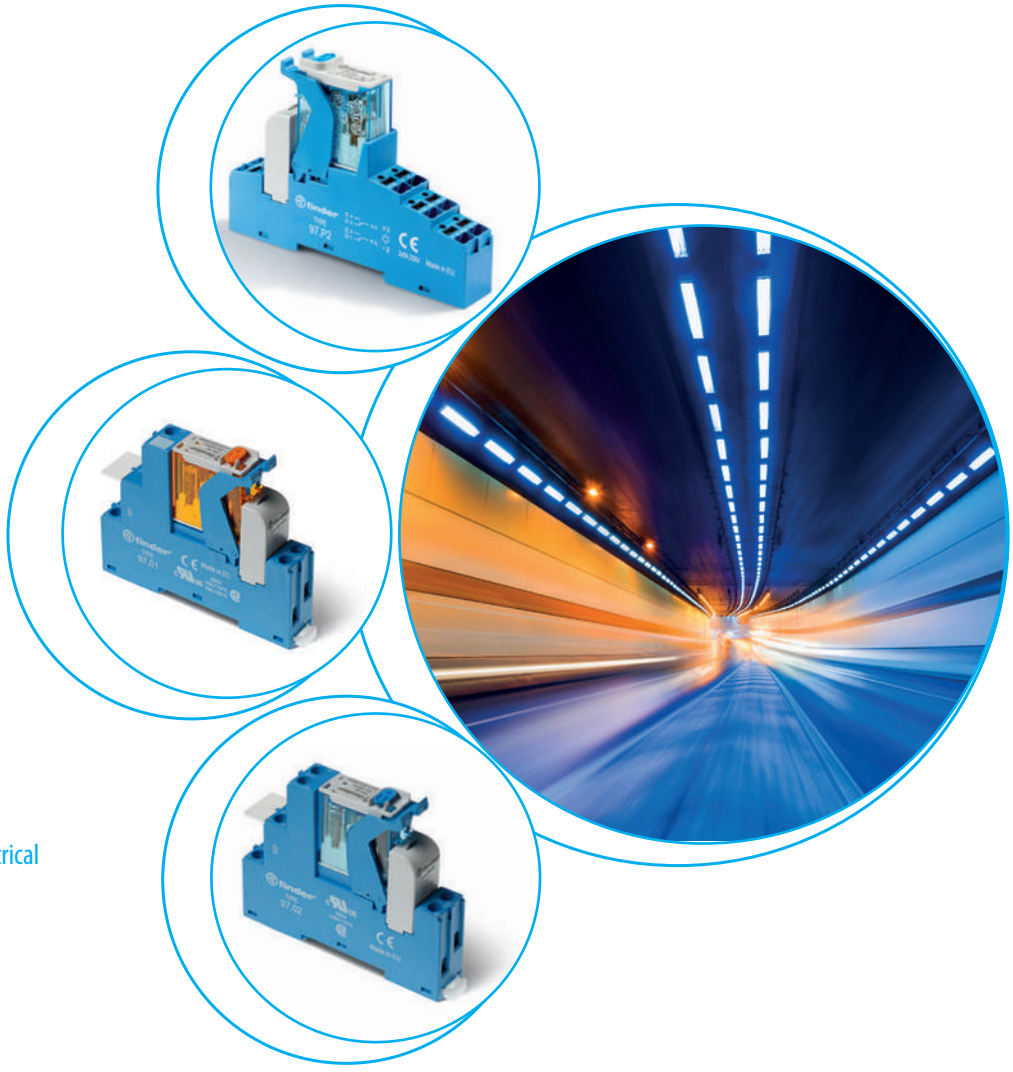
finder®
SWITCH TO THE FUTURE

4C
SERIES

# Relay interface modules 8 - 10 - 16 A

- Escalators
- Road / tunnel lighting
- Hoists and cranes
- Carousel warehouses
- Control panels
- Panels for electrical distribution



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**1 & 2 CO relay interface modules, 15.8 mm wide with Push-in terminal**

**Ideal interface for PLC and electronic systems**

**Type 4C.P1**
- 1 CO 10 A

**Type 4C.P2**
- 2 CO 8 A

- AC coils or DC coils
- Supply status indication and coil suppression module as standard
- Identification label
- UL Listing (certain relay/socket combinations)
- 35 mm rail (EN 60715) mounting

