm pin pitch)

- Pin length 3.5 mm for PCB mount
- Pin length 5.3 mm for Plug-in mount
- DC coils (650 mW or 500 mW)
- Cadmium-free contact material available
- 8 mm Creepage and Clearance, 6 kV (1.2/50µs) between coil and contact
- Meets EN 60335-1 glow wire requirements
- 95 series sockets for PCB or 35 mm rail mounting (EN 60715) with Screw, Screwless or Push-in terminals
- Coil Indication and EMC suppression modules 99 series and Timer module 86.30 options
- Environmental protection:  
RT II - flux proof (Standard)  
RT III - wash tight (Option)

\* Mounted on sockets ≤ 10 A

\*\* With the AgSnO<sub>2</sub> material the maximum peak current is 120 A - 5 ms on normally open contact.

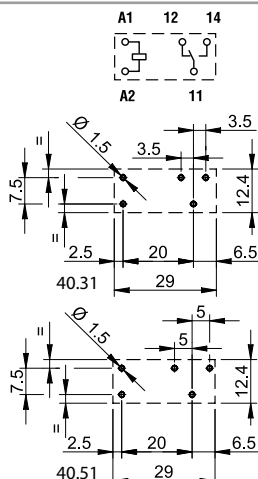
For UL RATINGS SEE:

"General technical information" page V

For outline drawing see page 11

**40.31/51**

- 1 CO 12 A on PCB, 10 A with socket
- 3.5 mm pin pitch (40.31), 5.0 mm pin pitch (40.51)
- PCB or 95 Series socket mount



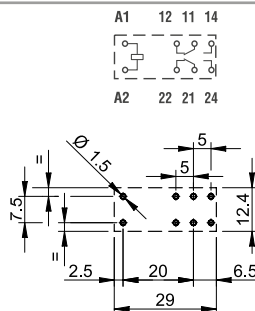
Copper side view

Pin length 3.5 mm for PCB only  
Pin length 5.3 mm for PCB or sockets

See ordering information

**40.52**

- 2 CO 8 A
- 5.0 mm pin pitch
- PCB or 95 Series socket mount



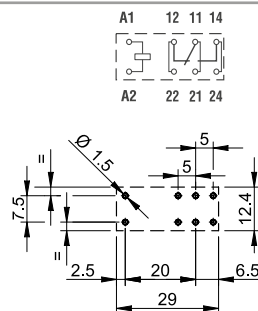
Copper side view

Pin length 3.5 mm for PCB only  
Pin length 5.3 mm for PCB or sockets

See ordering information

**40.61**

- 1 CO 16 A
- 5.0 mm pin pitch
- PCB or 95 Series socket mount



Copper side view

Pin length 3.5 mm for PCB only  
Pin length 5.3 mm for PCB or sockets

See ordering information

**Contact specification**

|                                         |           |             |             |             |
|-----------------------------------------|-----------|-------------|-------------|-------------|
| Contact configuration                   |           | 1 CO (SPDT) | 2 CO (DPDT) | 1 CO (SPDT) |
| Rated current/Maximum peak current      | A         | 12*/20      | 8/15        | 16/30**     |
| Rated voltage/Maximum switching voltage | V AC      | 250/400     | 250/400     | 250/400     |
| Rated load AC1                          | VA        | 3000        | 2000        | 4000        |
| Rated load AC15 (230 V AC)              | VA        | 1000        | 750         | 1000        |
| Single phase motor rating (230 V AC)    | kW        | 0.55        | 0.37        | 0.55        |
| Breaking capacity DC1: 30/110/220 V     | A         | 12/0.6/0.25 | 8/0.6/0.25  | 16/0.6/0.25 |
| Minimum switching load                  | mW (V/mA) | 300 (5/5)   | 300 (5/5)   | 500 (10/5)  |
| Standard contact material               |           | AgNi        | AgNi        | AgCdO       |

**Coil specification**

|                                   |                 |                                                                             |                                                        |                                                       |
|-----------------------------------|-----------------|-----------------------------------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------|
| Nominal voltage (U <sub>N</sub> ) | V AC (50/60 Hz) | —                                                                           | —                                                      | —                                                     |
|                                   | V DC            | 5 - 6 - 7 - 9 - 12 - 14 - 18 - 21 - 24 - 28 - 36 - 48 - 60 - 90 - 110 - 125 |                                                        |                                                       |
| Rated power DC/sensitive DC       | W               | 0.65/0.5                                                                    | 0.65/0.5                                               | 0.65/0.5                                              |
| Operating range                   | AC              | —                                                                           | —                                                      | —                                                     |
|                                   | DC/sensitive 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> | (0.73...1.5)U <sub>N</sub> /(0.8...1.5)U <sub>N</sub> |
| Holding voltage                   | DC              | 0.4 U <sub>N</sub>                                                          | 0.4 U <sub>N</sub>                                     | 0.4 U <sub>N</sub>                                    |
| Must drop-out voltage             | DC              | 0.1 U <sub>N</sub>                                                          | 0.1 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>  | 10 · 10 <sup>6</sup>  |
| Electrical life at rated load AC1                | cycles | 200 · 10 <sup>3</sup> | 100 · 10 <sup>3</sup> | 100 · 10 <sup>3</sup> |
| Operate/release time                             | ms     | 7/3 (10/3 sensitive)  | 7/3 (12/4 sensitive)  | 7/3 (10/3 sensitive)  |
| Insulation between coil and contacts (1.2/50 µs) | kV     | 6 (8 mm)              | 6 (8 mm)              | 6 (8 mm)              |
| Dielectric strength between open contacts        | V AC   | 1000                  | 1000                  | 1000                  |
| Ambient temperature range                        | °C     | -40...+85             | -40...+85             | -40...+85             |
| Environmental protection                         |        | RT II***              | RT II***              | RT II***              |

**Approvals (according to type)**

\*\*\* See general technical information "Guidelines for automatic flow solder processes" page II.

**Power relays 1 and 2 pole for direct PCB or socket mount****Type 40.31/51**

- 1 CO 10 A (3.5 mm pin pitch)
- 1 CO 10 A (5.0 mm pin pitch)

**Type 40.52**

- 2 CO 8 A (5.0 mm pin pitch)

**Type 40.61**

- 1 CO 16 A (5.0 mm pin pitch)

- AC or DC coils according to type
- Cadmium-free contact material
- 8 mm Creepage and Clearance, 6 kV (1.2/50µs) between coil and contact
- Meets EN 60335-1 glow wire requirements
- 95 series sockets for PCB or 35 mm rail mounting (EN 60715) with Screw, Screwless or Push-in terminals
- Coil Indication and EMC suppression modules 99 series and Timer module 86.30 options
- Environmental protection:  
RT II - flux proof (Standard)  
RT III - wash tight (Option)

\* With the AgSnO<sub>2</sub> material the maximum peak current is 120 A - 5 ms on normally open contact.

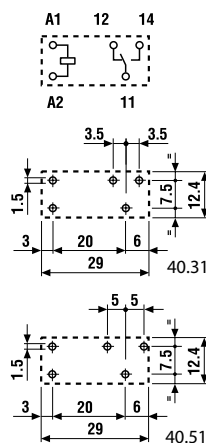
FOR UL RATINGS SEE:

"General technical information" page V

For outline drawing see page 11

**40.31/51**

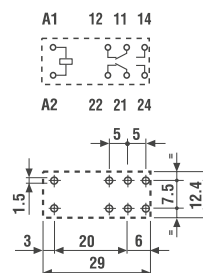
- 1 CO 10 A
- 3.5 mm pin pitch (40.31), 5.0 mm pin pitch (40.51)
- PCB or 95 Series socket mount



Copper side view  
Pin length 5.3 mm for PCB or sockets

**40.52**

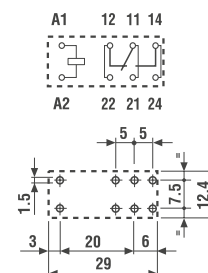
- 2 CO 8 A
- 5.0 mm pin pitch
- PCB or 95 Series socket mount



Copper side view  
Pin length 5.3 mm for PCB or sockets

**40.61**

- 1 CO 16 A
- 5.0 mm pin pitch
- PCB or 95 Series socket mount



Copper side view  
Pin length 5.3 mm for PCB or sockets

**Contact specification**

|                                         |           |             |             |             |
|-----------------------------------------|-----------|-------------|-------------|-------------|
| Contact configuration                   |           | 1 CO (SPDT) | 2 CO (DPDT) | 1 CO (SPDT) |
| Rated current/Maximum peak current      | A         | 10/20       | 8/15        | 16/30*      |
| Rated voltage/Maximum switching voltage | V AC      | 250/400     | 250/400     | 250/400     |
| Rated load AC1                          | VA        | 2500        | 2000        | 4000        |
| Rated load AC15 (230 V AC)              | VA        | 500         | 400         | 750         |
| Single phase motor rating (230 V AC)    | kW        | 0.37        | 0.3         | 0.55        |
| Breaking capacity DC1: 30/110/220 V     | A         | 10/0.3/0.12 | 8/0.3/0.12  | 16/0.3/0.12 |
| Minimum switching load                  | mW (V/mA) | 300 (5/5)   | 300 (5/5)   | 500 (10/5)  |
| Standard contact material               |           | AgNi        | AgNi        | AgCdO       |

**Coil specification**

|                                   |                 |                                               |                                                                             |                           |
|-----------------------------------|-----------------|-----------------------------------------------|-----------------------------------------------------------------------------|---------------------------|
| Nominal voltage (U <sub>N</sub> ) | V AC (50/60 Hz) | 6 - 12 - 24 - 48 - 60 - 110 - 120 - 230 - 240 |                                                                             |                           |
|                                   | V DC            | —                                             | 5 - 6 - 7 - 9 - 12 - 14 - 18 - 21 - 24 - 28 - 36 - 48 - 60 - 90 - 110 - 125 | —                         |
| Rated power AC/DC/sens. DC        | VA (50 Hz)/W/W  | 1.2/—/—                                       | 1.2/0.65/0.5                                                                | 1.2/—/—                   |
| Operating range                   | AC              | (0.8...1.1)U <sub>N</sub>                     | (0.8...1.1)U <sub>N</sub>                                                   | (0.8...1.1)U <sub>N</sub> |
|                                   | DC/sens. 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> /—                         | 0.8 U <sub>N</sub> /0.4 U <sub>N</sub>                                      | 0.8 U <sub>N</sub> /—     |
| Must drop-out voltage             | AC/DC           | 0.2 U <sub>N</sub> /—                         | 0.2 U <sub>N</sub> /0.1 U <sub>N</sub>                                      | 0.2 U <sub>N</sub> /—     |

**Technical data**

|                                                  |        |                       |                        |                       |
|--------------------------------------------------|--------|-----------------------|------------------------|-----------------------|
| Mechanical life                                  | cycles | 10 · 10 <sup>6</sup>  | 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>  | 100 · 10 <sup>3</sup> |
| Operate/release time                             | ms     | 7/3                   | 7/3 - (12/4 sensitive) | 7/3                   |
| Insulation between coil and contacts (1.2/50 µs) | kV     | 6 (8 mm)              | 6 (8 mm)               | 6 (8 mm)              |
| Dielectric strength between open contacts        | V AC   | 1000                  | 1000                   | 1000                  |
| Ambient temperature range                        | °C     | -40...+85             | -40...+85              | -40...+85             |
| Environmental protection                         |        | RT II**               | RT II**                | RT II**               |

**Approvals** (according to type)

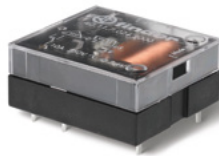
\*\* See general technical information "Guidelines for automatic flow solder processes" page II.

