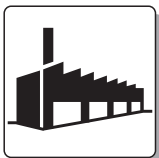




- Six time scales, from 0.1 s to 10h
- Each timer has 2 functions
- Supply voltage: 12, 24, 48, 110/125 V AC/DC (non polarized);  
230/240 V AC
- Functions and time scales set by DIP switches situati sulla parte superiore del relè
- LED indication
- 2 CO (DPDT), 3 CO (3PDT) 10 A 250 V AC1 or 4 CO (4PDT) 5 A 252 V AC1 contacts available
- Sockets and accessories: see 94 series
- Conforms to EN 61812-1 standard
- Approvals (according to type): CSA, cULus

INDUSTRIAL  
APPLIANCES



INDUSTRIAL  
AUTOMATION





85.32



85.54



### MINIATURE PLUG-IN TIMERS 5 - 10 A

**TYPE 85.32** 2 CO (DPDT) 10 A

**TYPE 85.33** 3 CO (3PDT) 10 A

**TYPE 85.34** 4 CO (4PDT) 5 A

- Functions available, see page 13:
  - ON delay (AI)
  - ON pulse (DI)
- 2.0 x 0.5 mm terminals
- LED indication: red = relay ON  
green = power ON
- Mounting: see 94 series sockets
- Ordering information: see page 15

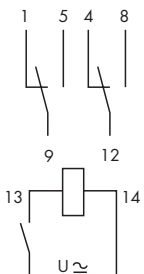
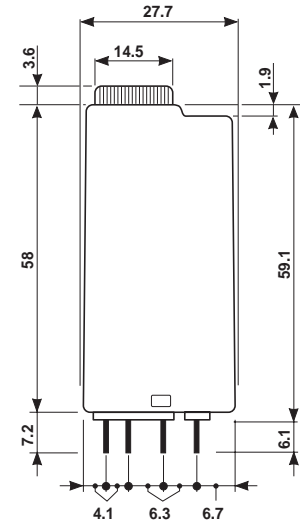
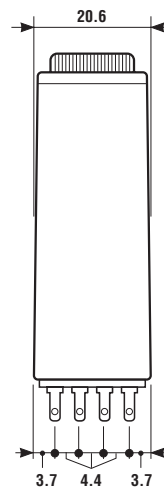
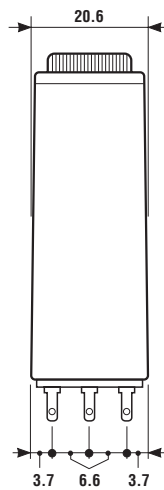
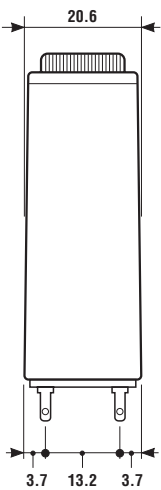
### MINIATURE PLUG-IN TIMERS 5 - 10 A

**TYPE 85.52** 2 CO (DPDT) 10 A

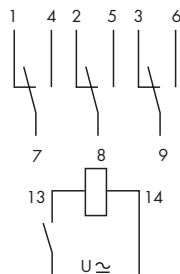
**TYPE 85.53** 3 CO (3PDT) 10 A

**TYPE 85.54** 4 CO (4PDT) 5 A

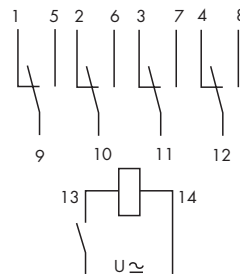
- Functions available, see page 13:
  - symmetrical recycler: pulse start (SW)
  - symmetrical recycler: pause start (SP)
- 2.0 x 0.5 mm terminals
- LED indication: red = relay ON  
green = power ON
- Mounting: see 94 series sockets
- Ordering information: see page 15



85.32 / 85.52



85.33 / 85.53



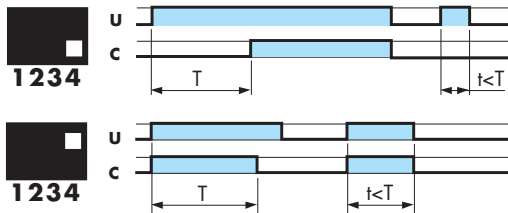
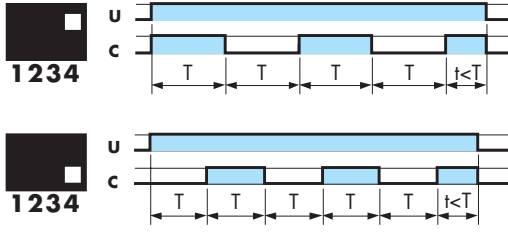
85.34 / 85.54

