



- 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)

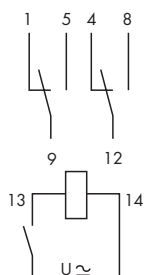
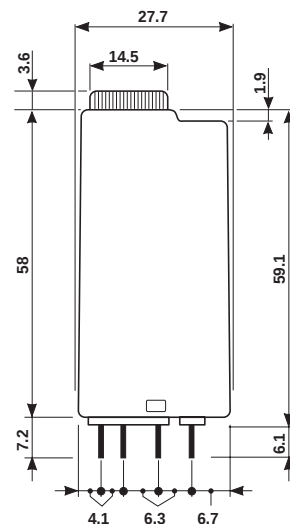
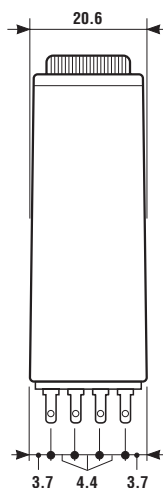
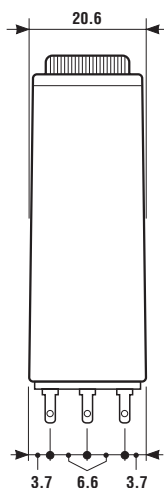
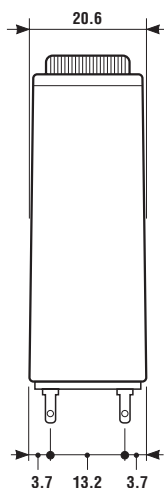
symmetrical recycler: pause start (SP)

- 2.0 x 0.5 mm terminals

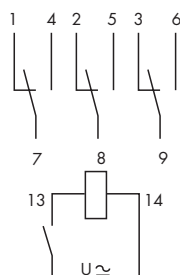
- LED indication: red = relay ON
green = power ON

- Mounting: see 94 series sockets

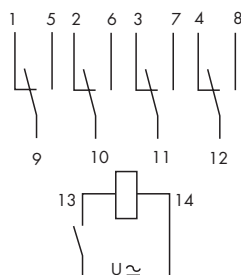
- Ordering information: see page 15



85.32 / 85.52



85.33 / 85.53



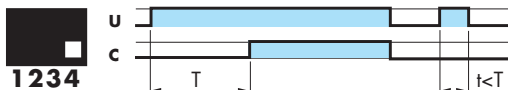
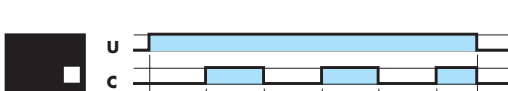
85.34 / 85.54

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		(AI) ON delay. Apply power to timer. Contact transfers after preset time has elapsed. Reset occurs when power is removed.
Types 85.32 85.33 85.34		(DI) ON pulse. Apply power to timer. Contact transfers immediately. After preset time has elapsed, contact returns to original position.
Types 85.52 85.53 85.54		(SW) Symmetrical recycler: pulse start. Apply power to timer. First transfer of contact occurs as soon as power is applied. The timer now cycles between ON and OFF as long as power is applied. The ratio is 1:1 (time off = time on).
Types 85.52 85.53 85.54		(SP) Symmetrical recycler: pause start. Apply power to timer. First transfer of contact occurs after preset time has elapsed. The timer now cycles between OFF and ON as long as power (time off = time on).