**PCB relay****Type 40.11**

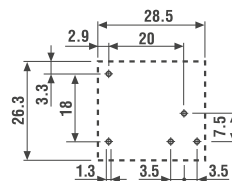
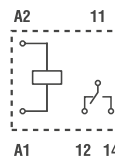
- 1 CO 10 A - flat pack
- DC (sensitive) coils

**Type 40.xx.6**

- Bistable versions of the types 40.31, 40.51, 40.52 and 40.61
- Bistable (single coil)
- Cadmium-free contact material available
- 8 mm Creepage and Clearance, 6 kV (1.2/50µs) between coil and contact
- 95 series sockets for PCB or 35 mm rail mounting (EN 60715) with Screw, Screwless or Push-in terminals
- Environmental protection:  
RT II - flux proof (Standard)  
RT III - wash tight (Option)

**40.11**

- 1 CO 10 A
- PCB mount 12.7 mm high



Copper side view

Pin length 3.5 mm for  
PCB or sockets

**40.xx.6**

- Bistable (single coil)
- 3.5 or 5.0 mm pin pitch
- PCB or 95 Series socket mount

Bistable version (1 coil) types:

40.31.6...

40.51.6...

40.52.6...

40.61.6...

For wiring diagrams see page 10

Pin length 5.3 mm for  
PCB or sockets

FOR UL RATINGS SEE:

"General technical information" page V

For outline drawing see page 11

**Contact specification**

|                                             |           |             |
|---------------------------------------------|-----------|-------------|
| Contact configuration                       |           | 1 CO (SPDT) |
| Rated current/Maximum peak current          | A         | 10/20       |
| Rated voltage/<br>Maximum switching voltage | V AC      | 250/400     |
| Rated load AC1                              | VA        | 2500        |
| Rated load AC15 (230 V AC)                  | VA        | 500         |
| Single phase motor rating (230 V AC)        | kW        | 0.37        |
| Breaking capacity DC1: 30/110/220 V         | A         | 10/0.3/0.12 |
| Minimum switching load                      | mW (V/mA) | 300 (5/5)   |
| Standard contact material                   |           | AgCdO       |

See relays

40.31

40.51

40.52

40.61

page 4

**Coil specification**

|                            |                 |                       |
|----------------------------|-----------------|-----------------------|
| Nominal voltage ( $U_N$ )  | V AC (50/60 Hz) | —                     |
|                            | V DC            | 6 - 12 - 24 - 48 - 60 |
| Rated power AC/DC/sens. DC | VA (50 Hz)/W/W  | —/—/0.5               |
| Operating range            | AC              | —                     |
|                            | DC/sens. DC     | —/(0.73...1.75) $U_N$ |
| Holding voltage            | AC/DC           | —/0.4 $U_N$           |
| Must drop-out voltage      | AC/DC           | —/0.1 $U_N$           |

5 - 6 - 12 - 24 - 48 - 110

1.0/1.0/—

(0.8...1.1) $U_N$ (0.8...1.1) $U_N$  / —

—

—

**Technical data**

|                                                     |        |                       |
|-----------------------------------------------------|--------|-----------------------|
| Mechanical life                                     | cycles | 20 · 10 <sup>6</sup>  |
| Electrical life at rated load AC1                   | cycles | 200 · 10 <sup>3</sup> |
| Operate/release time                                | ms     | 12/4                  |
| Insulation between coil<br>and contacts (1.2/50 µs) | kV     | 6 (8 mm)              |
| Dielectric strength<br>between open contacts        | V AC   | 1000                  |
| Ambient temperature range                           | °C     | −40...+70             |
| Environmental protection                            |        | RT I**                |

See relays

40.31

40.51

40.52

40.61

Min. impulse duration

≥ 20 ms

**Approvals** (according to type)

\*\* See general technical information "Guidelines for automatic flow solder processes" page II.

## Ordering information

Example: 40 series PCB relay, 2 CO, 230 V AC coil.

A

**4 0 . 5 2 . 8 . 2 3 0 . 0 0 0 0**

### Series

### Type

1 = PCB - 3.5 mm pinning, flat  
3 = PCB/Plug-in - 3.5 mm pinning  
5 = PCB/Plug-in - 5 mm pinning  
6 = PCB/Plug-in - 5 mm pinning

### No. of poles

1 = 1 pole  
2 = 2 pole

### Coil version

6 = AC/DC bistable  
7 = Sensitive DC, 0.5 W  
8 = AC (50/60 Hz)  
9 = Standard DC, 0.65 W

### Coil voltage

See coil specifications

### A: Contact material

See table below

### B: Contact circuit

0 = CO (nPDT)  
3 = NO (nPST)

### D: Special versions

0 = Standard  
1 = Wash tight (RT III)  
3 = High temperature (+125 °C) wash tight

### C: Options

0 = Pin length 5.3 mm (Plug-in relays)  
2 = Pin length 3.5 mm (PCB relays)

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

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

| Terminal pin                           | Type        | Coil version             | A                                          | B            | C        | D                |
|----------------------------------------|-------------|--------------------------|--------------------------------------------|--------------|----------|------------------|
| PCB relay,<br>pin length 3.5 mm        | 40.11       | Sensitive DC             | <b>2</b> (AgCdO) - 4 (AgSnO <sub>2</sub> ) | <b>0</b>     | <b>0</b> | <b>0</b>         |
|                                        | 40.31/51    | Standard DC/sensitive DC | <b>1</b> (AgNi)                            | <b>0 - 3</b> | <b>2</b> | <b>0 - 1</b>     |
|                                        | 40.61       | Standard DC/sensitive DC | 1 (AgNi) - <b>2</b> (AgCdO)                | <b>0 - 3</b> | <b>2</b> | <b>0 - 1</b>     |
| PCB/Plug-in relay<br>pin length 5.3 mm | 40.31/51    | AC/sensitive DC          | <b>0</b> (AgNi) - 2 (AgCdO) - 5 (AgNi+Au)  | <b>0 - 3</b> | <b>0</b> | <b>0 - 1</b>     |
|                                        | 40.31/51    | Standard DC              | <b>0</b> (AgNi) - 2 (AgCdO) - 5 (AgNi+Au)  | <b>0 - 3</b> | <b>0</b> | <b>0 - 1 - 3</b> |
|                                        | 40.52       | AC/sensitive DC          | <b>0</b> (AgNi) - 2 (AgCdO) - 5 (AgNi+Au)  | <b>0 - 3</b> | <b>0</b> | <b>0 - 1</b>     |
|                                        | 40.52       | Standard DC              | <b>0</b> (AgNi) - 2 (AgCdO) - 5 (AgNi+Au)  | <b>0 - 3</b> | <b>0</b> | <b>0 - 1 - 3</b> |
|                                        | 40.61       | AC/sensitive DC          | <b>0</b> (AgCdO) - 4 (AgSnO <sub>2</sub> ) | <b>0 - 3</b> | <b>0</b> | <b>0 - 1</b>     |
|                                        | 40.61       | Standard DC              | <b>0</b> (AgCdO) - 4 (AgSnO <sub>2</sub> ) | <b>0 - 3</b> | <b>0</b> | <b>0 - 1 - 3</b> |
|                                        | 40.31/51/52 | Bistable                 | <b>0</b> (AgNi)                            | <b>0</b>     | <b>0</b> | <b>0</b>         |
|                                        | 40.61       | Bistable                 | <b>0</b> (AgCdO)                           | <b>0</b>     | <b>0</b> | <b>0</b>         |

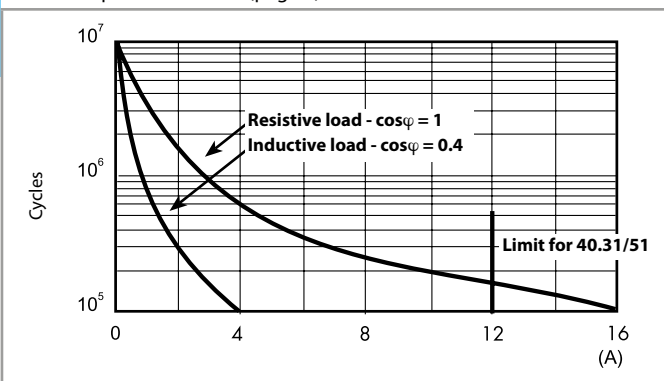
## Technical data

| 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   |
| Insulation between coil and contact set                                     |                         |                     |                      |        |                      |     |
| 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                | 4000                 |        | 4000                 |     |
| Insulation between adjacent contacts                                        |                         |                     |                      |        |                      |     |
| Type of insulation                                                          |                         |                     | —                    |        | Basic                |     |
| Overvoltage category                                                        |                         |                     | —                    |        | II                   |     |
| Rated impulse voltage                                                       |                         | kV (1.2/50 μs)      | —                    |        | 2.5                  |     |
| Dielectric strength                                                         |                         | V AC                | —                    |        | 2000                 |     |
| Insulation between open contacts                                            |                         |                     |                      |        |                      |     |
| Type of disconnection                                                       |                         |                     | Micro-disconnection  |        | Micro-disconnection  |     |
| Dielectric strength                                                         |                         | V AC/kV (1.2/50 μs) | 1000/1.5             |        | 1000/1.5             |     |
| Insulation between coil terminals                                           |                         |                     |                      |        |                      |     |
| Rated impulse voltage (surge) differential mode (according to EN 61000-4-5) |                         | kV(1.2/50 μs)       | 2                    |        |                      |     |
| Other data                                                                  |                         |                     |                      |        |                      |     |
| Bounce time: NO/NC                                                          |                         | ms                  | 2/5                  |        |                      |     |
| Vibration resistance (10...150)Hz: NO/NC                                    |                         | g                   | 20/5 (1 changeover)  |        | 14/2 (2 changeover)  |     |
| Shock resistance NO/NC                                                      |                         | g                   | 20/13 (1 changeover) |        | 20/12 (2 changeover) |     |
| Power lost to the environment                                               | without contact current | W                   | 0.65                 |        |                      |     |
|                                                                             | with rated current      | W                   | 1.2 (40.11/31/51)    |        | 2 (40.61/52)         |     |
| Recommended distance between relays mounted on PCB                          |                         | mm                  | ≥ 5                  |        |                      |     |