## EMC SPECIFICATIONS







TYPE OF TEST	REFERENCE STANDARD	
ELECTROSTATIC DISCHARGE - contact discharge - air discharge	EN 61000-4-2	n.a. 8 kV
RADIO-FREQUENCY ELECTROMAGNETIC FIELD (80 ÷ 1000 MHz)	ENV 50140 (IEC 1000-4-3)	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 - differential mode	EN 61000-4-5	4 kV 2 kV
RADIO-FREQUENCY COMMON MODE (0.15 ÷ 80 MHz) on Supply terminals	ENV 50141 (IEC 1000-4-6)	10 V
POWER-FREQUENCY (50 Hz)	EN 61000-4-8	30 A/m
RADIATED AND CONDUCTED EMISSION	EN 55022	class B

## DESCRIPTION OF THE FUNCTIONS

The (C) indicated in the diagrams refers to the position of the NO contacts.  
When the red LED (C) is illuminated the NO contact are closed.

U = SUPPLY VOLTAGE      C = RELAY CONTACT (NO)	
Types 85.32 85.33 85.34	 <p><b>(AI) ON delay.</b> Apply power to timer. Contact transfers after preset time has elapsed. Reset occurs when power is removed.</p> <p><b>(DI) ON pulse.</b> Apply power to timer. Contact transfers immediately. After preset time has elapsed, contact returns to original position.</p>
Types 85.52 85.53 85.54	 <p><b>(SW) Symmetrical recycler: pulse start.</b> Apply power to timer. First transfer of contact occurs as soon as power is applied. The timer now cycles between <b>ON</b> and <b>OFF</b> as long as power is applied. The ratio is 1:1 (time off = time on).</p> <p><b>(SP) Symmetrical recycler: pause start.</b> Apply power to timer. First transfer of contact occurs after preset time has elapsed. The timer now cycles between <b>OFF</b> and <b>ON</b> as long as power (time off = time on).</p>

## TIME SCALES

(0.1...1) s	(1...10) s	(10...60) s	(1...10) min	(10...60) min	(1...10) h
					

### TECHNICAL DATA

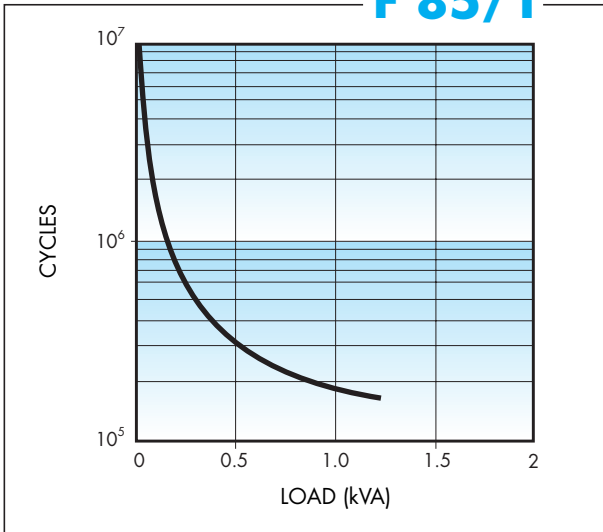
SUPPLY VOLTAGE (U <sub>N</sub> )		12, 24, 48, 110/125 V AC/DC (non polarized) 230/240 V AC		
OPERATING RANGE		AC (50/60 Hz)/DC: (0.85...1.1)U <sub>N</sub>		
POWER CONSUMPTION		AC: ≤ 2 VA DC: ≤ 2 W		
DIELECTRIC STRENGTH		<b>2 (DPDT) - 3 CO (3PDT)</b>		<b>4 CO (4PDT)</b>
	between coil and contacts:	2,000 V		2,000 V
	between open contacts:	1,000 V		1,000 V
	between adjacent contacts:	2,000 V		1,550 V
	between frame and live parts:	1,500 V		1,500 V
MECHANICAL LIFE		10 · 10 <sup>6</sup> cycles		
PROTECTION CATEGORY		IP 40		
DELAY SETTING		0.1 s...10h (see time scales)		
REPEATABILITY		± 2%		
SETTING ACCURACY - FULL RANGE		± 5%		
RECOVERY TIME		≤ 20 ms		
AMBIENT TEMPERATURE		(-20...+60)°C		
POWER LOST IN THE ENVIRONMENT		<b>85.x2.8.230</b>	<b>85.x3.8.230</b>	<b>85.x4.8.230</b>
- without load:		0.6 W	0.6 W	0.6 W
- at full load:		3.7 W	4.7 W	3.3 W

