

# Miniature plug-in timers 7 - 10 A



Timers and  
lighting controls



Medical and  
dentistry



Drying kilns



Elevators  
and lifts



Panels for  
electrical  
distribution



Control panels



85  
SERIES

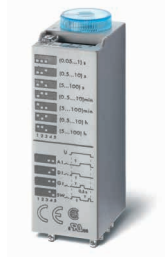
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**Plug-in timer**

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

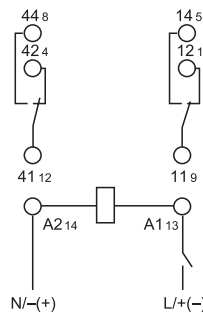
- Multifunctions
- Seven time scales, from 0.05 s to 100 h
- 94 series sockets for 35 mm rail (EN 60715) mount with push-in and box clamp

**85.02**



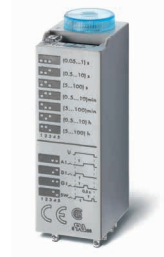
- 2 pole, 10 A
- AC/DC supply non polarized
- Plug-in for use with 94 series sockets

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



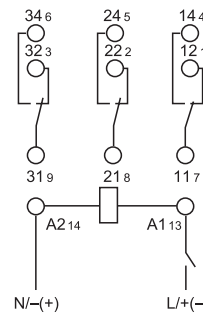
Wiring diagram  
(without control signal)

**85.03**



- 3 pole, 10 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



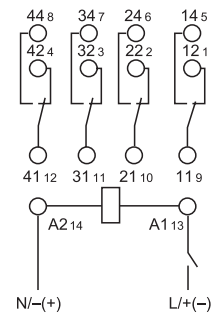
Wiring diagram  
(without control signal)

**85.04**



- 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



Wiring diagram  
(without control signal)

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

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: 24/110/220 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 <sub>N</sub> )	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 <sub>N</sub>	(0.85...1.1)U <sub>N</sub>	(0.85...1.1)U <sub>N</sub>
	DC	(0.85...1.1)U <sub>N</sub>	(0.85...1.1)U <sub>N</sub>	(0.85...1.1)U <sub>N</sub>

**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 <sup>3</sup>	200 · 10 <sup>3</sup>	150 · 10 <sup>3</sup>
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)

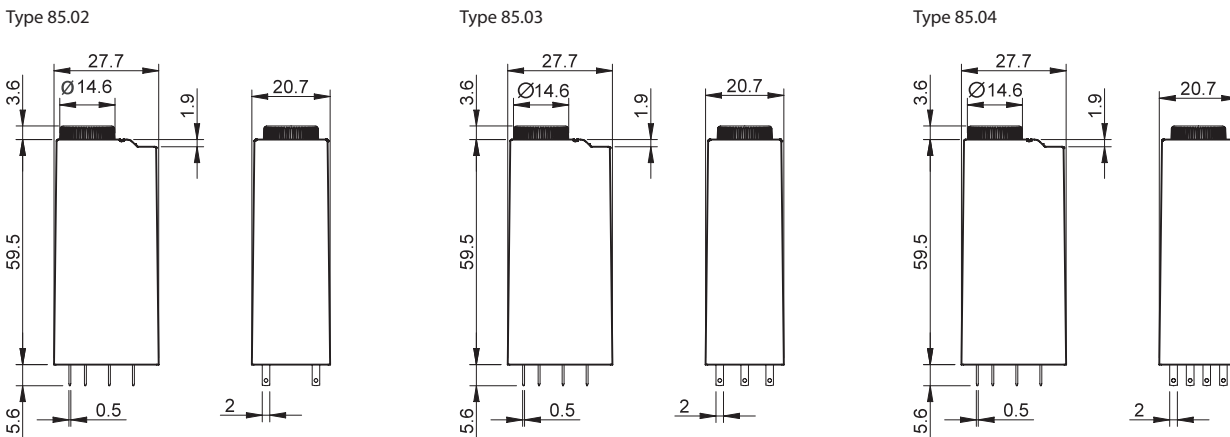
**Supply voltage**  
 012 = 12 V AC/DC  
 024 = 24 V AC/DC  
 048 = 48 V AC/DC  
 125 = (110...125)V AC/DC  
 240 = (230...240)V AC  
**Supply version**  
 0 = AC (50/60 Hz)/DC  
 8 = AC (50/60 Hz) for 240 V only