4C.P1 / 4C.P2
Push-in terminals



NEW **4C.P1**

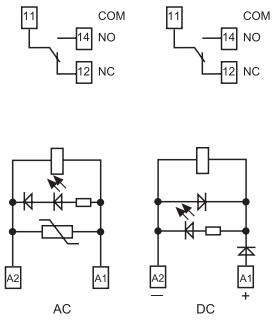


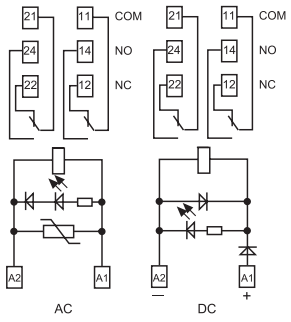
- 1 CO 10 A
- Push-in terminals

NEW **4C.P2**



- 2 CO 8 A
- Push-in terminals




For outline drawing see page 7

| | | | |
|---|---|---|---|
| **Contact specification** | | | |
| Contact configuration | | 1 CO (SPDT) | 2 CO (DPDT) |
| Rated current/Maximum peak current | A | 10/25 | 8/15 |
| Rated voltage/ Maximum switching voltage | V AC | 250/440 | 250/440 |
| Rated load AC1 | VA | 2500 | 2000 |
| Rated load AC15 (230 V AC) | VA | 750 | 350 |
| Single phase motor rating (230 V AC) | kW | 0.55 | 0.37 |
| Breaking capacity DC1: 30/110/220 V | A | 10/0.5/0.15 | 6/0.5/0.15 |
| Minimum switching load | mW (V/mA) | 300 (5/5) | 300 (5/5) |
| Standard contact material | | AgNi | AgNi |
| **Coil specification** | | | |
| Nominal voltage ($U_N$) | V AC (50/60 Hz) | 12 - 24 - 110 - 120 - 230 | 12 - 24 - 110 - 120 - 230 |
| | V DC | 12 - 24 - 125 | 12 - 24 - 125 |
| Rated power AC/DC | VA (50 Hz)/W | 1.2/0.5 | 1.2/0.5 |
| Operating range | AC | $(0.8…1.1)U_N$ | $(0.8…1.1)U_N$ |
| | DC | $(0.73…1.1)U_N$ | $(0.73…1.1)U_N$ |
| Holding voltage | AC/DC | 0.8 $U_N$ / 0.4 $U_N$ | 0.8 $U_N$ / 0.4 $U_N$ |
| Must drop-out voltage | AC/DC | 0.2 $U_N$ / 0.1 $U_N$ | 0.2 $U_N$ / 0.1 $U_N$ |
| **Technical data** | | | |
| Mechanical life AC/DC | cycles | $10 \cdot 10^6$ | $10 \cdot 10^6$ |
| Electrical life at rated load AC1 | cycles | $100 \cdot 10^3$ | $100 \cdot 10^3$ |
| Operate/release time | ms | 15/5 (AC) - 15/12 (DC) | 10/3 (AC) - 10/10 (DC) |
| Insulation between coil and contacts (1.2/50 µs) | kV | 6 (8 mm) | 6 (8 mm) |
| Dielectric strength between open contacts | V AC | 1000 | 1000 |
| Ambient temperature range | °C | –40…+70 | –40…+70 |
| Protection category | | IP 20 | IP 20 |
| **Approvals relay** (according to type) | | | |

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B

**1 & 2 CO relay interface modules, 15.8 mm wide with screw terminal**

**Ideal interface for PLC and electronic systems**

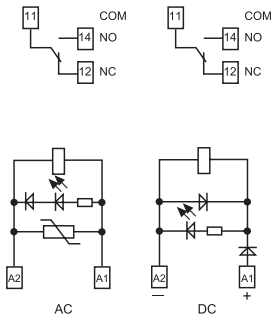
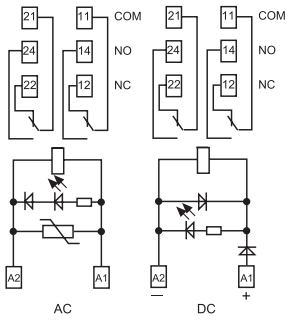
**Type 4C.01**
- 1 CO 16 A

**Type 4C.02**
- 2 CO 8 A

- AC coils or DC coils
- Supply status indication and coil suppression module as standard
- Identification label
- UL Listing (certain relay/socket combinations)
- 35 mm rail (EN 60715) mounting

4C.01 / 4C.02
Screw terminals



| | 4C.01 | 4C.02 |
|---|---|---|
| |  |  |
| | • 1 CO 16 A<br>• Screw terminals | • 2 CO 8 A<br>• Screw terminals |
| |  |  |