## Contact specification

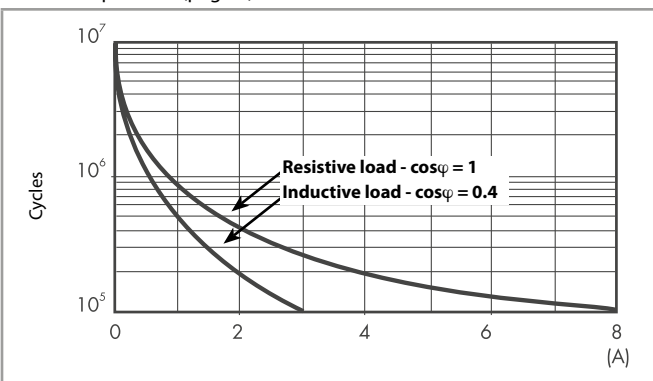
## F 40.1 - Electrical life (AC) v contact current

Types 40.31/51/61 (page 3)



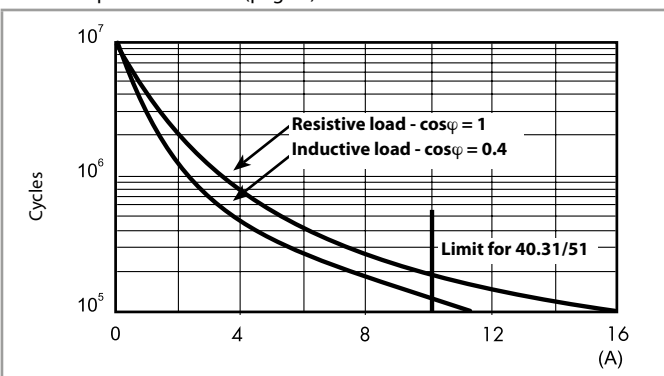
## F 40.2 - Electrical life (AC) v contact current

Type 40.52 (page 3)



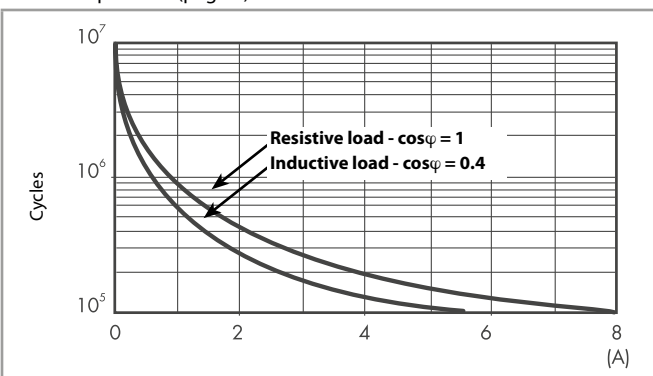
## F 40.3 - Electrical life (AC) v contact current

Types 40.31/51/61 (page 4)



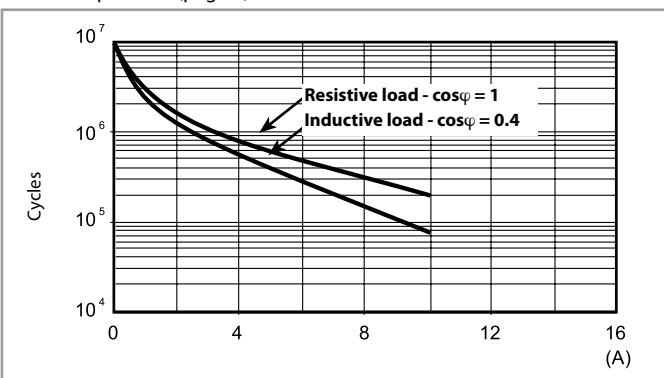
## F 40.4 - Electrical life (AC) v contact current

Type 40.52 (page 4)



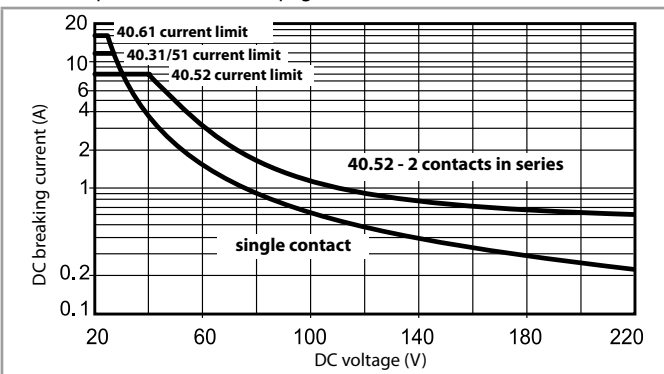
## F 40.5 - Electrical life (AC) v contact current

Type 40.11 (page 5)



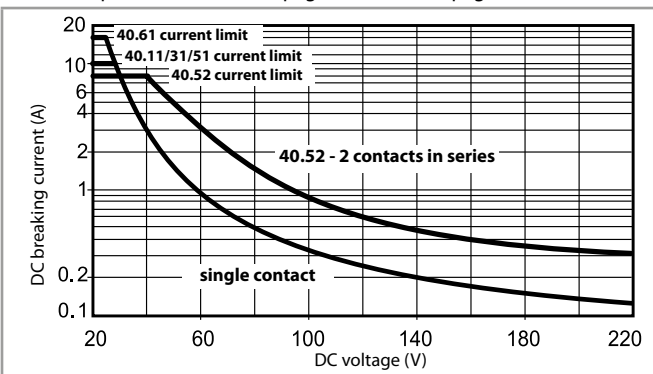
## H 40.1 - Maximum DC1 breaking capacity

Types 40.31/51/52/61 (page 3)



## H 40.2 - Maximum DC1 breaking capacity

Types 40.31/51/52/61 (page 4) and 40.11 (page 5)



- 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 - 0.65 W standard** (types 40.31/51/52/61)

| Nominal voltage<br>$U_N$ | Coil code | Operating range |           | Resistance | Rated coil consumption |
|--------------------------|-----------|-----------------|-----------|------------|------------------------|
| V                        |           | $U_{min}$       | $U_{max}$ | R          | I at $U_N$             |
| V                        |           | V               | V         | $\Omega$   | mA                     |
| 5                        | 9.005     | 3.65            | 7.5       | 38         | 130                    |
| 6                        | 9.006     | 4.4             | 9         | 55         | 109                    |
| 7                        | 9.007     | 5.1             | 10.5      | 75         | 94                     |
| 9                        | 9.009     | 6.6             | 13.5      | 125        | 72                     |
| 12                       | 9.012     | 8.8             | 18        | 220        | 55                     |
| 14                       | 9.014     | 10.2            | 21        | 300        | 47                     |
| 18                       | 9.018     | 13.1            | 27        | 500        | 36                     |
| 21                       | 9.021     | 15.3            | 31.5      | 700        | 30                     |
| 24                       | 9.024     | 17.5            | 36        | 900        | 27                     |
| 28                       | 9.028     | 20.5            | 42        | 1200       | 23                     |
| 36                       | 9.036     | 26.3            | 54        | 2000       | 18                     |
| 48                       | 9.048     | 35              | 72        | 3500       | 14                     |
| 60                       | 9.060     | 43.8            | 90        | 5500       | 11                     |
| 90                       | 9.090     | 65.7            | 135       | 12500      | 7.2                    |
| 110                      | 9.110     | 80.3            | 165       | 18000      | 6.2                    |
| 125                      | 9.125     | 91.2            | 188       | 23500      | 5.3                    |

**DC coil data - 0.5 W sensitive** (types 40.31/51/52/61)

| Nominal voltage<br>$U_N$ | Coil code | Operating range |           | Resistance | Rated coil consumption |
|--------------------------|-----------|-----------------|-----------|------------|------------------------|
| V                        |           | $U_{min}$       | $U_{max}$ | R          | I at $U_N$             |
| V                        |           | V               | V         | $\Omega$   | mA                     |
| 5                        | 7.005     | 3.7             | 7.5       | 50         | 100                    |
| 6                        | 7.006     | 4.4             | 9         | 75         | 80                     |
| 7                        | 7.007     | 5.1             | 10.5      | 100        | 70                     |
| 9                        | 7.009     | 6.6             | 13.5      | 160        | 56                     |
| 12                       | 7.012     | 8.8             | 18        | 288        | 42                     |
| 14                       | 7.014     | 10.2            | 21        | 400        | 35                     |
| 18                       | 7.018     | 13.2            | 27        | 650        | 27.7                   |
| 21                       | 7.021     | 15.4            | 31.5      | 900        | 23.4                   |
| 24                       | 7.024     | 17.5            | 36        | 1150       | 21                     |
| 28                       | 7.028     | 20.5            | 42        | 1600       | 17.5                   |
| 36                       | 7.036     | 26.3            | 54        | 2600       | 13.8                   |
| 48                       | 7.048     | 35              | 72        | 4800       | 10                     |
| 60                       | 7.060     | 43.8            | 90        | 7200       | 8.4                    |
| 90                       | 7.090     | 65.7            | 135       | 16200      | 5.6                    |
| 110                      | 7.110     | 80.3            | 165       | 23500      | 4.7                    |
| 125                      | 7.125     | 91.2            | 188       | 32000      | 3.9                    |

\*  $U_{min} = 0.8 U_N$  for 40.61

**DC coil data - 0.5 W sensitive** (types 40.11)

| Nominal voltage<br>$U_N$ | Coil code | Operating range |           | Resistance | Rated coil consumption |
|--------------------------|-----------|-----------------|-----------|------------|------------------------|
| V                        |           | $U_{min}$       | $U_{max}$ | R          | I at $U_N$             |
| V                        |           | V               | V         | $\Omega$   | mA                     |
| 6                        | 7.006     | 4.4             | 10.5      | 75         | 80                     |
| 12                       | 7.012     | 8.8             | 21        | 300        | 40                     |
| 24                       | 7.024     | 17.5            | 42        | 1200       | 20                     |
| 48                       | 7.048     | 35              | 84        | 4600       | 10.4                   |
| 60                       | 7.060     | 43.8            | 105       | 7200       | 8.3                    |

**AC coil data** (types 40.31/51/52/61)

| Nominal voltage<br>$U_N$ | Coil code | Operating range |           | Resistance | Rated coil consumption<br>I at $U_N$ (50 Hz) |
|--------------------------|-----------|-----------------|-----------|------------|----------------------------------------------|
| V                        |           | $U_{min}$       | $U_{max}$ | R          | I at $U_N$                                   |
| V                        |           | V               | V         | $\Omega$   | mA                                           |
| 6                        | 8.006     | 4.8             | 6.6       | 21         | 168                                          |
| 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      | 1350       | 21                                           |
| 60                       | 8.060     | 48              | 66        | 2100       | 16.8                                         |
| 110                      | 8.110     | 88              | 121       | 6900       | 9.4                                          |
| 120                      | 8.120     | 96              | 132       | 9000       | 8.4                                          |
| 230                      | 8.230     | 184             | 253       | 28000      | 5                                            |
| 240                      | 8.240     | 192             | 264       | 31500      | 4.1                                          |