**No. of poles** ————  
 2 = 2 pole - 10 A  
 3 = 3 pole - 10 A  
 4 = 4 pole - 7 A

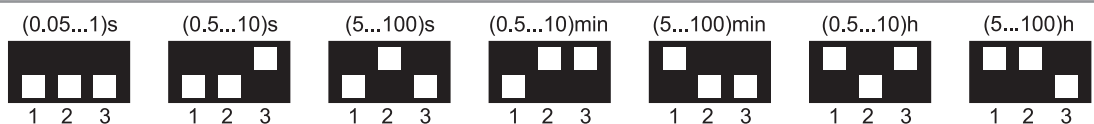
### Technical data

Insulation				
Dielectric strength			<b>85.02, 85.03</b>	<b>85.04</b>
	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				
<b>Type of test</b>			<b>Reference standard</b>	
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.

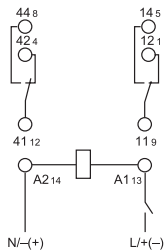
**Functions**

- U** = Supply voltage
- = Output contact

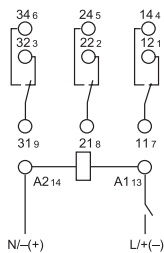
LED	Supply voltage	NO (SPDT-NO) output contact	Contacts	
			Open	Closed
	OFF	Open	x1 - x4	x1 - x2
	ON	Open	x1 - x4	x1 - x2
	ON	Open (Timing in Progress)	x1 - x4	x1 - x2
	ON	Closed	x1 - x2	x1 - x4

**Wiring diagram**

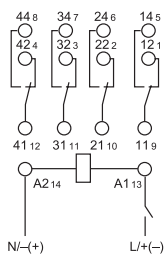
Type: 85.02, 85.03, 85.04



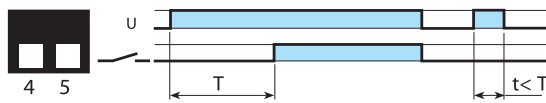
85.02



85.03

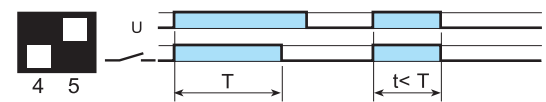


85.04



**(AI) On-delay.**

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



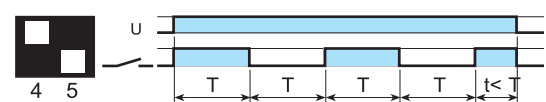
**(DI) Interval.**

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



**(GI) Pulse delayed.**

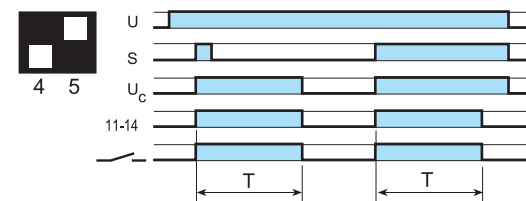
Apply power to timer. Output contacts transfer after preset time has elapsed. Reset occurs after a fixed time of 0.5 s.



**(SW) Symmetrical flasher (starting pulse on).**

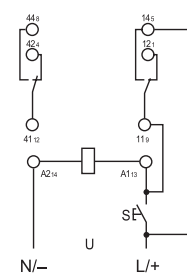
Apply power to timer. Output contacts transfer immediately and cycle between ON and OFF for as long as power is applied. The ratio is 1:1 (time on = time off).