For outline drawing see page 7

| | | | |
|---|---|---|---|
| **Contact specification** | | | |
| Contact configuration | | 1 CO (SPDT) | 2 CO (DPDT) |
| Rated current/Maximum peak current | A | 16/25 | 8/15 |
| Rated voltage/ Maximum switching voltage | V AC | 250/440 | 250/440 |
| Rated load AC1 | VA | 4000 | 2000 |
| Rated load AC15 (230 V AC) | VA | 750 | 350 |
| Single phase motor rating (230 V AC) | kW | 0.55 | 0.37 |
| Breaking capacity DC1: 30/110/220 V | A | 16/0.5/0.15 | 6/0.5/0.15 |
| Minimum switching load | mW (V/mA) | 300 (5/5) | 300 (5/5) |
| Standard contact material | | AgNi | AgNi |
| **Coil specification** | | | |
| Nominal voltage ($U_N$) | V AC (50/60 Hz) | 12 - 24 - 110 - 120 - 230 | 12 - 24 - 110 - 120 - 230 |
| | V DC | 12 - 24 - 125 | 12 - 24 - 125 |
| Rated power AC/DC | VA (50 Hz)/W | 1.2/0.5 | 1.2/0.5 |
| Operating range | AC | $(0.8…1.1)U_N$ | $(0.8…1.1)U_N$ |
| | DC | $(0.73…1.1)U_N$ | $(0.73…1.1)U_N$ |
| Holding voltage | AC/DC | 0.8 $U_N$ / 0.4 $U_N$ | 0.8 $U_N$ / 0.4 $U_N$ |
| Must drop-out voltage | AC/DC | 0.2 $U_N$ / 0.1 $U_N$ | 0.2 $U_N$ / 0.1 $U_N$ |
| **Technical data** | | | |
| Mechanical life AC/DC | cycles | $10 \cdot 10^6$ | $10 \cdot 10^6$ |
| Electrical life at rated load AC1 | cycles | $100 \cdot 10^3$ | $100 \cdot 10^3$ |
| Operate/release time | ms | 15/5 (AC) - 15/12 (DC) | 10/3 (AC) - 10/10 (DC) |
| Insulation between coil and contacts (1.2/50 µs) | kV | 6 (8 mm) | 6 (8 mm) |
| Dielectric strength between open contacts | V AC | 1000 | 1000 |
| Ambient temperature range | °C | ≤ 12 A: –40…+70/>12 A: –40…+50 | –40…+70 |
| Protection category | | IP 20 | IP 20 |
| **Approvals relay** (according to type) | | | |

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## Ordering information

Example: 4C series, 35 mm rail (EN 60715) mount, Push-in terminal relay interface module, 1 CO 10 A contacts, 24 V DC coil, green LED + diode.

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | A | | B | | C | D |
| 4 | C | . | P | 1 | . | 9 | . | 0 | 2 | 4 | . | 0 | | 0 | | 5 | 0 |

**Series**

**Type**
0 = 35 mm rail (EN 60715) mount
screw terminal socket
P = 35 mm rail (EN 60715) mount
Push-in terminal socket

**No. of poles**
1 = 1 pole, 10/16 A
2 = 2 pole, 8 A

**Coil version**
8 = AC (50/60 Hz)
9 = DC

**Coil voltage**
See coil specifications

**A: Contact material**
0 = AgNi
4 = $AgSnO_2$
5 = AgNi + Au

**B: Contact circuit**
0 = CO (nPDT)

**C: Options**
5 = Standard for DC:
green LED + diode (polarity +A1)
6 = Standard for AC:
green LED + Varistor

**D: Special versions**
0 = Standard

**Selecting features and options: only combinations in the same row are possible.**
Preferred selections for best availability are shown in **bold.**

| Type | Coil version | A | B | C | D |
|---|---|---|---|---|---|
| 4C.02 | AC | **0** - 5 | **0** | **6** | **0** |
| 4C.P2 | DC | **0** - 5 | **0** | **5** | **0** |
| 4C.01 | AC | **0** - 4 - 5 | **0** | **6** | **0** |
| 4C.P1 | DC | **0** - 4 - 5 | **0** | **5** | **0** |

