



finder[®]

SWITCH TO THE FUTURE

Miniature plug-in timers 7 - 10 A

85
SERIES



Timers and
lighting controls



Medical and
dentistry



Drying kilns



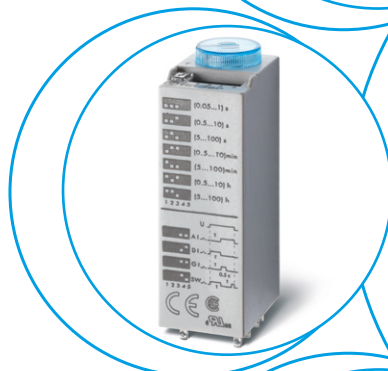
Elevators
and lifts



Panels for
electrical
distribution



Control panels



Plug-in timer

- 85.02 - 2 Pole 10 A**
- 85.03 - 3 Pole 10 A**
- 85.04 - 4 Pole 7 A**

- Multifunctions
- Seven time scales, from 0.05 s to 100 h
- 94 series sockets for 35 mm rail (EN 60715) mount with push-in and screw terminal



- 2 pole, 10 A
- AC/DC supply non polarized
- Plug-in for use with 94 series sockets

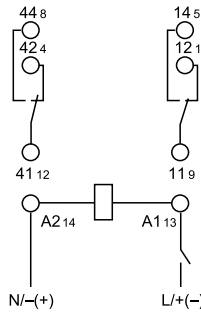
- 3 pole, 10 A
- AC/DC supply non polarized
- Plug-in for use with 94 series sockets

- 4 pole, 7 A
- AC/DC supply non polarized
- Plug-in for use with 94 series sockets

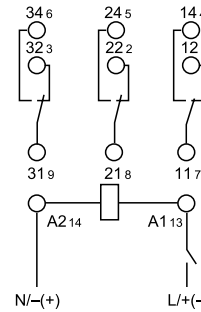
AI: On-delay
DI: Interval
SW: Symmetrical flasher (starting pulse on)
GI: Pulse delayed

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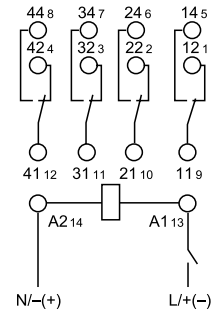
AI: On-delay
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SW: Symmetrical flasher (starting pulse on)
GI: Pulse delayed



Wiring diagram (without control signal)



Wiring diagram (without control signal)



Wiring diagram (without control signal)

FOR UL RATINGS SEE:
"General technical information" page V

For outline drawing see page 4

Contact specification

| | | | | |
|---|-----------|--------------|--------------|-------------|
| Contact configuration | | 2 CO (DPDT) | 3 CO (3PDT) | 4 CO (4PDT) |
| Rated current/Maximum peak current | A | 10/20 | 10/20 | 7/15 |
| Rated voltage/Maximum switching voltage | V AC | 250/400 | 250/400 | 250/250 |
| Rated load AC1 | VA | 2500 | 2500 | 1750 |
| Rated load AC15 (230 V AC) | VA | 500 | 500 | 350 |
| Single phase motor rating (230 V AC) | kW | 0.37 | 0.37 | 0.125 |
| Breaking capacity DC1: 30/110/220 V | A | 10/0.25/0.12 | 10/0.25/0.12 | 7/0.25/0.12 |
| Minimum switching load | mW (V/mA) | 300 (5/5) | 300 (5/5) | 300 (5/5) |
| Standard contact material | | AgNi | AgNi | AgNi |

Supply specification

| | | | | |
|-----------------------------------|-----------------|--|----------------------------|----------------------------|
| Nominal voltage (U _N) | V AC (50/60 Hz) | 230...240 | 230...240 | 230...240 |
| | V AC/DC | 12 - 24 - 48 - 110...125 (non polarized) | | |
| Rated power AC/DC | VA (50 Hz)/W | 2/2 | 2/2 | 2/2 |
| Operating range | AC | (0.85...1.1)U _N | (0.85...1.1)U _N | (0.85...1.1)U _N |
| | DC | (0.85...1.1)U _N | (0.85...1.1)U _N | (0.85...1.1)U _N |