**WORKING CONDITIONS:** in conformity with EC Directive on EMC (89/336), the timer has a high level of immunity, both from radiated and conducted disturbances (according to EN 61812-1). However, the timer (and its supply and control wiring) must be installed as far as possible from disturbance sources (such as transformers contactors, circuit-breakers and their power cables).

### CONTACT SPECIFICATIONS

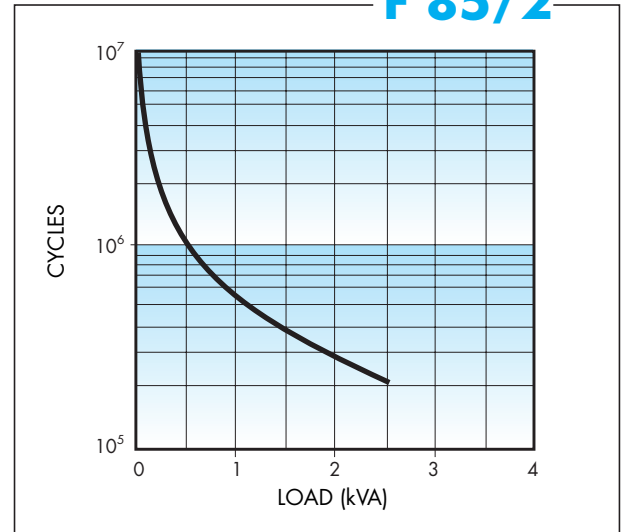
	<b>2 CO (DPDT)</b>	<b>3 CO (3PDT)</b>	<b>4 CO (4PDT)</b>
RATED CURRENT	10 A	10 A	5 A
MAXIMUM PEAK CURRENT	20 A	20 A	10 A
RATED VOLTAGE	250 V AC	250 V AC	250 V AC
MAXIMUM SWITCHING VOLTAGE	400 V AC	400 V AC	400 V AC
NOMINAL RATE IN AC1	2,500 VA	2,500 VA	1,250 VA
NOMINAL RATE IN AC15 (230 V)	500 VA	500 VA	250 VA
BREAKING CAPACITY IN DC1	see diagram H 85	see diagram H 85	see diagram H 85
SINGLE PHASE MOTOR RATING (230 V AC)	0.37 kW/0.6 HP	0.37 kW/0.6 HP	0.125 kW/0.2 HP
ELECTRICAL LIFE IN AC1	see diagram F 85/2	see diagram F 85/2	see F 85/1
CONTACT RESISTANCE: initial	≤ 50 mΩ	≤ 50 mΩ	≤ 50 mΩ
CONTACT MATERIAL	AgNi	AgNi	AgNi

## F 85/1



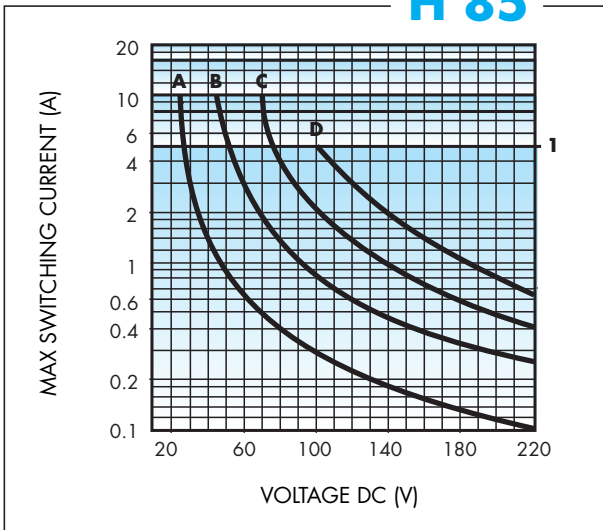
DC contact life vs AC1 load. 4 CO types (5 A)

## F 85/2



Contact life vs AC1 load. 2 - 3 CO types (10 A)

## H 85



Breaking capacity for DC1 load.