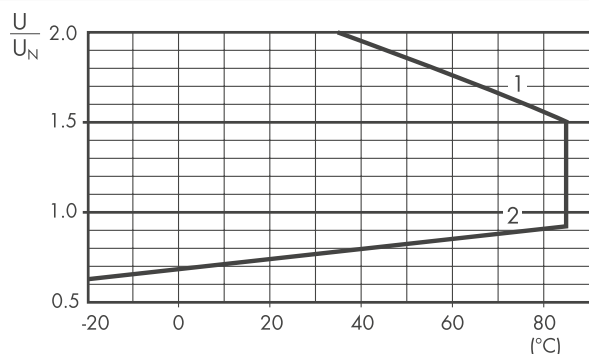
**AC/DC coil data - bistable** (types 40.31/51/52/61)

| Nominal voltage<br>$U_N$ | Coil code | Operating range |           | Resistance | Rated coil consumption<br>I at $U_N$ | DC: Release resistance**<br>$R_{DC}$ |
|--------------------------|-----------|-----------------|-----------|------------|--------------------------------------|--------------------------------------|
| V                        |           | $U_{min}$       | $U_{max}$ | R          | I at $U_N$                           | $R_{DC}$                             |
| V                        |           | V               | V         | $\Omega$   | mA                                   | $\Omega$                             |
| 5                        | 6.005     | 4               | 5.5       | 23         | 215                                  | 37                                   |
| 6                        | 6.006     | 4.8             | 6.6       | 33         | 165                                  | 62                                   |
| 12                       | 6.012     | 9.6             | 13.2      | 130        | 83                                   | 220                                  |
| 24                       | 6.024     | 19.2            | 26.4      | 520        | 40                                   | 910                                  |
| 48                       | 6.048     | 38.4            | 52.8      | 2100       | 21                                   | 3,600                                |
| 110                      | 6.110     | 88              | 121       | 11000      | 10                                   | 16,500                               |

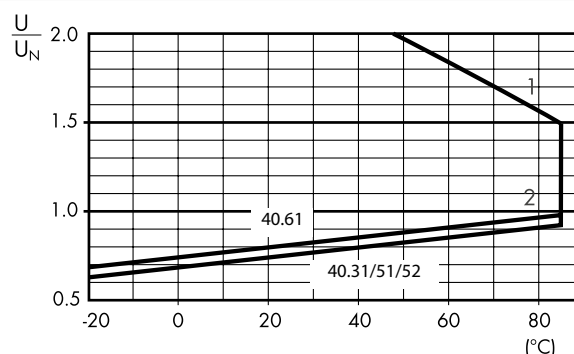
\*\*  $R_{DC}$  = Resistance in DC,  $R_{AC} = 1.3 \times R_{DC}$  1 W

## Contact specification

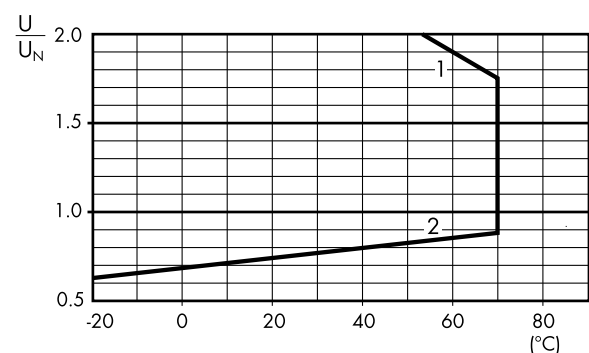
**R 40 - DC coil operating range v ambient temperature**  
Standard coil



**R 40 - DC coil operating range v ambient temperature**  
Sensitive coil, types 40.31/51/52/61

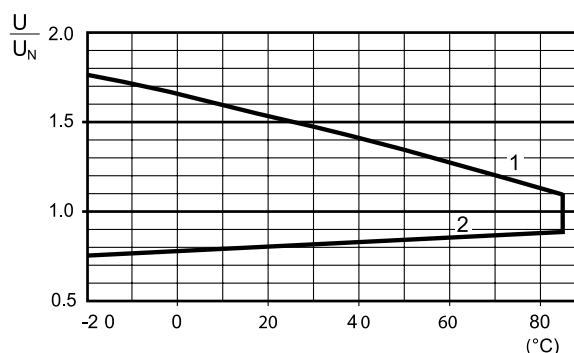


**R 40 - DC coil operating range v ambient temperature**  
Sensitive coil, type 40.11



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

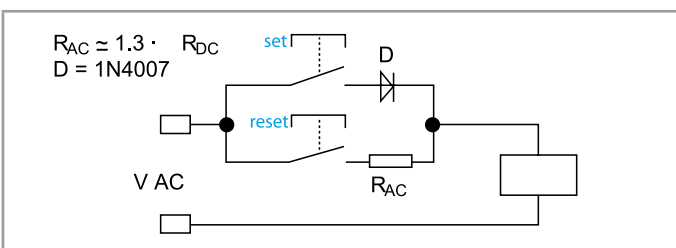
**R 40 - AC coil operating range v ambient temperature**



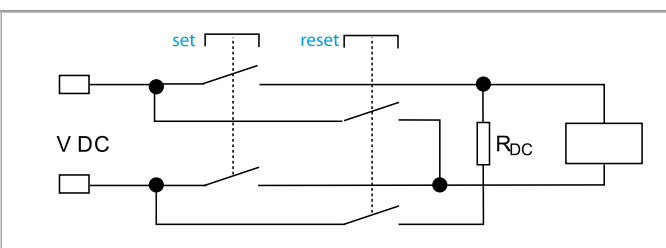
- 1 - Max. permitted coil voltage.  
2 - Min. pick-up voltage with coil at ambient temperature.

## Wiring diagram for 40 series bistable coil version

## AC Operation



## DC Operation



On momentary closure of the SET switch the relay is magnetised through the diode and the relay contacts transfer to the set position and remain in this position.

On momentary closure of the RESET switch the relay is demagnetised through limiting resistor ( $R_{AC}$ ) and the contacts return to the reset position.

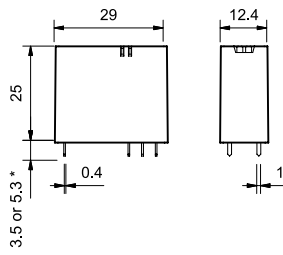
On momentary closure of the SET switch the relay is magnetised and the relay contacts transfer to the set position and remain in this position.

On momentary closure of the RESET switch the relay is demagnetised through limiting resistor ( $R_{DC}$ ) and the contacts return to the reset position.

**Notes:** The minimum SET or RESET impulse time is 20 ms. The maximum time can be continuous. In practice, always ensure that the SET and RESET contacts cannot be operated simultaneously.

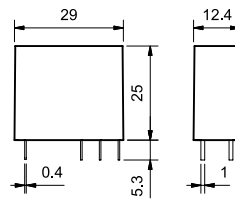
## Outline drawings

Type 40.31/51/52/61 (page 3)

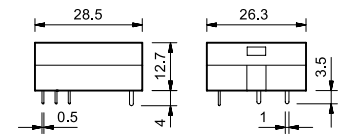


\* (3.5 or 5.3 mm) see ordering code

Type 40.31/51/52/61 (page 4)



Type 40.11 (page 5)



A

A



95.P5

See page 13



| Module                                                                            | Socket | Relay | Description                                                                                                                   | Mounting                                | Accessories                                                                                                                                                                              |
|-----------------------------------------------------------------------------------|--------|-------|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 95.P3  | 40.31 | <b>Push-in terminal sockets</b><br><br>- For fast cable connection<br>- Top terminals - Contacts<br>- Bottom terminals - Coil | Panel or 35 mm rail<br>(EN 60715) mount | <ul style="list-style-type: none"><li>- Coil indication and EMC suppression modules</li><li>- Jumper link</li><li>- Timer modules</li><li>- Plastic retaining and release clip</li></ul> |
|                                                                                   | 95.P5  | 40.51 |                                                                                                                               |                                         |                                                                                                                                                                                          |
|                                                                                   |        | 40.52 |                                                                                                                               |                                         |                                                                                                                                                                                          |
|                                                                                   |        | 40.61 |                                                                                                                               |                                         |                                                                                                                                                                                          |



95.05

See page 15



| Module                                                                            | Socket | Relay | Description                              | Mounting                             | Accessories                                                                                                                                                                              |
|-----------------------------------------------------------------------------------|--------|-------|------------------------------------------|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 99.02  | 40.31 | <b>Screw terminal (Box clamp) socket</b> | Panel or 35 mm rail (EN 60715) mount | <ul style="list-style-type: none"><li>- Coil indication and EMC suppression modules</li><li>- Jumper link</li><li>- Timer modules</li><li>- Plastic retaining and release clip</li></ul> |
|                                                                                   | 95.03  | 40.51 | - Top terminals - Contacts               |                                      |                                                                                                                                                                                          |
|                                                                                   |        | 40.52 | - Bottom terminals - Coil                |                                      |                                                                                                                                                                                          |
|                                                                                   |        | 40.61 |                                          |                                      |                                                                                                                                                                                          |



95.55

See page 16



| Module | Socket | Relay                   | Description                                                                                 | Mounting                             | Accessories                                                                                                                                                            |
|--------|--------|-------------------------|---------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 99.02  | 95.55  | 40.51<br>40.52<br>40.61 | <b>Screwless terminal socket</b><br>- Top terminals - Contacts<br>- Bottom terminals - Coil | Panel or 35 mm rail (EN 60715) mount | <ul style="list-style-type: none"> <li>- Coil indication and EMC suppression modules</li> <li>- Timer modules</li> <li>- Plastic retaining and release clip</li> </ul> |



95.85.3

See page 17



| Module                                                                              | Socket  | Relay | Description                               | Mounting                             | Accessories                                                                                                                                                      |
|-------------------------------------------------------------------------------------|---------|-------|-------------------------------------------|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 99.80   | 40.31 | <b>Screw terminal (Box clamp) socket</b>  | Panel or 35 mm rail (EN 60715) mount | <ul style="list-style-type: none"><li>- Coil indication and EMC suppression modules</li><li>- Jumper link</li><li>- Plastic retaining and release clip</li></ul> |
|                                                                                     | 95.83.3 | 40.51 | - Top terminals - NO and COM              |                                      |                                                                                                                                                                  |
|                                                                                     |         | 40.52 | Contacts                                  |                                      |                                                                                                                                                                  |
|                                                                                     |         | 40.61 | - Bottom terminals - Coil and NC Contacts |                                      |                                                                                                                                                                  |