Technical data

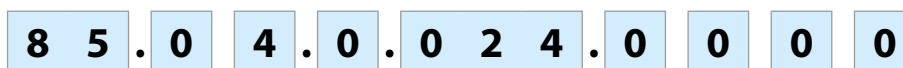
| | | | | |
|--------------------------------------|--------|--|-----------------------|-----------------------|
| Specified time range | | (0.05...1)s, (0.5...10)s, (5...100)s, (0.5...10)min, (5...100)min, (0.5...10)h, (5...100)h | | |
| Repeatability | % | ± 2 | ± 2 | ± 2 |
| Recovery time | ms | ≤ 20 | ≤ 20 | ≤ 20 |
| Minimum control impulse | ms | — | — | — |
| Setting accuracy-full range | % | ± 5 | ± 5 | ± 5 |
| Electrical life at rated load in AC1 | cycles | 200 · 10 ³ | 200 · 10 ³ | 150 · 10 ³ |
| Ambient temperature range | °C | -20...+60 | -20...+60 | -20...+60 |
| Protection category | | IP 40 | IP 40 | IP 40 |

Approvals (according to type)



Ordering information

Example: 85 series timer, 4 CO (4PDT), 24 V AC/DC supply voltage, AI, DI, GI, SW functions.



Series ————

Type ————

0 = Multifunction (AI, DI, GI, SW)*

* AI = On-delay
DI = Interval
GI = Pulse delayed
SW = Symmetrical flasher (starting pulse on)

Supply voltage

012 = 12 V AC/DC
024 = 24 V AC/DC
048 = 48 V AC/DC
125 = (110...125)V AC/DC
240 = (230...240)V AC

Supply version

0 = AC (50/60 Hz)/DC
8 = AC (50/60 Hz) for 240 V only

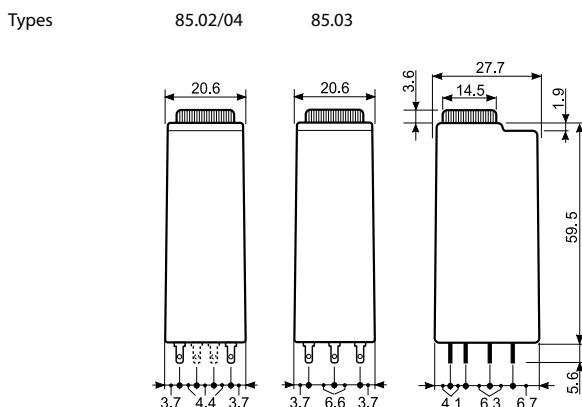
No. of poles ————

2 = 2 pole - 10 A
3 = 3 pole - 10 A
4 = 4 pole - 7 A

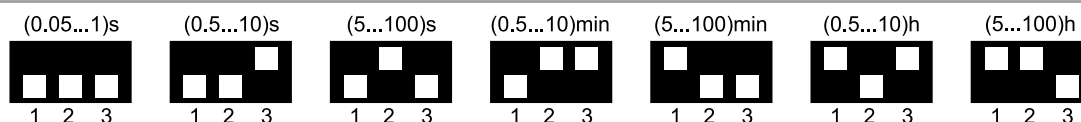
Technical data

| Insulation | | | | |
|---|----------------------------------|------|---------------------------|-------------------------|
| Dielectric strength | | | 85.02, 85.03 | 85.04 |
| | between input and output circuit | V AC | 2000 | 2000 |
| | between open contacts | V AC | 1000 | 1000 |
| | between adjacent contacts | V AC | 2000 | 1550 |
| Insulation (1.2/50 μs) between input and output | | kV | 6 | 4 |
| EMC specifications | | | | |
| Type of test | | | Reference standard | |
| Electrostatic discharge | contact discharge | | EN 61000-4-2 | n.a. |
| | air discharge | | EN 61000-4-2 | 8 kV |
| Radio-frequency electromagnetic field (80 ÷ 1000 MHz) | | | EN 61000-4-3 | 15 V/m |
| Fast transients (burst) (5-50 ns, 5 kHz) on Supply terminals | | | EN 61000-4-4 | 4 kV |
| Surges (1.2/50 μs) on Supply terminals | common mode | | EN 61000-4-5 | 4 kV |
| | differential mode | | EN 61000-4-5 | 2 kV |
| Radio-frequency common mode (0.15 ÷ 80 MHz) on Supply terminals | | | EN 61000-4-6 | 10 V |
| Power-frequency (50 Hz) | | | EN 61000-4-8 | 30 A/m |
| Radiated and conducted emission | | | EN 55022 | class B |
| Other data | | | | |
| Power lost to the environment | without contact current | W | 1.6 | |
| | with rated current | W | 3.7 (85.02) | 4.7 (85.03) 3.6 (85.04) |