**1** = 4 CO type

**A** = load applied to 1 contact

**B** = load applied to 2 contacts in series

**C** = load applied to 3 contacts in series

**D** = load applied to 4 contacts in series

## ORDERING INFORMATION

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

<b>8</b>	<b>5</b>	<b>3</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Series</b>		<b>No. of poles</b>		<b>Coil version</b>		<b>Coil voltage</b>					
3 = Functions: AI - DI 5 = Functions: SW - SP		2 = 2 CO (DPDT) - 10A 3 = 3 CO (3PDT) - 10A 4 = 4 CO (4PDT) - 5A		0 = AC (50/60 Hz)/DC 8 = AC (50/60 Hz) for 230 V only		012 = 12 V AC/DC 024 = 24 V AC/DC 048 = 48 V AC/DC 110 = 110/125 V AC/DC 230 = 230/240 V AC					



A range of sockets and accessories for 85 series timers

Features include:

- PCB, screw terminal, panel or 35 mm rail (EN 50022) mount versions
- Flammability in conformity with UL 94
- Approvals (according to type): BBJ, CSA, DEMKO, CS - IMQ, SEV, cULus



94.14



94.22



### P.C.B. SOCKETS

**TYPE 94.12** for types 85.32 - 85.52

**TYPE 94.13** for types 85.33 - 85.53

**TYPE 94.14** for types 85.34 - 85.54

### CHARACTERISTICS

- LOAD: 10 A 250 V
- ISOLATION RESISTANCE:  $\geq 10^3 \text{ M}\Omega$
- DIELECTRIC STRENGTH:  $\geq 2 \text{ kV AC}$
- MATERIAL: self-extinguishing PPEm (V1)
- CONNECTIONS: Cu Sn 6 tin plated

### PANEL MOUNT SOLDER SOCKETS (1 mm thick panel mount)

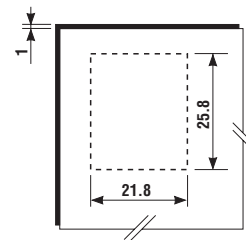
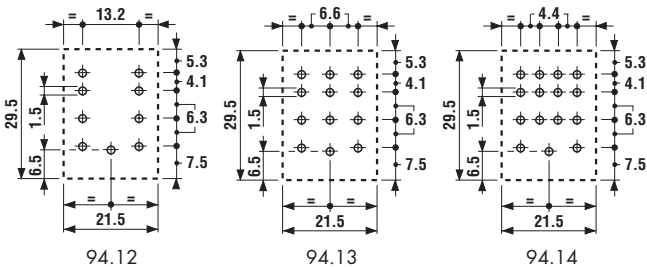
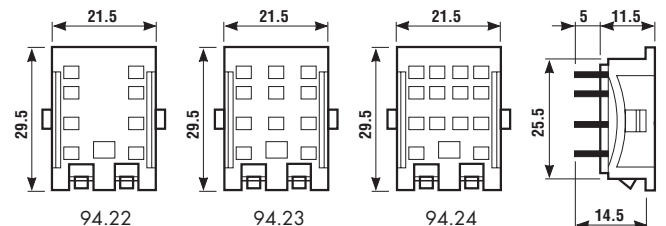
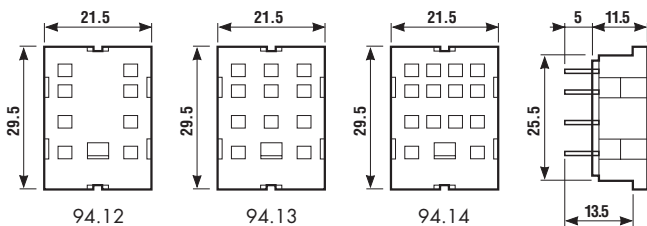
**TYPE 94.22** for types 85.32 - 85.52

**TYPE 94.23** for types 85.33 - 85.53

**TYPE 94.24** for types 85.34 - 85.54

### CHARACTERISTICS

- LOAD: 10 A 250 V
- ISOLATION RESISTANCE:  $\geq 10^3 \text{ M}\Omega$
- DIELECTRIC STRENGTH:  $\geq 2 \text{ kV AC}$
- MATERIAL: polycarbonate (PC)
- CONNECTIONS: Cu Sn 6 silver plated