95.95.3

See page 18



| Module                                                                              | Socket | Relay   | Description | Mounting                                                                         | Accessories                                                                                            |
|-------------------------------------------------------------------------------------|--------|---------|-------------|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
|  | 99.80  | 95.93.3 | 40.31       | <b>Screw terminal (Box clamp) socket</b><br>Panel or 35 mm rail (EN 60715) mount | - Coil indication and EMC suppression modules<br>- Jumper link<br>- Plastic retaining and release clip |
|                                                                                     |        | 95.95.3 | 40.51       |                                                                                  |                                                                                                        |
|                                                                                     |        |         | 40.52       |                                                                                  |                                                                                                        |
|                                                                                     |        |         | 40.61       |                                                                                  |                                                                                                        |



95.65

See page 19



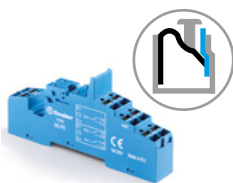
| Module                                                                              | Socket | Relay | Description | Mounting                                                                         | Accessories            |
|-------------------------------------------------------------------------------------|--------|-------|-------------|----------------------------------------------------------------------------------|------------------------|
|  | 99.01  | 95.63 | 40.31       | <b>Screw terminal (Box clamp) socket</b><br>Panel or 35 mm rail (EN 60715) mount | - Metal retaining clip |
|                                                                                     |        | 95.65 | 40.51       |                                                                                  |                        |
|                                                                                     |        |       | 40.52       |                                                                                  |                        |
|                                                                                     |        |       | 40.61       |                                                                                  |                        |



95.13.2

See page 20

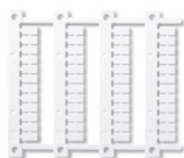
| Module | Socket  | Relay | Description       | Mounting     | Accessories                                                                                                |
|--------|---------|-------|-------------------|--------------|------------------------------------------------------------------------------------------------------------|
| —      | 95.13.2 | 40.31 | <b>PCB socket</b> | PCB mounting | <ul style="list-style-type: none"> <li>- Metal retaining clip</li> <li>- Plastic retaining clip</li> </ul> |
| —      | 95.15.2 | 40.51 |                   |              |                                                                                                            |
|        |         | 40.52 |                   |              |                                                                                                            |
|        |         | 40.61 |                   |              |                                                                                                            |



**95.P5**  
Approvals  
(according to type):



**095.91.3**

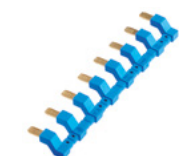
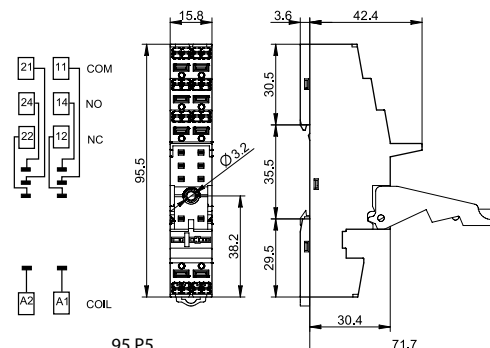
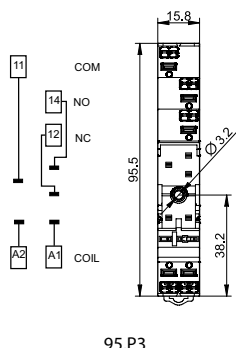
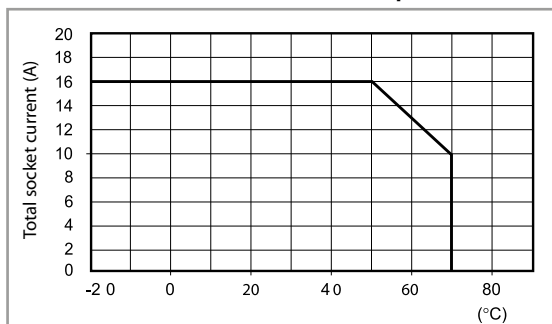


**060.48**

|                                                                                                                                                                       |  |                                            |                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------|---------------------|
| <b>Push-in terminals socket panel or 35 mm rail mount</b>                                                                                                             |  | <b>95.P3</b>                               | <b>95.P5</b>        |
| For relay type                                                                                                                                                        |  | 40.31                                      | 40.51, 40.52, 40.61 |
| <b>Accessories</b>                                                                                                                                                    |  |                                            |                     |
| Metal retaining clip                                                                                                                                                  |  |                                            | 095.71              |
| Plastic retaining and release clip<br>(supplied with socket - packaging code SPA)                                                                                     |  |                                            | 095.91.3            |
| 8-way jumper link                                                                                                                                                     |  |                                            | 097.58              |
| 2-way jumper link (12.5 mm pitch)                                                                                                                                     |  |                                            | 097.52              |
| 2-way jumper link (4.6 mm pitch)                                                                                                                                      |  |                                            | 097.42              |
| Marker tag holder (for tags 060.48 type)                                                                                                                              |  |                                            | 097.00              |
| Identification tag                                                                                                                                                    |  |                                            | 095.00.4            |
| Modules (see table below)                                                                                                                                             |  |                                            | 99.02               |
| Timer modules (see table below)                                                                                                                                       |  |                                            | 86.30               |
| Sheet of marker tags for plastic retaining and release clip<br>095.91.3 and for marker tag holder 097.00, 48 tags,<br>6 x 12 mm, for CEMBRE thermal transfert printer |  |                                            | 060.48              |
| <b>Technical data</b>                                                                                                                                                 |  |                                            |                     |
| Rated values                                                                                                                                                          |  | 10 A - 250 V*                              |                     |
| Dielectric strength                                                                                                                                                   |  | 6 kV (1.2/50 µs) between coil and contacts |                     |
| Protection category                                                                                                                                                   |  | IP 20                                      |                     |
| Ambient temperature                                                                                                                                                   |  | °C -40...+70 (see diagram L95)             |                     |
| Wire strip length                                                                                                                                                     |  | mm 8                                       |                     |
| Min. wire size for 95.P3 and 95.P5 sockets                                                                                                                            |  | solid wire                                 | stranded wire       |
|                                                                                                                                                                       |  | mm <sup>2</sup> 0.5                        | 0.5                 |
|                                                                                                                                                                       |  | AWG 21                                     | 21                  |
| Max. wire size for 95.P3 and 95.P5 sockets                                                                                                                            |  | solid wire                                 | stranded wire       |
|                                                                                                                                                                       |  | mm <sup>2</sup> 2 x 1.5 / 1 x 2.5          | 2 x 1.5 / 1 x 2.5   |
|                                                                                                                                                                       |  | AWG 2 x 16 / 1 x 14                        | 2 x 16 / 1 x 14     |

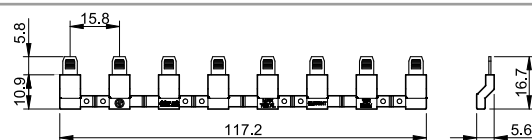
\* For currents > 10 A, contact terminals must be connected in parallel (21 with 11, 24 with 14, 22 with 12).  
With the relay 40.51 the change-over contact will be 21-12-14.

**L 95 - Total socket current v ambient temperature**



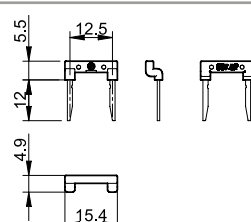
**097.58**

|                                                      |               |
|------------------------------------------------------|---------------|
| <b>8-way jumper link for 95.P3 and 95.P5 sockets</b> | <b>097.58</b> |
| Rated values                                         | 10 A - 250 V  |



**097.52**

|                                                      |               |
|------------------------------------------------------|---------------|
| <b>2-way jumper link for 95.P3 and 95.P5 sockets</b> | <b>097.52</b> |
| Rated values                                         | 10 A - 250 V  |



A



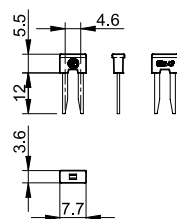
097.42

**2-way jumper link** for 95.P3 and 95.P5 sockets

097.42

Rated values

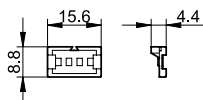
10 A - 250 V



097.00

**Marker tag holder** for 95.P3 and 95.P5 sockets

097.00



86.30

**86 series timer modules**

(12...24)V AC/DC; Bi-function: AI, DI; (0.05 s...100 h)

86.30.0.024.0000

(110...125)V AC; Bi-function: AI, DI; (0.05 s...100 h)

86.30.8.120.0000

(230...240)V AC; Bi-function: AI, DI; (0.05 s...100 h)

86.30.8.240.0000

Approvals (according to type): **CE** **EAC** **cUL**<sup>®</sup> **US**

99.02

**99.02 coil indication and EMC suppression modules** for 95.P3 and 95.P5 sockets

Diode (+A1, standard polarity)

(6...220)V DC

99.02.3.000.00

LED

(6...24)V DC/AC

99.02.0.024.59

LED

(28...60)V DC/AC

99.02.0.060.59

LED

(110...240)V DC/AC

99.02.0.230.59

LED + Diode (+A1, standard polarity)

(6...24)V DC

99.02.9.024.99

LED + Diode (+A1, standard polarity)

(28...60)V DC

99.02.9.060.99

LED + Diode (+A1, standard polarity)

(110...220)V DC

99.02.9.220.99

LED + Varistor

(6...24)V DC/AC

99.02.0.024.98

LED + Varistor

(28...60)V DC/AC

99.02.0.060.98

LED + Varistor

(110...240)V DC/AC

99.02.0.230.98

RC circuit

(6...24)V DC/AC

99.02.0.024.09

RC circuit

(28...60)V DC/AC

99.02.0.060.09

RC circuit

(110...240)V DC/AC

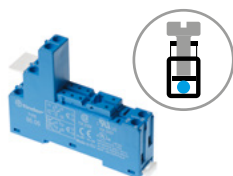
99.02.0.230.09

Residual current by-pass

(110...240)V AC

99.02.8.230.07

Approvals  
(according to type):**EAC** **cUL**<sup>®</sup> **US**DC Modules with  
non-standard polarity  
(+A2) on request.