Outline drawings



Times scales



NOTE: time scales and functions must be set before energising the timer.

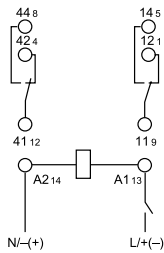
Functions

- U** = Supply voltage
- = Output contact

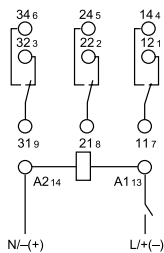
| LED | Supply voltage | NO (SPDT-NO) output contact | Contacts | |
|-----|----------------|------------------------------|----------|---------|
| | | | Open | Closed |
| | OFF | Open | x1 - x4 | x1 - x2 |
| | ON | Open | x1 - x4 | x1 - x2 |
| | ON | Open (Timing in Progress) | x1 - x4 | x1 - x2 |
| | ON | Closed | x1 - x2 | x1 - x4 |

Wiring diagram

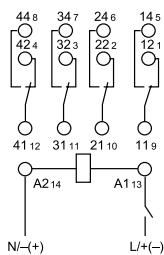
Type: 85.02, 85.03, 85.04



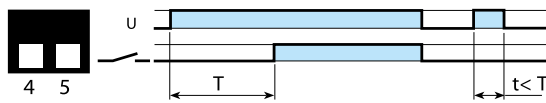
85.02



85.03

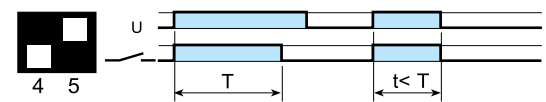


85.04



(AI) On-delay.

Apply power to timer.
Output contacts transfer after preset time has elapsed.
Reset occurs when power is removed.



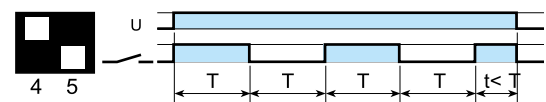
(DI) Interval.

Apply power to timer.
Output contacts transfer immediately.
After the preset time has elapsed, contacts reset.



(GI) Pulse delayed.

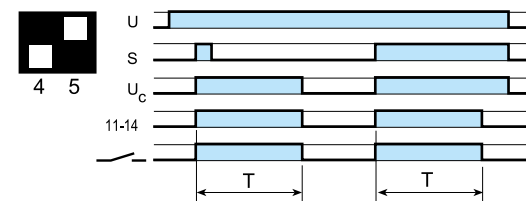
Apply power to timer. Output contacts transfer after preset time has elapsed. Reset occurs after a fixed time of 0.5 s.



(SW) Symmetrical flasher (starting pulse on).

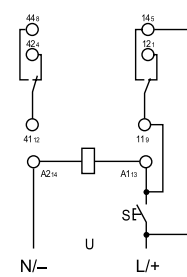
Apply power to timer.
Output contacts transfer immediately and cycle between ON and OFF for as long as power is applied.
The ratio is 1:1 (time on = time off).

- U** = Supply voltage
- S** = Signal switch
- U_c** = Supply voltage to the timer
- 11-14** = Self-holding contact
- = Output contact

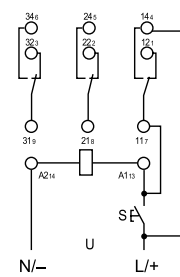


Signal ON Pulse

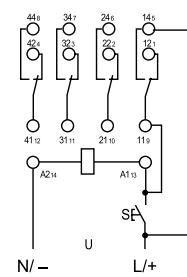
On momentary closure of Signal Switch (S) > 50 ms, the output contacts transfer and remain so (with self-holding on contact 11-14) for the duration of the preset delay, after which they reset.