94.34



94.64



### PANEL MOUNT SOLDER SOCKETS (M3 screw mount)

**TYPE 94.32** for types 85.32 - 85.52

**TYPE 94.33** for types 85.33 - 85.53

**TYPE 94.34** for types 85.34 - 85.54

### CHARACTERISTICS

- LOAD: 10 A 250 V
- ISOLATION RESISTANCE:  $\geq 10^3 \text{ M}\Omega$
- DIELECTRIC STRENGTH:  $\geq 2 \text{ kV AC}$
- MATERIAL: self-extinguishing PPEm (V1)
- CONNECTIONS: Cu Sn 6 tin plated

### CLAMP TERMINALS SOCKETS

(panel or 35 mm rail - EN 50022- mount)

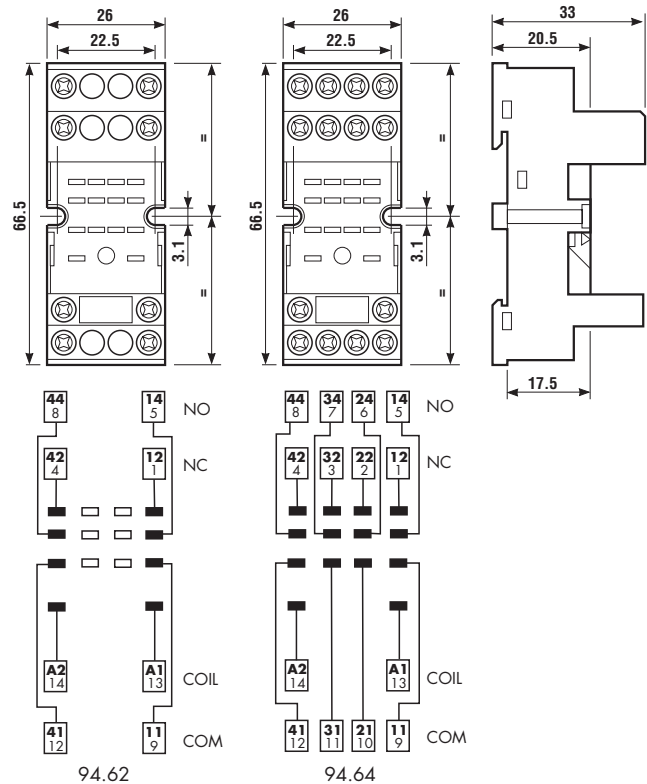
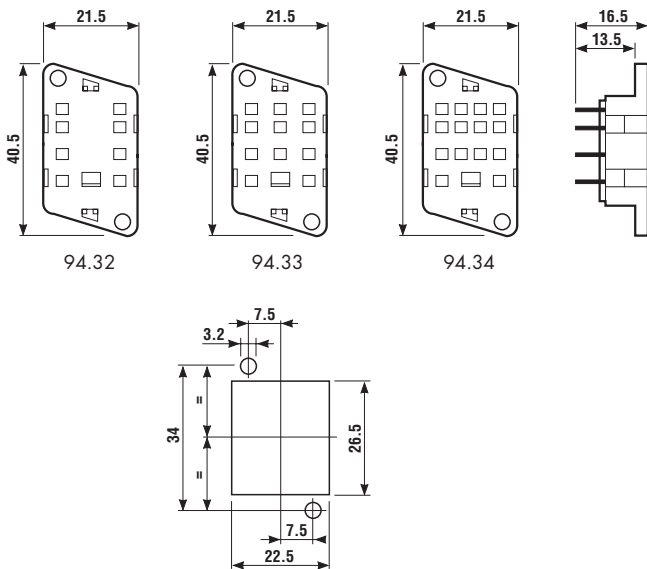
**TYPE 94.62** for types 85.32 - 85.52

**TYPE 94.64** for types 85.34 - 85.54

Accessories: **TYPE 094.81** retaining clip

### CHARACTERISTICS

- LOAD: 10 A 250 V
- ISOLATION RESISTANCE:  $\geq 10^3 \text{ M}\Omega$
- DIELECTRIC STRENGTH:  $\geq 2 \text{ kV AC}$
- MATERIAL: self-extinguishing PPEm (V1)
- CONNECTIONS: Cu Zn 33 nickel plated
- PROTECTION CATEGORY: IP 20
- Non removable pozidrive slotted terminal screws.
- Identification label.