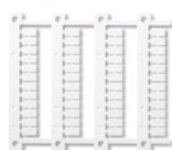
**95.05**  
Approvals  
(according to type):



UL US Certain relay/socket combinations



**095.01**

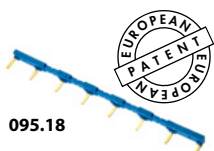
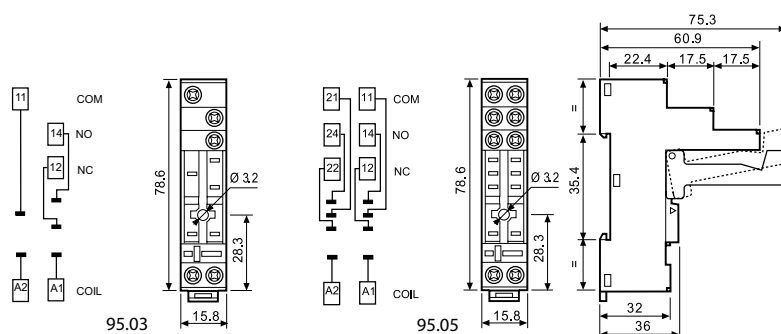
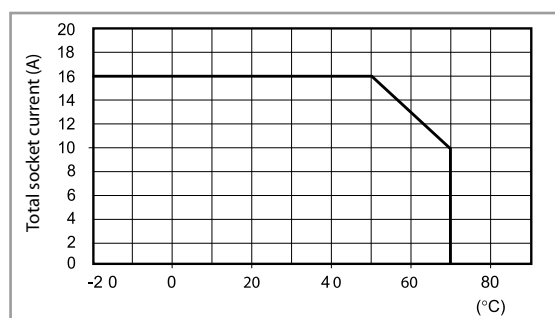


**060.48**

| Screw terminal (Box clamp) socket panel or 35 mm rail mount                                                                                                   | 95.03 (blue)                               | 95.03.0 (black)             | 95.05 (blue)        | 95.05.0 (black) |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------|---------------------|-----------------|
| For relay type                                                                                                                                                | 40.31                                      |                             | 40.51, 40.52, 40.61 |                 |
| Accessories                                                                                                                                                   |                                            |                             |                     |                 |
| Metal retaining clip                                                                                                                                          | 095.71                                     |                             |                     |                 |
| Plastic retaining and release clip<br>(supplied with socket - packaging code SPA)                                                                             | 095.01                                     | 095.01.0                    | 095.01              | 095.01.0        |
| 8-way jumper link                                                                                                                                             | 095.18                                     | 095.18.0                    | 095.18              | 095.18.0        |
| Marker tag holder (for tags 060.48 type)                                                                                                                      | 097.00                                     |                             |                     |                 |
| Identification tag                                                                                                                                            | 095.00.4                                   |                             |                     |                 |
| Modules (see table below)                                                                                                                                     | 99.02                                      |                             |                     |                 |
| Timer modules (see table below)                                                                                                                               | 86.30                                      |                             |                     |                 |
| Sheet of marker tags for plastic retaining and release clip 095.01 and for marker tag holder 097.00, 48 tags, 6 x 12 mm, for CEMBRE thermal transfer printers | 060.48                                     |                             |                     |                 |
| Technical data                                                                                                                                                |                                            |                             |                     |                 |
| Rated values                                                                                                                                                  | 10 A - 250 V*                              |                             |                     |                 |
| Dielectric strength                                                                                                                                           | 6 kV (1.2/50 μs) between coil and contacts |                             |                     |                 |
| Protection category                                                                                                                                           | IP 20                                      |                             |                     |                 |
| Ambient temperature                                                                                                                                           | °C                                         | −40...+70 (see diagram L95) |                     |                 |
|  Screw torque                                                                | Nm                                         | 0.5                         |                     |                 |
| Wire strip length                                                                                                                                             | mm                                         | 8                           |                     |                 |
| Max. wire size for 95.03 and 95.05 sockets                                                                                                                    |                                            | solid wire                  |                     | stranded wire   |
|                                                                                                                                                               | mm²                                        | 1 x 6 / 2 x 2.5             |                     | 1 x 4 / 2 x 2.5 |
|                                                                                                                                                               | AWG                                        | 1 x 10 / 2 x 14             |                     | 1 x 12 / 2 x 14 |

\* For currents > 10 A, contact terminals must be connected in parallel (21 with 11, 24 with 14, 22 with 12).  
With the relay 40.51 the change-over contact will be 21-12-14.

#### L 95 - Total socket current v ambient temperature



**095.18**

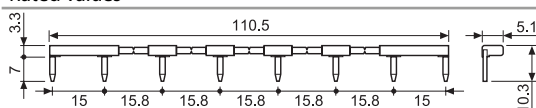
#### 8-way jumper link for 95.03 and 95.05 sockets

Rated values

095.18 (blue)

095.18.0 (black)

10 A - 250 V



#### 86 series timer modules

(12...24)V AC/DC; Bi-function: AI, DI; (0.05 s...100 h)  
(110...125)V AC; Bi-function: AI, DI; (0.05 s...100 h)  
(230...240)V AC; Bi-function: AI, DI; (0.05 s...100 h)

86.30.0.024.0000

86.30.8.120.0000

86.30.8.240.0000

Approvals (according to type):



#### 99.02 coil indication and EMC suppression modules for 95.03 and 95.05 sockets

|                                      |                    |                |
|--------------------------------------|--------------------|----------------|
| Diode (+A1, standard polarity)       | (6...220)V DC      | 99.02.3.000.00 |
| LED                                  | (6...24)V DC/AC    | 99.02.0.024.59 |
| LED                                  | (28...60)V DC/AC   | 99.02.0.060.59 |
| LED                                  | (110...240)V DC/AC | 99.02.0.230.59 |
| LED + Diode (+A1, standard polarity) | (6...24)V DC       | 99.02.9.024.99 |
| LED + Diode (+A1, standard polarity) | (28...60)V DC      | 99.02.9.060.99 |
| LED + Diode (+A1, standard polarity) | (110...220)V DC    | 99.02.9.220.99 |
| LED + Varistor                       | (6...24)V DC/AC    | 99.02.0.024.98 |
| LED + Varistor                       | (28...60)V DC/AC   | 99.02.0.060.98 |
| LED + Varistor                       | (110...240)V DC/AC | 99.02.0.230.98 |
| RC circuit                           | (6...24)V DC/AC    | 99.02.0.024.09 |
| RC circuit                           | (28...60)V DC/AC   | 99.02.0.060.09 |
| RC circuit                           | (110...240)V DC/AC | 99.02.0.230.09 |
| Residual current by-pass             | (110...240)V AC    | 99.02.8.230.07 |



**86.30**



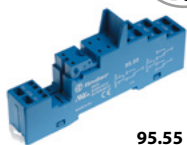
**99.02**

Approvals  
(according to type):



DC Modules with  
non-standard polarity  
(+A2) on request.

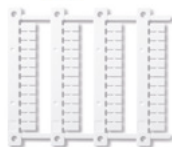
A



95.55

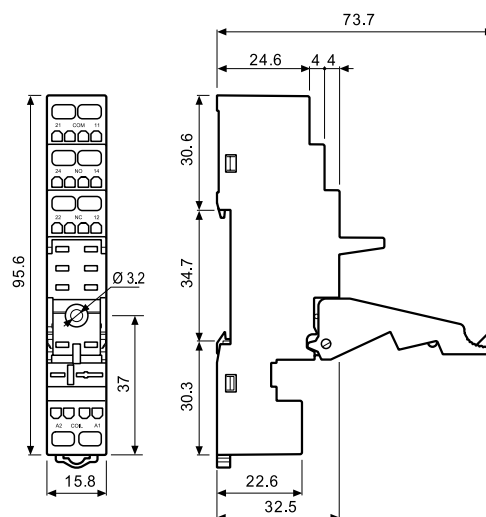
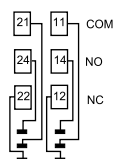
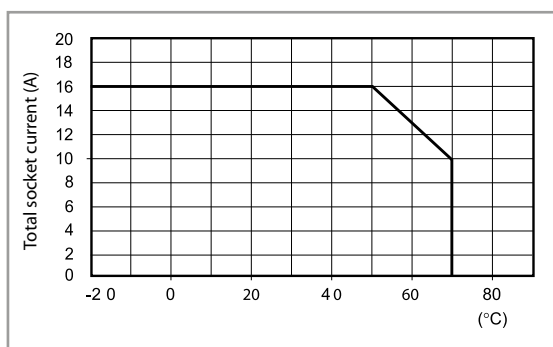
Approvals  
(according to type):

095.91.3



060.48

## L 95 - Total socket current v ambient temperature



## 86 series timer modules

|                                                         |                  |
|---------------------------------------------------------|------------------|
| (12...24)V AC/DC; Bi-function: AI, DI; (0.05 s...100 h) | 86.30.0.024.0000 |
| (110...125)V AC; Bi-function: AI, DI; (0.05 s...100 h)  | 86.30.8.120.0000 |
| (230...240)V AC; Bi-function: AI, DI; (0.05 s...100 h)  | 86.30.8.240.0000 |

Approvals (according to type):

## 99.02 coil indication and EMC suppression modules for 95.55 socket

|                                      |                    |                |
|--------------------------------------|--------------------|----------------|
| Diode (+A1, standard polarity)       | (6...220)V DC      | 99.02.3.000.00 |
| LED                                  | (6...24)V DC/AC    | 99.02.0.024.59 |
| LED                                  | (28...60)V DC/AC   | 99.02.0.060.59 |
| LED                                  | (110...240)V DC/AC | 99.02.0.230.59 |
| LED + Diode (+A1, standard polarity) | (6...24)V DC       | 99.02.9.024.99 |
| LED + Diode (+A1, standard polarity) | (28...60)V DC      | 99.02.9.060.99 |
| LED + Diode (+A1, standard polarity) | (110...220)V DC    | 99.02.9.220.99 |
| LED + Varistor                       | (6...24)V DC/AC    | 99.02.0.024.98 |
| LED + Varistor                       | (28...60)V DC/AC   | 99.02.0.060.98 |
| LED + Varistor                       | (110...240)V DC/AC | 99.02.0.230.98 |
| RC circuit                           | (6...24)V DC/AC    | 99.02.0.024.09 |
| RC circuit                           | (28...60)V DC/AC   | 99.02.0.060.09 |
| RC circuit                           | (110...240)V DC/AC | 99.02.0.230.09 |
| Residual current by-pass             | (110...240)V AC    | 99.02.8.230.07 |

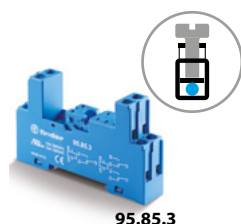


86.30



99.02

Approvals  
(according to type):DC Modules with  
non-standard polarity  
(+A2) on request.