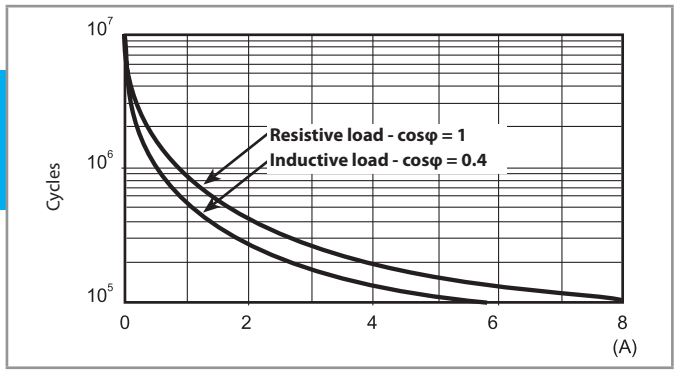
## Technical data

| | | | | | | |
|---|---|---|---|---|---|---|
| **Insulation** | | | | | | |
| Insulation according to EN 61810-1 | insulation rated voltage | V | 250 | | 440 | |
| | rated impulse withstand voltage | kV | 4 | | 4 | |
| | pollution degree | | 3 | | 2 | |
| | overvoltage category | | III | | III | |
| Insulation between coil and contacts (1.2/50 µs) | | kV | 6 (8 mm) | | | |
| Dielectric strength between open contacts | | V AC | 1000 | | | |
| Dielectric strength between adjacent contacts | | V AC | 2000 | | | |
| **Conducted disturbance immunity** | | | | | | |
| Burst (5…50)ns, 5 kHz, on A1 - A2 according to EN 61000-4-4 | | | level 4 (4 kV) | | | |
| Surge (1.2/50 µs) on A1 - A2 (differential mode) according to EN 61000-4-5 | | | level 3 (2 kV) | | | |
| **Other data** | | | | | | |
| Bounce time: NO/NC | | ms | 2/6 (4C.01/P1) | | 1/4 (4C.02/P2) | |
| Vibration resistance (10…150)Hz: NO/NC | | g | 20/12 | | | |
| Power lost to the environment | without contact current | W | 0.6 | | | |
| | with rated current | W | 1.6 (4C.01/P1) | | 2 (4C.02/P2) | |
| **Terminals** | | | **4C.01/4C.02** | | **4C.P1/4C.P2** | |
| Wire strip length | | mm | 8 | | 8 | |
| Screw torque | | Nm | 0.8 | | — | |
| Min. wire size | | | solid cable | stranded cable | solid cable | stranded cable |
| | | $mm^2$ | 0.5 | 0.5 | 0.5 | 0.5 |
| | | AWG | 21 | 21 | 21 | 21 |
| Max. wire size | | | solid cable | stranded cable | solid cable | stranded cable |
| | | $mm^2$ | 1 x 6 / 2 x 2.5 | 1 x 4 / 2 x 2.5 | 2 x 1.5 / 1 x 2.5 | 2 x 1.5 / 1 x 2.5 |
| | | AWG | 1 x 10 / 2 x 14 | 1 x 12 / 2 x 14 | 2 x 16 / 1 x 14 | 2 x 16 / 1 x 14 |

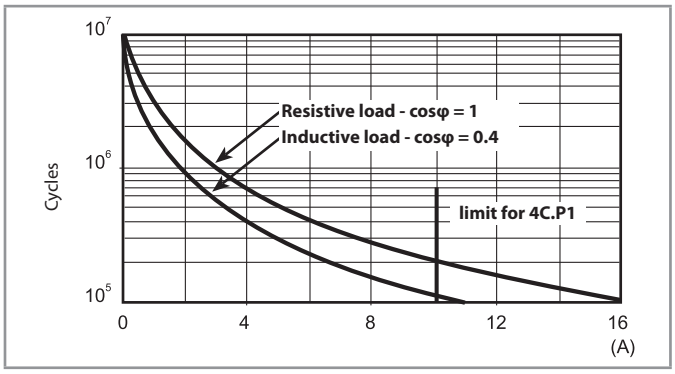
B

## Contact specification

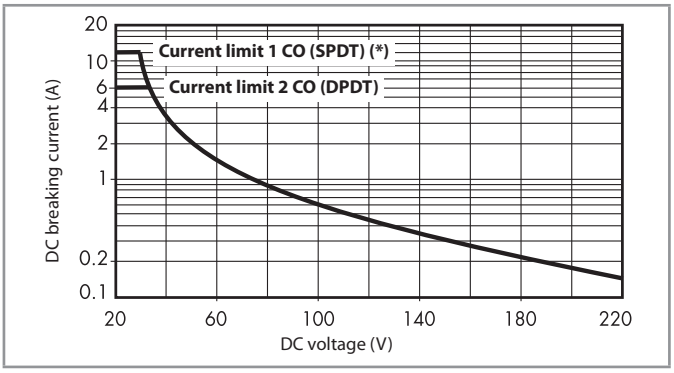
**F 4C - Electrical life (AC) v contact current**
Types 4C.02/P2