- U** = Supply voltage
- S** = Signal switch
- U<sub>c</sub>** = Supply voltage to the timer
- 11-14** = Self-holding contact
- = Output contact

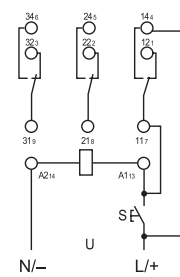


**Signal ON Pulse**

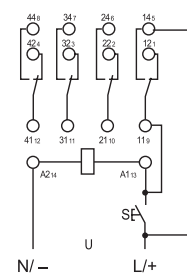
On momentary closure of Signal Switch (S) > 50 ms, the output contacts transfer and remain so (with self-holding on contact 11-14) for the duration of the preset delay, after which they reset.



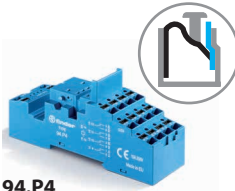
85.02



85.03

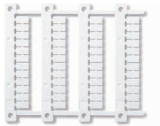


85.04



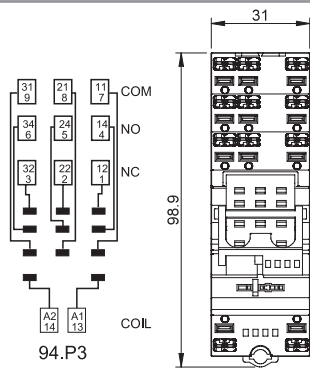
94.P4

Approvals  
(according to type):



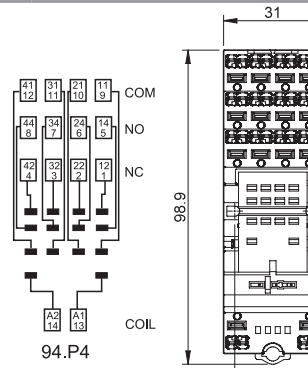
060.48

<b>Push-in terminal socket</b> panel or 35 mm (EN 60715) rail mount	<b>94.P3 (blue)</b>	<b>94.P4 (blue)</b>
For timer type	85.03	85.02, 85.04
<b>Accessories</b>		
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
<b>Technical data</b>		
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 <sup>2</sup> 0.5	0.5
	AWG 21	21
Max. wire size for 94.P3 and 94.P4 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 18 / 1 x 14	2 x 18 / 1 x 14



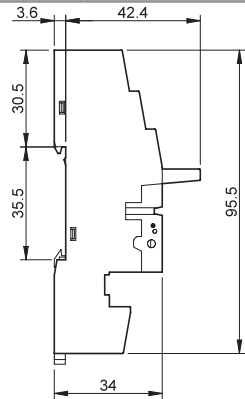
94.P3

94.P3

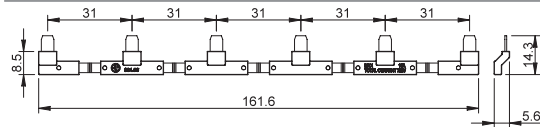


94.P4

94.P4

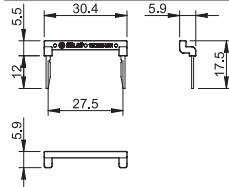


<b>6-way jumper link</b> for 94.P3 and 94.P4 sockets	094.56 (blue)
Rated values	10 A - 250 V



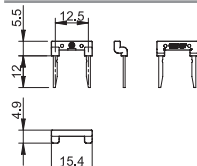
094.56

<b>2-way jumper link</b> for 94.P3 and 94.P4 sockets	094.52.1
Rated values	10 A - 250 V



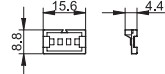
094.52.1

<b>2-way jumper link</b> for 94.P3 and 94.P4 sockets	097.52
Rated values	10 A - 250 V