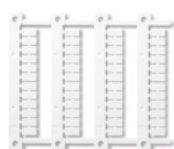


95.85.3

Approvals  
(according to type):



095.91.3



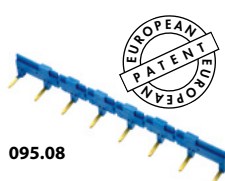
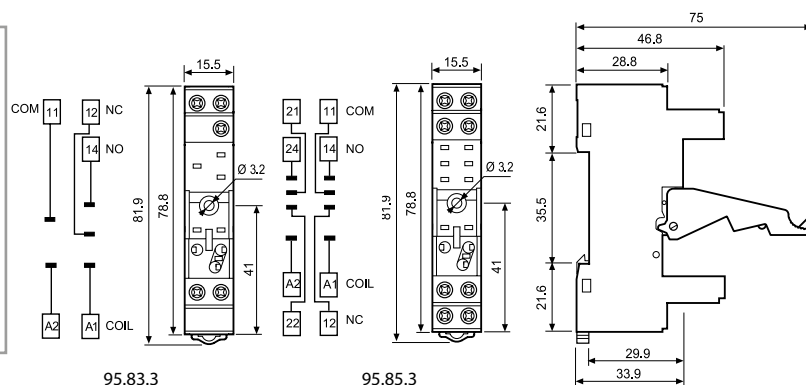
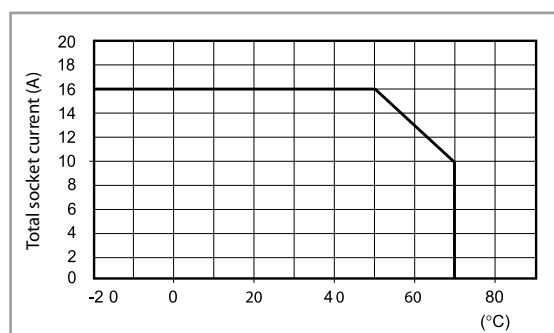
060.48

| Screw terminal (Box clamp) socket panel or 35 mm rail mount                                                                          | 95.83.3 (blue)                                            | 95.83.30 (black) | 95.85.3 (blue)      | 95.85.30 (black) |
|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|------------------|---------------------|------------------|
| For relay type                                                                                                                       | 40.31                                                     |                  | 40.51, 40.52, 40.61 |                  |
| <b>Accessories</b>                                                                                                                   |                                                           |                  |                     |                  |
| Metal retaining clip                                                                                                                 |                                                           |                  | 095.71              |                  |
| Plastic retaining and release clip<br>(supplied with socket - packaging code SPA)                                                    | 095.91.3                                                  | 095.91.30        | 095.91.3            | 095.91.30        |
| 8-way jumper link                                                                                                                    | 095.08                                                    | 095.08.0         | 095.08              | 095.08.0         |
| Identification tag                                                                                                                   |                                                           |                  | 095.00.4            |                  |
| Modules (see table below)                                                                                                            |                                                           |                  | 99.80               |                  |
| Marker tag holder                                                                                                                    |                                                           |                  | 097.00              |                  |
| Sheet of marker tags for plastic retaining and release clip<br>095.91.3, 48 tags, 6 x 12 mm, for CEMBRE thermal transfert<br>printer |                                                           |                  | 060.48              |                  |
| <b>Technical data</b>                                                                                                                |                                                           |                  |                     |                  |
| Rated values                                                                                                                         | 10 A - 250 V*                                             |                  |                     |                  |
| Dielectric strength                                                                                                                  | 6 kV (1.2/50 µs) between coil and contacts (95.83.3 only) |                  |                     |                  |
| Protection category                                                                                                                  | IP 20                                                     |                  |                     |                  |
| Ambient temperature                                                                                                                  | °C -40...+70 (see diagram L95)                            |                  |                     |                  |
| Screw torque                                                                                                                         | Nm                                                        | 0.5              |                     |                  |
| Wire strip length                                                                                                                    | mm                                                        | 7                |                     |                  |
| Max. wire size for 95.83.3 and 95.85.3 sockets                                                                                       |                                                           | solid wire       | stranded wire       |                  |
|                                                                                                                                      | mm <sup>2</sup>                                           | 1 x 6 / 2 x 2.5  | 1 x 4 / 2 x 2.5     |                  |
|                                                                                                                                      | AWG                                                       | 1 x 10 / 2 x 14  | 1 x 12 / 2 x 14     |                  |

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

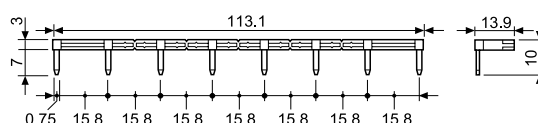
With the relay 40.51 the change-over contact will be 21-12-14.

## L 95 - Total socket current v ambient temperature



095.08

| 8-way jumper link for 95.83.3 and 95.85.3 sockets | 095.08 (blue) | 095.08.0 (black) |
|---------------------------------------------------|---------------|------------------|
| Rated values                                      | 10 A - 250 V  |                  |



## 99.80 coil indication and EMC suppression modules for 95.83.3 and 95.85.3 sockets

|                                      |                    | Blue*          |
|--------------------------------------|--------------------|----------------|
| Diode (+A1, standard polarity)       | (6...220)V DC      | 99.80.3.000.00 |
| LED                                  | (6...24)V DC/AC    | 99.80.0.024.59 |
| LED                                  | (28...60)V DC/AC   | 99.80.0.060.59 |
| LED                                  | (110...240)V DC/AC | 99.80.0.230.59 |
| LED + Diode (+A1, standard polarity) | (6...24)V DC       | 99.80.9.024.99 |
| LED + Diode (+A1, standard polarity) | (28...60)V DC      | 99.80.9.060.99 |
| LED + Diode (+A1, standard polarity) | (110...220)V DC    | 99.80.9.220.99 |
| LED + Varistor                       | (6...24)V DC/AC    | 99.80.0.024.98 |
| LED + Varistor                       | (28...60)V DC/AC   | 99.80.0.060.98 |
| LED + Varistor                       | (110...240)V DC/AC | 99.80.0.230.98 |
| RC circuit                           | (6...24)V DC/AC    | 99.80.0.024.09 |
| RC circuit                           | (28...60)V DC/AC   | 99.80.0.060.09 |
| RC circuit                           | (110...240)V DC/AC | 99.80.0.230.09 |
| Residual current by-pass             | (110...240)V AC    | 99.80.8.230.07 |



99.80

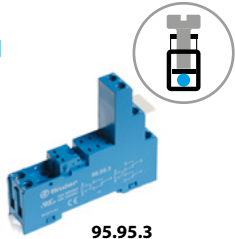
Approvals  
(according to type):



\* Modules in Black  
housing are available  
on request.

Green LED is standard.  
Red LED available on  
request.

A

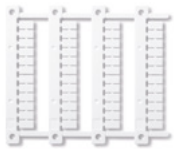


95.95.3

Approvals  
(according to type):



095.91.3

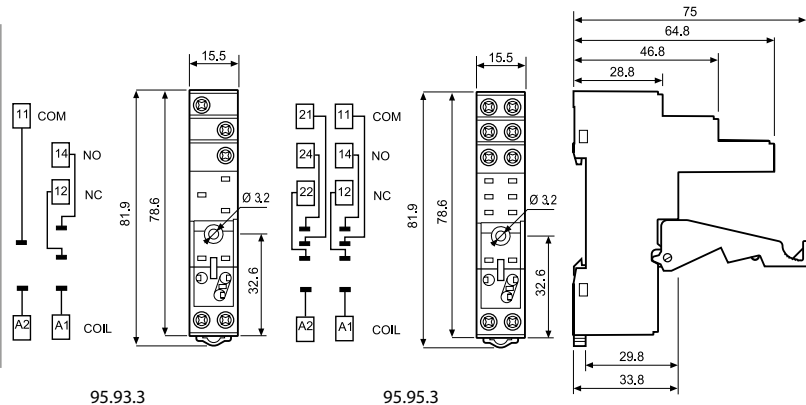
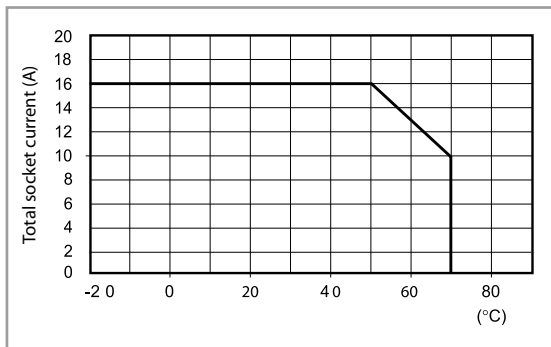


060.48

| Screw (Box clamp) terminal socket panel or 35 mm rail mount                                                                                                           | 95.93.3 (blue)                             | 95.93.30 (black)            | 95.95.3 (blue)      | 95.95.30 (black) |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------|---------------------|------------------|
| For relay type                                                                                                                                                        | 40.31                                      |                             | 40.51, 40.52, 40.61 |                  |
| Accessories                                                                                                                                                           |                                            |                             |                     |                  |
| Metal retaining clip                                                                                                                                                  | 095.71                                     |                             |                     |                  |
| Plastic retaining and release clip<br>(supplied with socket - packaging code SPA)                                                                                     | 095.91.3                                   | 095.91.30                   | 095.91.3            | 095.91.30        |
| 8-way jumper link                                                                                                                                                     | 095.08                                     | 095.08.0                    | 095.08              | 095.08.0         |
| Identification tag                                                                                                                                                    | 095.00.4                                   |                             |                     |                  |
| Modules (see table below)                                                                                                                                             | 99.80                                      |                             |                     |                  |
| Sheet of marker tags for plastic retaining and release clip<br>095.91.3 and for marker tag holder 097.00, 48 tags,<br>6 x 12 mm, for CEMBRE thermal transfer printers | 060.48                                     |                             |                     |                  |
| Technical data                                                                                                                                                        |                                            |                             |                     |                  |
| Rated values                                                                                                                                                          | 10 A - 250 V*                              |                             |                     |                  |
| Dielectric strength                                                                                                                                                   | 6 kV (1.2/50 µs) between coil and contacts |                             |                     |                  |
| Protection category                                                                                                                                                   | IP 20                                      |                             |                     |                  |
| Ambient temperature                                                                                                                                                   | °C                                         | −40...+70 (see diagram L95) |                     |                  |
|  Screw torque                                                                        | Nm                                         | 0.5                         |                     |                  |
| Wire strip length                                                                                                                                                     | mm                                         | 8                           |                     |                  |
| Max. wire size for 95.93.3 and 95.95.3 sockets                                                                                                                        |                                            | solid wire                  | stranded wire       |                  |
|                                                                                                                                                                       | mm²                                        | 1 x 6 / 2 x 2.5             |                     | 1 x 4 / 2 x 2.5  |
|                                                                                                                                                                       | AWG                                        | 1 x 10 / 2 x 14             |                     | 1 x 12 / 2 x 14  |

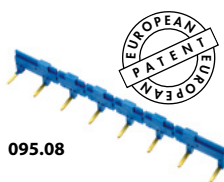
\* For currents > 10 A, contact terminals must be connected in parallel (21 with 11, 24 with 14, 22 with 12).  
With the relay 40.51 the change-over contact will be 21-12-14.