**F 4C - Electrical life (AC) v contact current**
Types 4C.01/P1




**H 4C - Maximum DC1 breaking capacity**




(*) Type 4C.01 = 12 A, Type 4C.P1 = 10 A

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

## Coil specifications

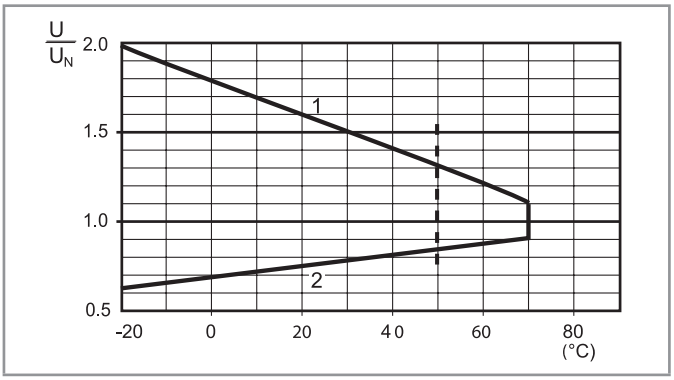
**DC coil data**

| Nominal voltage | Coil code | Operating range | | Resistance | Rated coil consumption |
|---|---|---|---|---|---|
| $U_N$ | | $U_{min}$ | $U_{max}$ | R | I at $U_N$ |
| V | | V | V | Ω | mA |
| 12 | **9**.012 | 8.8 | 13.2 | 300 | 40 |
| 24 | **9**.024 | 17.5 | 26.4 | 1200 | 20 |
| 125 | **9**.125 | 91.2 | 138 | 32000 | 3.9 |

**AC coil data**

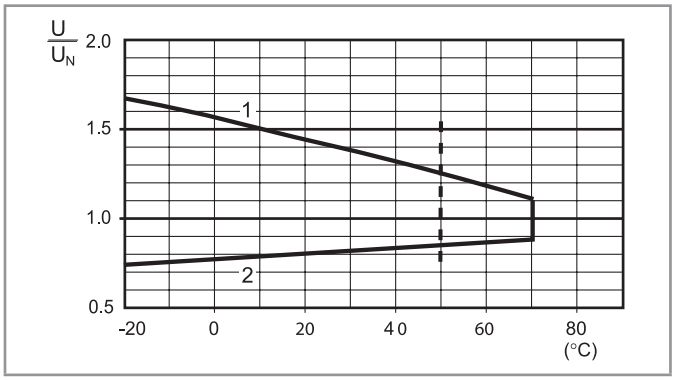
| Nominal voltage | Coil code | Operating range | | Resistance | Rated coil consumption |
|---|---|---|---|---|---|
| $U_N$ | | $U_{min}$ | $U_{max}$ | R | I at $U_N$ |
| V | | V | V | Ω | mA |
| 12 | **8**.012 | 9.6 | 13.2 | 80 | 90 |
| 24 | **8**.024 | 19.2 | 26.4 | 320 | 45 |
| 110 | **8**.110 | 88 | 121 | 6900 | 9.4 |
| 120 | **8**.120 | 96 | 132 | 9000 | 8.4 |
| 230 | **8**.230 | 184 | 253 | 28000 | 5 |

**R 4C - DC coil operating range v ambient temperature**




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

**R 4C - AC coil operating range v ambient temperature**




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

------ Temperature limit for 4C.01 with 16 A contact current.