097.52

<b>Marker tag holder</b> for 94.P3 and 94.P4 sockets	097.00
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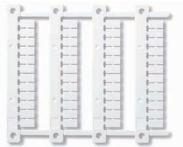


097.00



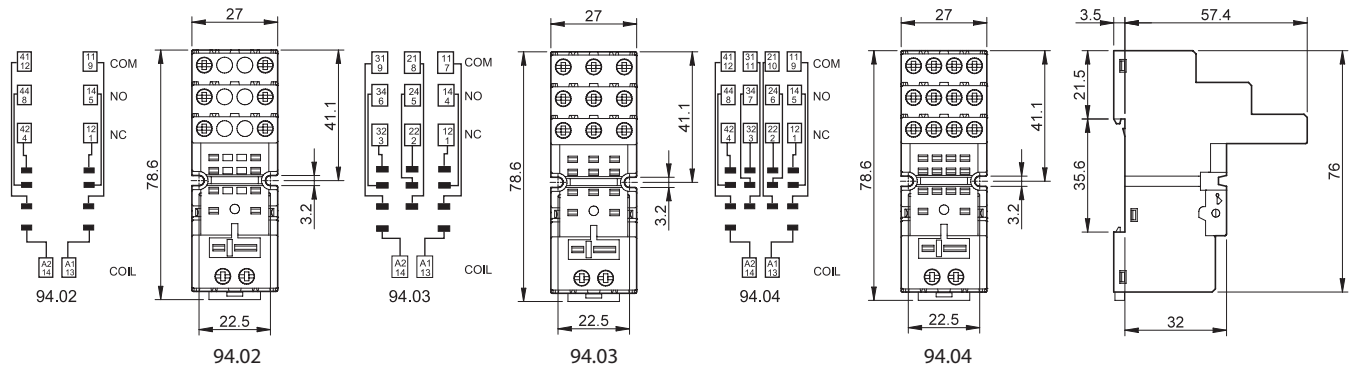
94.04

Approvals  
(according to type):



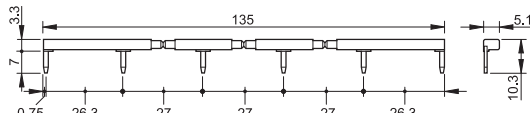
060.48

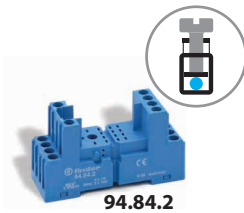
Box clamp socket panel or 35 mm (EN 60715) rail mount	94.02 (blue)	94.02.0 (black)	94.03 (blue)	94.03.0 (black)	94.04 (blue)	94.04.0 (black)
For timer type	85.02		85.03		85.04	
<b>Accessories</b>						
Metal retaining clip						094.81
6-way jumper link	094.06	094.06.0	094.06	094.06.0	094.06	094.06.0
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
<b>Technical data</b>						
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 <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		



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	



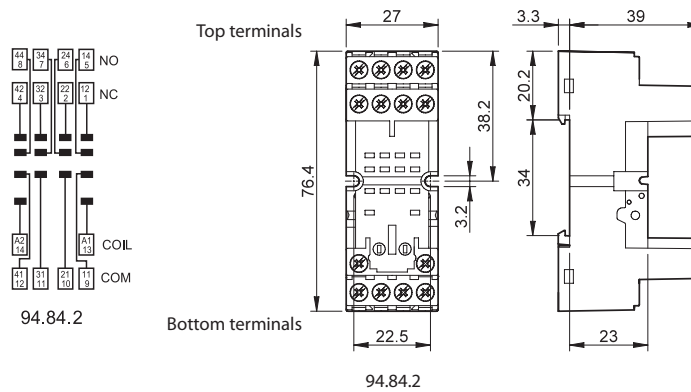


94.84.2

Approvals  
(according to type):