85.02



85.03

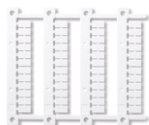


85.04



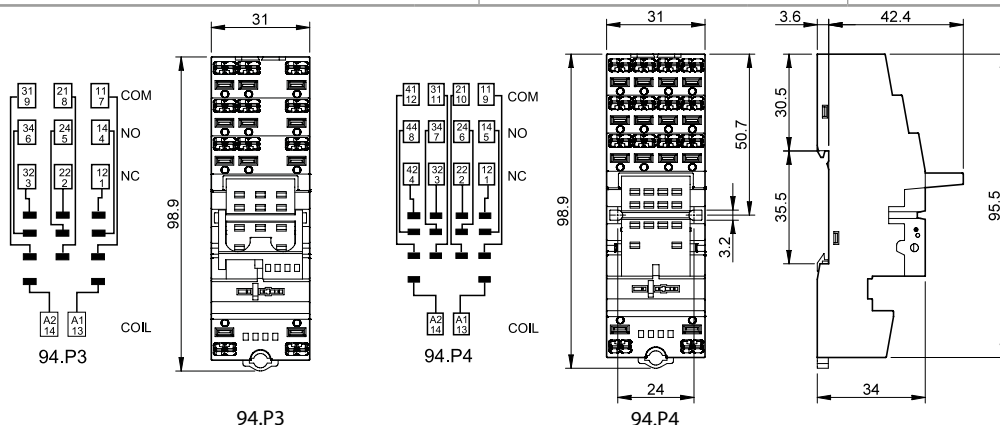
94.P4

Approvals
(according to type):

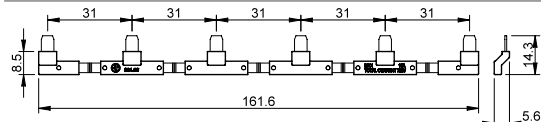


060.48

| | | |
|--|-------------------|-------------------|
| Push-in terminal socket panel or 35 mm (EN 60715) rail mount | 94.P3 Blue | 94.P4 Blue |
| For timer type | 85.03 | 85.02, 85.04 |
| Accessories | | |
| Metal retaining clip | | 094.81 |
| 6-way jumper link | | 094.56 |
| Identification tag | | 094.00.4 |
| 2-way jumper link | | 094.52.1 |
| 2-way jumper link | | 097.52 |
| Marker tag holder | | 097.00 |
| Sheet of marker tags 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 | 2 kV AC | |
| Protection category | IP 20 | |
| Ambient temperature | °C -40...+70 | |
| Wire strip length | mm | 8 |
| Min. wire size for 94.P3 and 94.P4 sockets | solid wire | stranded wire |
| | mm ² | 0.5 |
| | AWG | 21 |
| Max. wire size for 94.P3 and 94.P4 sockets | solid wire | stranded wire |
| | mm ² | 2 x 1.5 / 1 x 2.5 |
| | AWG | 2 x 18 / 1 x 14 |



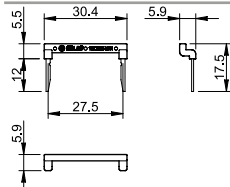
| | |
|--|---------------|
| 6-way jumper link for 94.P3 and 94.P4 sockets | 094.56 (blue) |
| Rated values | 10 A - 250 V |



094.56

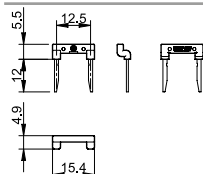


| | |
|--|--------------|
| 2-way jumper link for 94.P3 and 94.P4 sockets | 094.52.1 |
| Rated values | 10 A - 250 V |



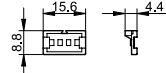
094.52.1

| | |
|--|--------------|
| 2-way jumper link for 94.P3 and 94.P4 sockets | 097.52 |
| Rated values | 10 A - 250 V |



097.52

| | |
|--|--------|
| Marker tag holder for 94.P3 and 94.P4 sockets | 097.00 |
|--|--------|