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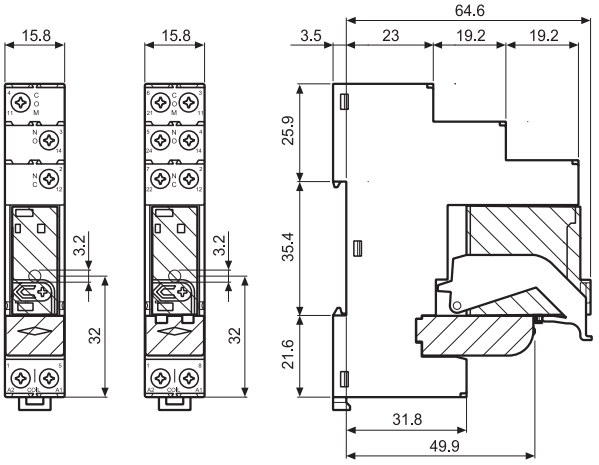
## Combinations

Certain relay/socket combinations

| Code | Type of socket | Type of relay | Module | Retaining clip |
|---|---|---|---|---|
| 4C.P1 | 97.P1 | 46.61 | 99.02 | 097.01 |
| 4C.P2 | 97.P2 | 46.52 | 99.02 | 097.01 |
| 4C.01 | 97.01 | 46.61 | 99.02 | 097.01 |
| 4C.02 | 97.02 | 46.52 | 99.02 | 097.01 |

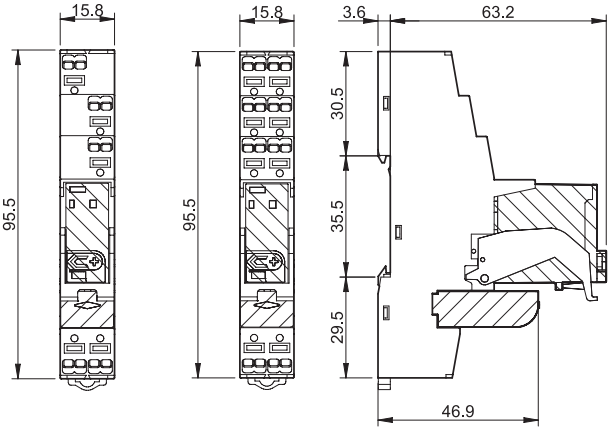


## Outline drawing




4C.01 / 4C.02
Screw terminals






4C.P1 / 4C.P2
Push-in terminals

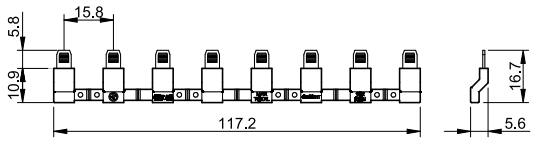


## Accessories



**097.58**

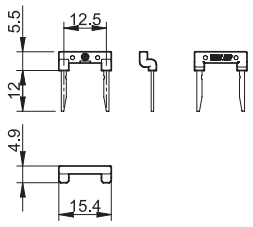
| **8-way jumper link** for type 4C.P1 and 4C.P2 | 097.58 |
|---|---|
| Rated values | 10 A - 250 V |






**097.52**

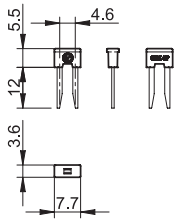
| **2-way jumper link** for type 4C.P1 and 4C.P2 | 097.52 |
|---|---|
| Rated values | 10 A - 250 V |






**097.42**

| **2-way jumper link** for type 4C.P1 and 4C.P2 | 097.42 |
|---|---|
| Rated values | 10 A - 250 V |

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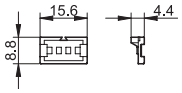
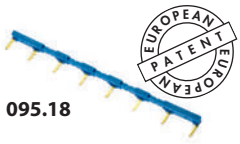
## Accessories



097.00

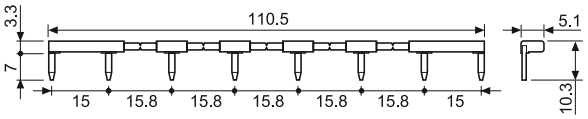
| | |
|---|---|
| **Marker tag holder** for type 4C.P1/P2/01/02 | 097.00 |

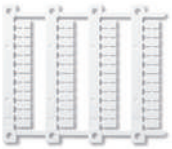



095.18

| | |
|---|---|
| **8-way jumper link** for 4C.01 and 4C.02 | 095.18 (blue) |
| Rated values | 10 A - 250 V |



060.48

| | |
|---|---|
| **Sheet of marker tags (CEMBRE Thermal transfer printers)**, marker tag holder 097.00 or on the relay 46 series, plastic, 48 tags, 6 x 12 mm | 060.48 |

## Packaging codes

**How to code and identify retaining clip and packaging options for relay interface module.**

Example:

| 4 | C | . | P | 1 | . | 9 | . | 0 | 2 | 4 | . | 0 | 0 | 5 | 0 | S | P | A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

**A** Standard packaging
**B** Blister packaging

**SP** Plastic retaining clip