#### L 95 - Total socket current v ambient temperature



95.93.3

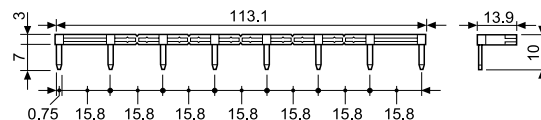
95.95.3



095.08



| 8-way jumper link for 95.93.3 and 95.95.3 sockets | 095.08 (blue) | 095.08.0 (black) |
|---------------------------------------------------|---------------|------------------|
| Rated values                                      | 10 A - 250 V  |                  |



#### 99.80 coil indication and EMC suppression modules for 95.93.3 and 95.95.3 sockets

|                                      |                    | Blue*          |
|--------------------------------------|--------------------|----------------|
| Diode (+A1, standard polarity)       | (6...220)V DC      | 99.80.3.000.00 |
| LED                                  | (6...24)V DC/AC    | 99.80.0.024.59 |
| LED                                  | (28...60)V DC/AC   | 99.80.0.060.59 |
| LED                                  | (110...240)V DC/AC | 99.80.0.230.59 |
| LED + Diode (+A1, standard polarity) | (6...24)V DC       | 99.80.9.024.99 |
| LED + Diode (+A1, standard polarity) | (28...60)V DC      | 99.80.9.060.99 |
| LED + Diode (+A1, standard polarity) | (110...220)V DC    | 99.80.9.220.99 |
| LED + Varistor                       | (6...24)V DC/AC    | 99.80.0.024.98 |
| LED + Varistor                       | (28...60)V DC/AC   | 99.80.0.060.98 |
| LED + Varistor                       | (110...240)V DC/AC | 99.80.0.230.98 |
| RC circuit                           | (6...24)V DC/AC    | 99.80.0.024.09 |
| RC circuit                           | (28...60)V DC/AC   | 99.80.0.060.09 |
| RC circuit                           | (110...240)V DC/AC | 99.80.0.230.09 |
| Residual current by-pass             | (110...240)V AC    | 99.80.8.230.07 |



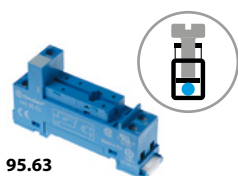
99.80

Approvals  
(according to type):



\* Modules in Black housing are available on request.

Green LED is standard.  
Red LED available on request.



95.63

Approvals  
(according to type):



95.65

Approvals  
(according to type):

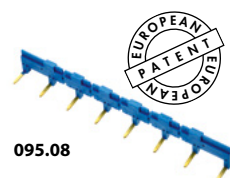
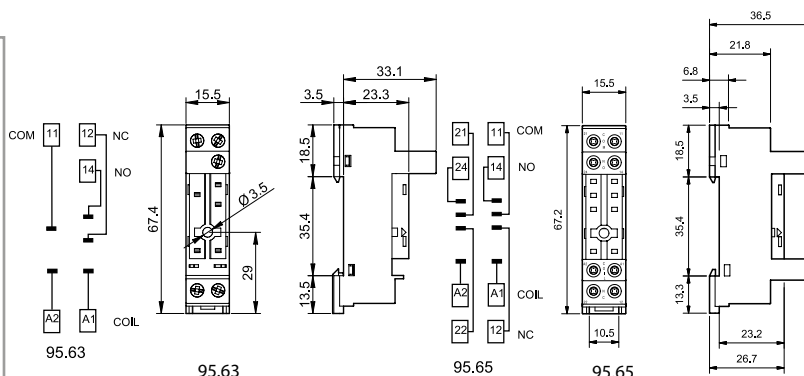
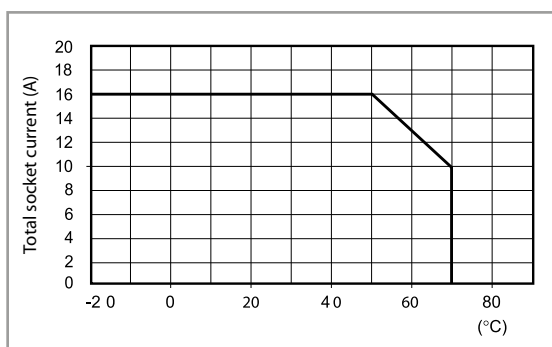


|                                                                    |                                 |                     |
|--------------------------------------------------------------------|---------------------------------|---------------------|
| <b>Screw terminal (Box clamp) socket</b> panel or 35 mm rail mount | <b>95.63</b>                    | <b>95.65</b>        |
| For relay type                                                     | 40.31                           | 40.51, 40.52, 40.61 |
| <b>Accessories</b>                                                 |                                 |                     |
| Metal retaining clip                                               | 095.71                          |                     |
| 8-way jumper link                                                  | 095.08                          | 095.08              |
| Modules (see table below)                                          | 99.01                           | —                   |
| <b>Technical data</b>                                              |                                 |                     |
| Rated values                                                       | 10 A - 250 V*                   |                     |
| Dielectric strength (between coil and contacts)                    | 6 kV (1.2/50 µs)                | 2 kV AC             |
| Protection category                                                | IP 20                           |                     |
| Ambient temperature                                                | °C -40...+70 (see diagram L95)  |                     |
| Screw torque                                                       | Nm                              | 0.5                 |
| Wire strip length                                                  | mm 7                            |                     |
| Max. wire size for 95.63 and 95.65 sockets                         | solid wire                      | stranded wire       |
|                                                                    | mm <sup>2</sup> 1 x 6 / 2 x 2.5 | 1 x 4 / 2 x 2.5     |
|                                                                    | AWG 1 x 10 / 2 x 14             | 1 x 12 / 2 x 14     |

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

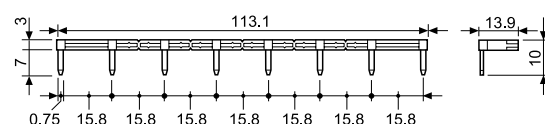
With the relay 40.51 the change-over contact will be 21-12-14.

## L 95 - Total socket current v ambient temperature



095.08

|                                                      |               |
|------------------------------------------------------|---------------|
| <b>8-way jumper link</b> for 95.63 and 95.65 sockets | 095.08 (blue) |
| Rated values                                         | 10 A - 250 V  |



99.01

Approvals  
(according to type):



\* Modules in Black housing are available on request.

Green LED is standard.  
Red LED available on request.

| <b>99.01 coil indication and EMC suppression modules for type 95.63 socket</b> |                    | <b>Blue*</b>   |
|--------------------------------------------------------------------------------|--------------------|----------------|
| Diode (+A1, standard polarity)                                                 | (6...220)V DC      | 99.01.3.000.00 |
| Diode (+A2, non-standard polarity)                                             | (6...220)V DC      | 99.01.2.000.00 |
| LED                                                                            | (6...24)V DC/AC    | 99.01.0.024.59 |
| LED                                                                            | (28...60)V DC/AC   | 99.01.0.060.59 |
| LED                                                                            | (110...240)V DC/AC | 99.01.0.230.59 |
| LED + Diode (+A1, standard polarity)                                           | (6...24)V DC       | 99.01.9.024.99 |
| LED + Diode (+A1, standard polarity)                                           | (28...60)V DC      | 99.01.9.060.99 |
| LED + Diode (+A1, standard polarity)                                           | (110...220)V DC    | 99.01.9.220.99 |
| LED + Diode (+A2, non-standard polarity)                                       | (6...24)V DC       | 99.01.9.024.79 |
| LED + Diode (+A2, non-standard polarity)                                       | (28...60)V DC      | 99.01.9.060.79 |
| LED + Diode (+A2, non-standard polarity)                                       | (110...220)V DC    | 99.01.9.220.79 |
| LED + Varistor                                                                 | (6...24)V DC/AC    | 99.01.0.024.98 |
| LED + Varistor                                                                 | (28...60)V DC/AC   | 99.01.0.060.98 |
| LED + Varistor                                                                 | (110...240)V DC/AC | 99.01.0.230.98 |
| RC circuit                                                                     | (6...24)V DC/AC    | 99.01.0.024.09 |
| RC circuit                                                                     | (28...60)V DC/AC   | 99.01.0.060.09 |
| RC circuit                                                                     | (110...240)V DC/AC | 99.01.0.230.09 |
| Residual current by-pass                                                       | (110...240)V AC    | 99.01.8.230.07 |

A



95.13.2



95.15.2

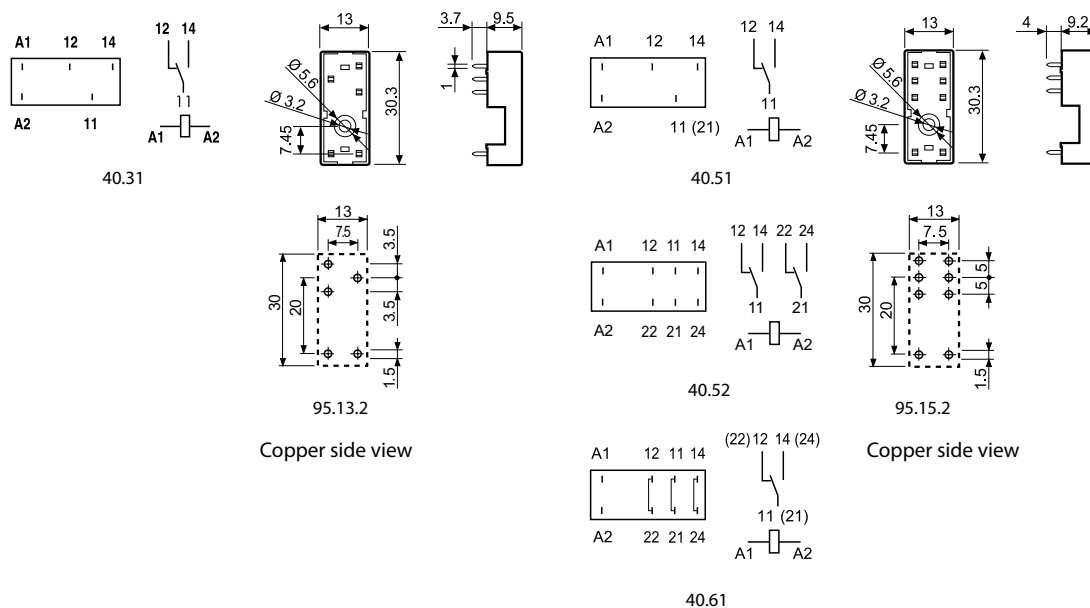
Approvals  
(according to type):



| PCB socket                                                       | 95.13.2 (blue)                             | 95.13.20 (black) | 95.15.2 (blue)      | 95.15.20 (black) |
|------------------------------------------------------------------|--------------------------------------------|------------------|---------------------|------------------|
| For relay type                                                   | 40.31                                      |                  | 40.51, 40.52, 40.61 |                  |
| Accessories                                                      |                                            |                  |                     |                  |
| Metal retaining clip (supplied with socket - packaging code SMA) | 095.51                                     |                  |                     |                  |
| Plastic retaining clip                                           | 095.52                                     |                  |                     |                  |
| Technical data                                                   |                                            |                  |                     |                  |
| Rated values                                                     | 12 A - 250 V                               |                  | 10 A - 250 V*       |                  |
| Dielectric strength                                              | 6 kV (1.2/50 μs) between coil and contacts |                  |                     |                  |
| Protection category                                              | IP 20                                      |                  |                     |                  |
| Ambient temperature                                              | °C                                         | −40...+70        |                     |                  |

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

With the relay 40.51 the change-over contact will be 21-12-14.



## Packaging codes

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

Example:



A Standard packaging

SM Metal retaining clip

SP Plastic retaining clip