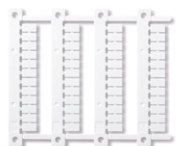


097.00



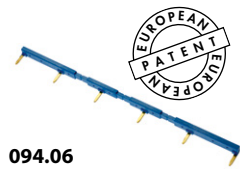
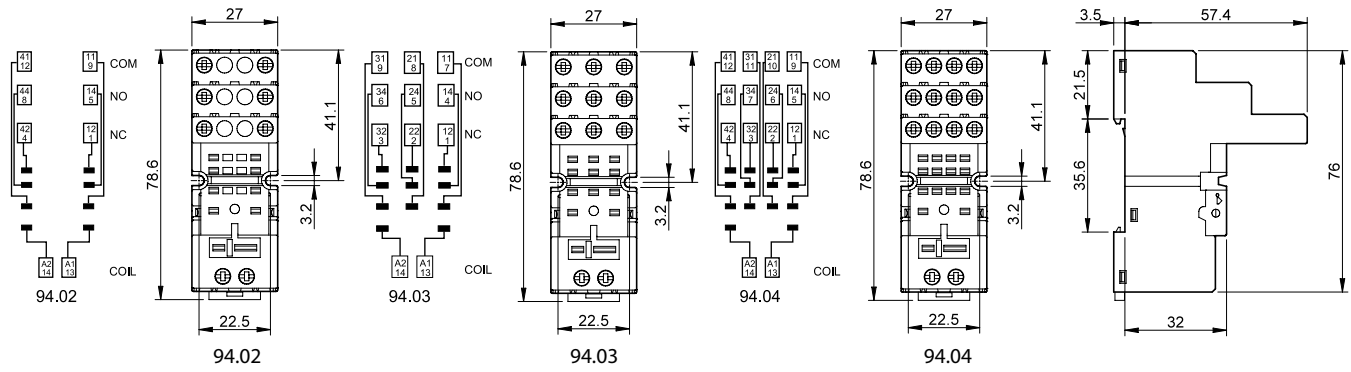
94.04

Approvals
(according to type):
CE EAC CULUS



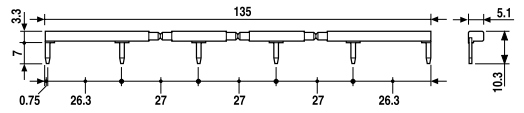
060.48

| | | | | | | |
|---|---------------------------------|----------------|--------------|-----------------|--------------|----------------|
| Screw terminal (Box clamp) socket panel or 35 mm (EN 60715) rail mount | 94.02 | 94.02.0 | 94.03 | 94.03.0 | 94.04 | 94.04.0 |
| (EN 60715) rail mount | Blue | Black | Blue | Black | Blue | Black |
| For timer type | 85.02 | | 85.03 | | 85.04 | |
| Accessories | | | | | | |
| Metal retaining clip | 094.81 | | | | | |
| 6-way jumper link | 094.06 | 094.06.0 | 094.06 | 094.06.0 | 094.06 | 094.06.0 |
| Identification tag | 094.00.4 | | | | | |
| Marker tag holder | 097.00 | | | | | |
| Sheet of marker tags 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 | 2 kV AC | | | | | |
| Protection category | IP 20 | | | | | |
| Ambient temperature | °C -40...+70 | | | | | |
| Screw torque | Nm 0.5 | | | | | |
| Wire strip length | mm 8 | | | | | |
| Max. wire size for 94.02/03/04 sockets | solid wire | | | stranded wire | | |
| | mm ² 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 | | |



094.06

| | | |
|---|----------------------|-------------------------|
| 6-way jumper link for 94.02, 94.03 and 94.04 sockets | 094.06 (blue) | 094.06.0 (black) |
| Rated values | 10 A - 250 V | |



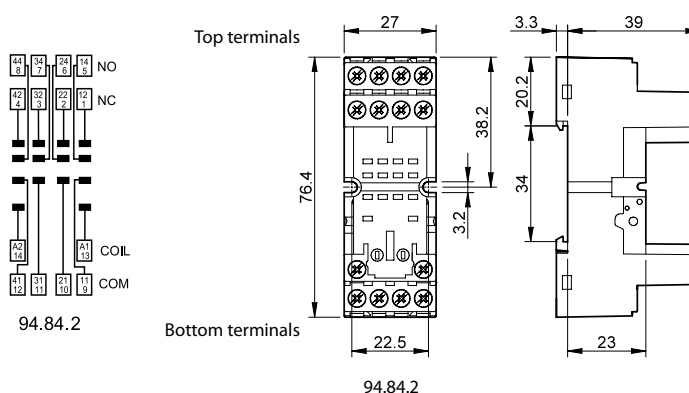


94.84.2

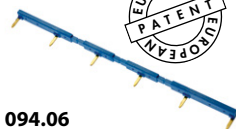
Approvals
(according to type):