94.74



94.82



### SCREW TERMINALS SOCKETS (panel or 35 mm rail - EN 50022- mount)

**TYPE 94.73** for types 85.32 - 85.52

**TYPE 94.74** for types 85.34 - 85.54

Accessories: **TYPE 094.81** retaining clip

#### CHARACTERISTICS

- LOAD: 10 A 250 V
- ISOLATION RESISTANCE:  $\geq 10^3 \text{ M}\Omega$
- DIELECTRIC STRENGTH:  $\geq 2 \text{ kV AC}$
- MATERIAL: self-extinguishing PPEm (V1)
- CONNECTIONS: Cu Zn 33 nickel plated
- PROTECTION CATEGORY: IP 20
- Non removable pozidrive slotted terminal screws.
- Identification label.

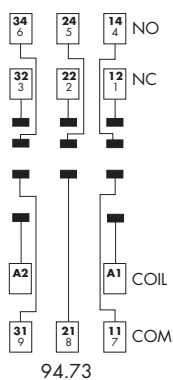
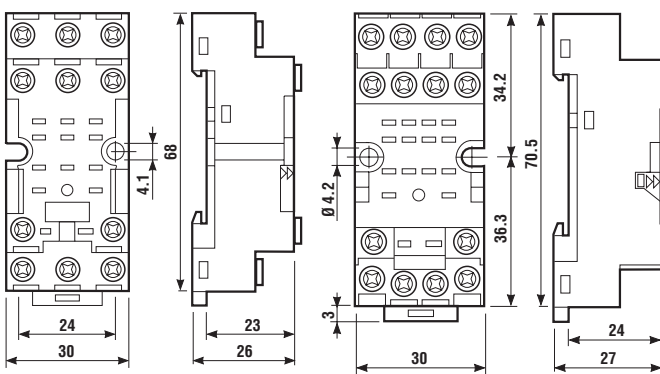
### SCREW TERMINALS SOCKETS (panel or 35 mm rail - EN 50022- mount)

**TYPE 94.82** for types 85.32 - 85.52

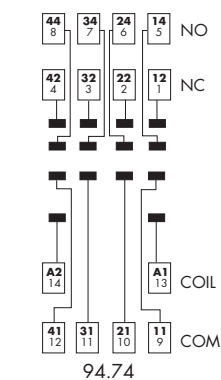
Accessories: **TYPE 094.81** retaining clip

#### CHARACTERISTICS

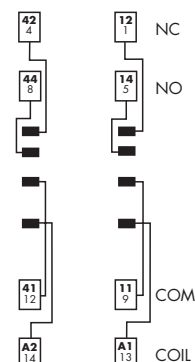
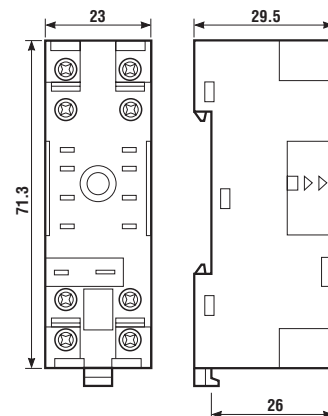
- LOAD: 10 A 250 V
- ISOLATION RESISTANCE:  $\geq 10^3 \text{ M}\Omega$
- DIELECTRIC STRENGTH:  $\geq 2 \text{ kV AC}$
- MATERIAL: self-extinguishing PPEm (V1)
- CONNECTIONS: Cu Zn 33 nickel plated
- PROTECTION CATEGORY: IP 20
- Non removable pozidrive slotted terminal screws.
- Identification label.



94.73



94.74





94.04



094.06



### CLAMP TERMINALS SOCKETS (panel or 35 mm rail - EN 50022- mount)

**TYPE 94.02** for types 85.32 - 85.52

**TYPE 94.04** for types 85.34 - 85.54

Accessories: **TYPE 094.81** retaining clip

**TYPE 094.06** 6-way jumper link

### CHARACTERISTICS

- LOAD: 10 A 250 V
- ISOLATION RESISTANCE:  $\geq 10^3 \text{ M}\Omega$
- DIELECTRIC STRENGTH:  $\geq 2 \text{ kV AC}$
- MATERIAL: self-extinguishing PA 6 20% FV (V1)
- CONNECTIONS: Cu Zn 33 nickel plated
- PROTECTION CATEGORY: IP 20
- Non removable pozidrive slotted terminal screws.
- Identification label.

### 6-WAY JUMPER LINK

**TYPE 094.06** for socket 94.02 and 94.04

### CHARACTERISTICS

- LOAD: 10 A 250 V