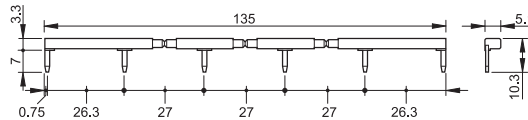
<b>Box clamp socket panel or 35 mm (EN 60715) rail mount</b>	<b>94.84.2 (blue)</b>	<b>94.84.20 (black)</b>
For timer type	85.02, 85.04	
<b>Accessories</b>		
Metal retaining clip (supplied with socket - packaging code SMA)	094.81	
6-way jumper link	094.06	094.06.0
Identification tag	094.80.3	
<b>Technical data</b>		
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 <sup>2</sup>	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



094.06



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



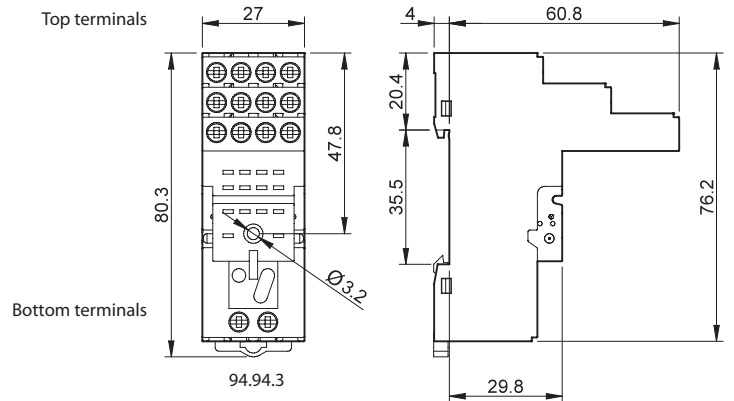
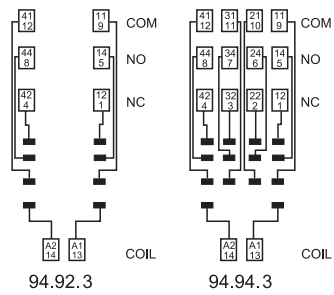


94.94.3

Approvals  
(according to type):



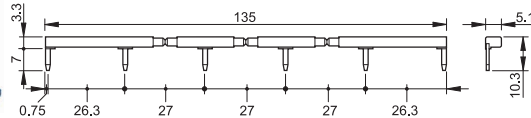
<b>Box clamp socket</b> panel or 35 mm rail mount	<b>94.92.3 (blue)</b>	<b>94.92.30 (black)</b>	<b>94.94.3 (blue)</b>	<b>94.94.30 (black)</b>
For timer type	85.02		85.04	
<b>Accessories</b>				
Metal retaining clip	094.81			
6-way jumper link	094.06	094.06.0	094.06	094.06.0
Identification tag	094.80.3			
<b>Technical data</b>				
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 <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



094.06



<b>6-way jumper link</b> 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):



<b>Screw terminal (Plate clamp) socket</b> panel or 35 mm rail (EN 60715) mount	<b>94.72</b> <b>(blue)</b>	<b>94.72.0</b> <b>(black)</b>	<b>94.73</b> <b>(blue)</b>	<b>94.73.0</b> <b>(black)</b>	<b>94.74</b> <b>(blue)</b>	<b>94.74.0</b> <b>(black)</b>
For timer type	85.02		85.03		85.02, 85.04	

<b>Accessories</b>	
Metal retaining clip (supplied with timer)	094.81

<b>Screw terminal (Plate clamp) socket</b> panel or 35 mm rail (EN 60715) mount	<b>94.82</b> <b>(blue)</b>	<b>94.82.0</b> <b>(black)</b>
For timer type	85.02	

<b>Accessories</b>	
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	stranded wire
	mm <sup>2</sup>	1 x 2.5 / 2 x 1.5
	AWG	1 x 14 / 2 x 16



94.82

Approvals  
(according to type):