TIME SCALES

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

TECHNICAL DATA

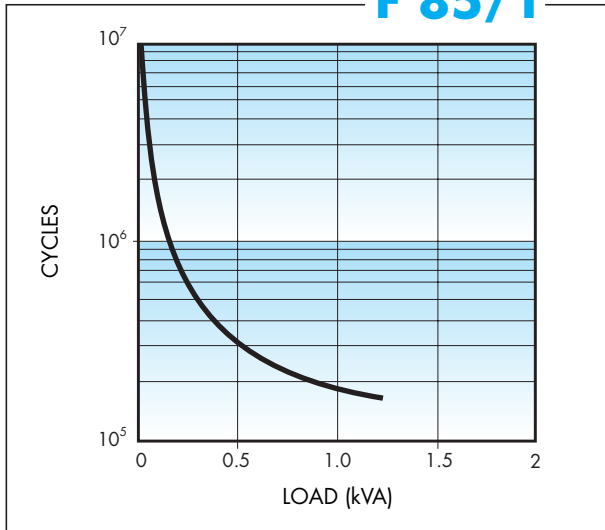
SUPPLY VOLTAGE (U _N)		12, 24, 48, 110/125 V AC/DC (non polarized) 230/240 V AC	
OPERATING RANGE		AC (50/60 Hz)/DC: (0.85...1.1)U _N	
POWER CONSUMPTION		AC: ≤ 2 VA DC: ≤ 2 W	
DIELECTRIC STRENGTH		2 (DPDT) - 3 CO (3PDT)	4 CO (4PDT)
	between coil and contacts:	2,000 V	2,000 V
	between open contacts:	1,000 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 ⁶ 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		85.x2.8.230	85.x3.8.230
- without load:		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

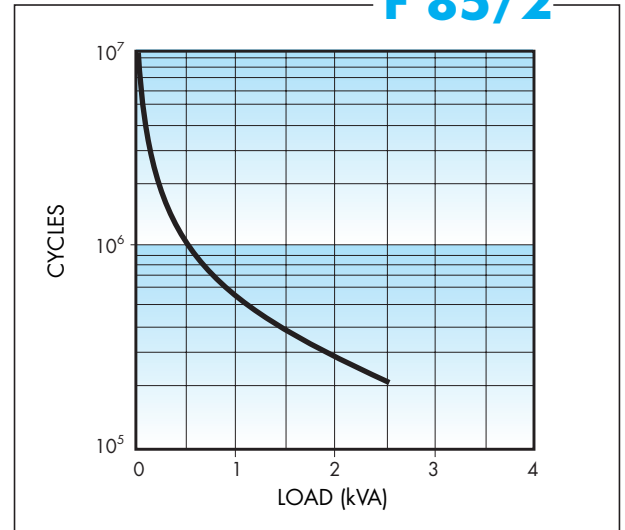
	2 CO (DPDT)	3 CO (3PDT)	4 CO (4PDT)
RATED CURRENT	10 A	10 A	5 A
MAXIMUM PEAK CURRENT	20 A	20 A	10 A
RATED VOLTAGE	250 V AC	250 V AC	250 V AC
MAXIMUM SWITCHING VOLTAGE	400 V AC	400 V AC	400 V AC
NOMINAL RATE IN AC1	2,500 VA	2,500 VA	1,250 VA
NOMINAL RATE IN AC15 (230 V)	500 VA	500 VA	250 VA
BREAKING CAPACITY 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



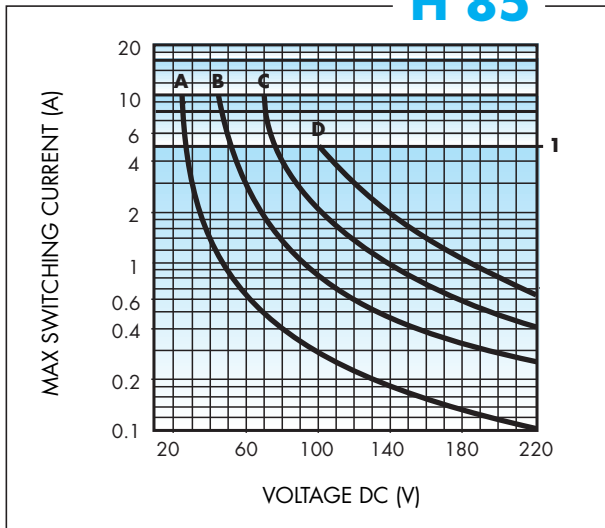
DC contact life vs AC1 load. 4 CO types (5 A)

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.