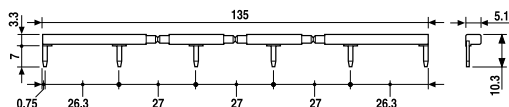
| | | |
|---|-----------------|---|
| Screw terminal (Box clamp) socket panel or 35 mm (EN 60715) rail mount | 94.84.2 | 94.84.20 |
| For timer type | Blue | Black |
| | 85.02, 85.04 | |
| Accessories | | |
| Metal retaining clip (supplied with socket - packaging code SMA) | | 094.81 |
| 6-way jumper link | 094.06 | 094.06.0 |
| Identification tag | | 094.80.3 |
| Technical data | | |
| Rated values | 10 A - 250 V | |
| Dielectric strength | 2 kV AC | |
| Protection category | IP 20 | |
| Ambient temperature | °C -40...+70 | |
| Screw torque | Nm | 0.5 |
| Wire strip length | mm | 7 |
| Max. wire size for 94.84.2 socket | | |
| | mm ² | solid wire 1 x 6 / 2 x 2.5 |
| | AWG | stranded wire 1 x 4 / 2 x 2.5 1 x 12 / 2 x 14 |



| | | |
|---|---------------|------------------|
| 6-way jumper link for 94.84.2 socket | 094.06 (blue) | 094.06.0 (black) |
| Rated values | 10 A - 250 V | |



094.06



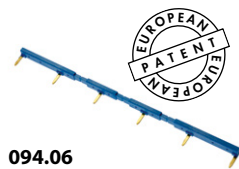
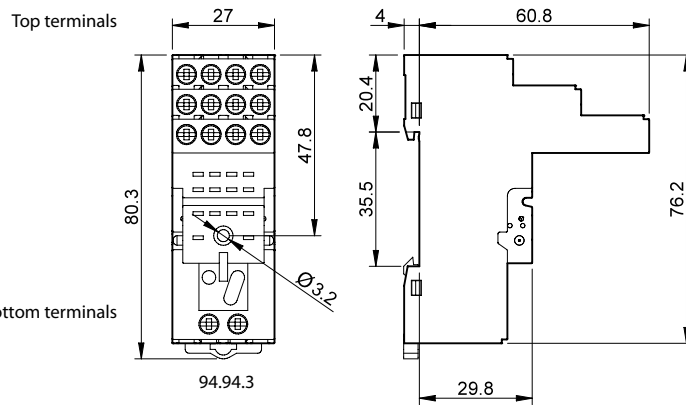
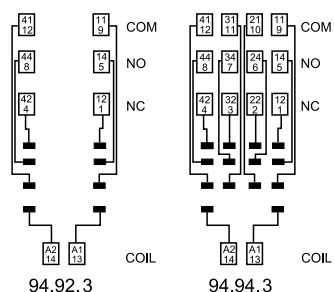


94.94.3

Approvals
(according to type):



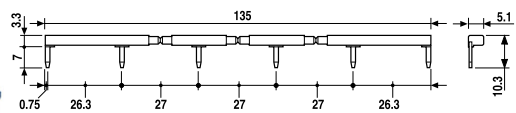
| | | | | |
|--|-----------------------|-------------------------|-----------------------|-------------------------|
| Screw terminal (Box clamp) socket panel or 35 mm rail mount | 94.92.3 (blue) | 94.92.30 (black) | 94.94.3 (blue) | 94.94.30 (black) |
| For timer type | 85.02 | | 85.04 | |
| Accessories | | | | |
| Metal retaining clip | 094.81 | | | |
| 6-way jumper link | 094.06 | 094.06.0 | 094.06 | 094.06.0 |
| Identification tag | 094.80.3 | | | |
| Technical data | | | | |
| Rated values | 10 A - 250 V | | | |
| Dielectric strength | 2 kV AC | | | |
| Protection category | IP 20 | | | |
| Ambient temperature | °C | -25...+70 | | |
| Screw torque | Nm | 0.5 | | |
| Wire strip length | mm | 8 | | |
| Max. wire size for 94.92.3 and 94.94.3 sockets | | solid wire | | stranded wire |
| | mm ² | 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 |



094.06



| | | |
|--|---------------|------------------|
| 6-way jumper link for 94.92.3 and 94.94.3 sockets | 094.06 (blue) | 094.06.0 (black) |
| Rated values | 10 A - 250 V | |





94.74

Approvals
(according to type):



| | | | | | | |
|--|--------------|----------------|--------------|----------------|--------------|----------------|
| Screw terminal (Plate clamp) socket panel or 35 mm rail (EN 60715) mount | 94.72 | 94.72.0 | 94.73 | 94.73.0 | 94.74 | 94.74.0 |
| For timer type | Blue | Black | Blue | Black | Blue | Black |
| | 85.02 | | 85.03 | | 85.02, 85.04 | |

| | | | | | | |
|--|--|--|--|--|--------|--|
| Accessories | | | | | | |
| Metal retaining clip (supplied with timer) | | | | | 094.81 | |

| | | |
|--|--------------|----------------|
| Screw terminal socket panel or 35 mm rail (EN 60715) mount | 94.82 | 94.82.0 |
| For timer type | Blue | Black |
| | 85.02 | 85.02 |

| | | |
|--|--|--------|
| Accessories | | |
| Metal retaining clip (supplied with timer) | | 094.81 |

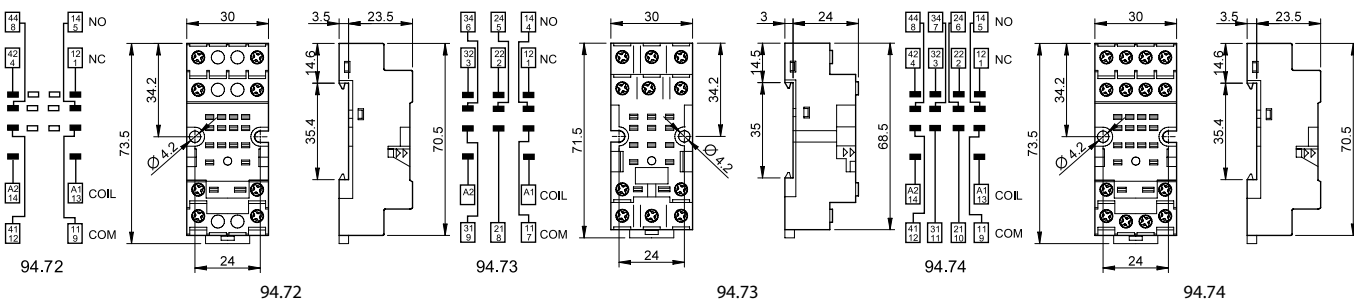
Technical data

| | | |
|--|----------------------------|-------------------|
| Rated values | 10 A - 250 V | |
| Dielectric strength | 2 kV AC | |
| Protection category | IP 20 | |
| Ambient temperature | °C -40...+70 | |
| Screw torque | Nm | 0.5 |
| Wire strip length | mm 8 (94.72, 94.73, 94.74) | 9 (94.82) |
| Max. wire size for 94.72, 94.73, 94.74 and 94.82 sockets | solid wire | |
| | mm ² | 1 x 2.5 / 2 x 1.5 |
| | AWG | 1 x 14 / 2 x 16 |



94.82

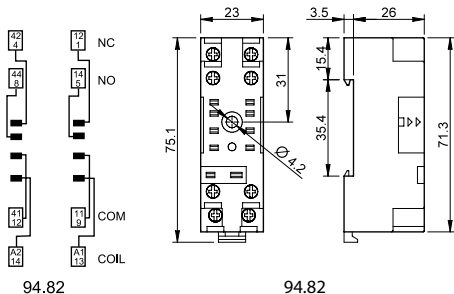
Approvals
(according to type):



94.72

94.73

94.74



94.82

94.82