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



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)

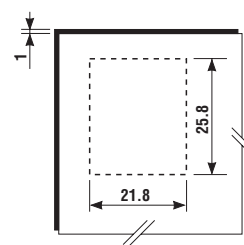
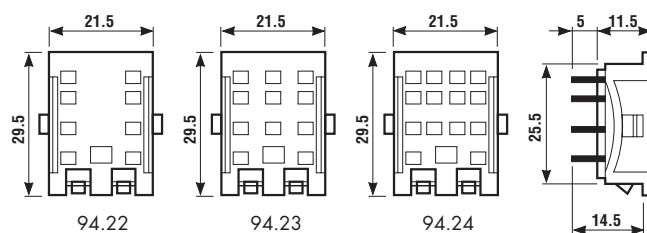
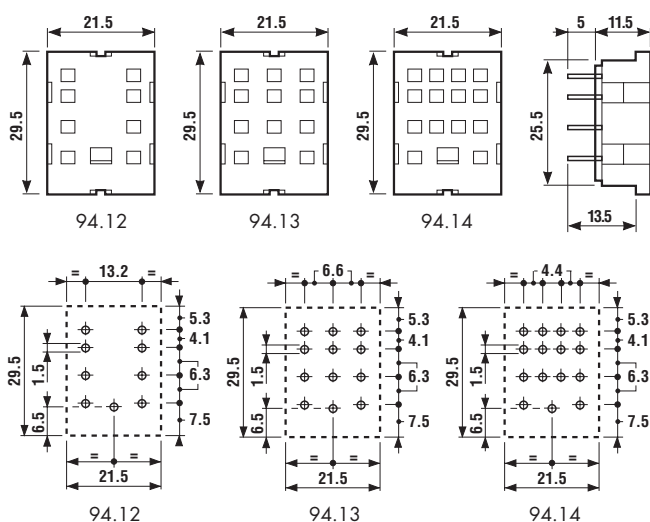
TYPE 94.22 for types 85.32 - 85.52

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



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



94.64



CLAMP TERMINALS SOCKETS

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

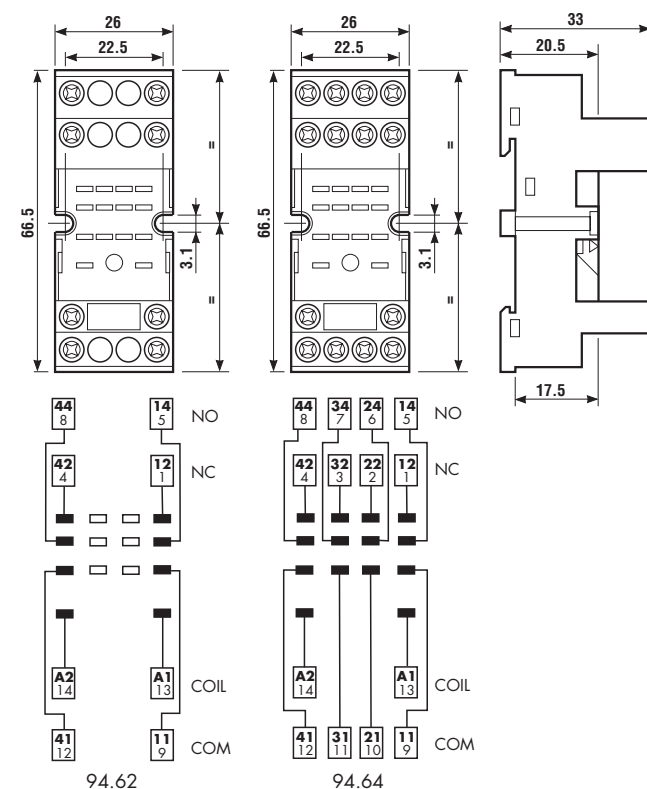
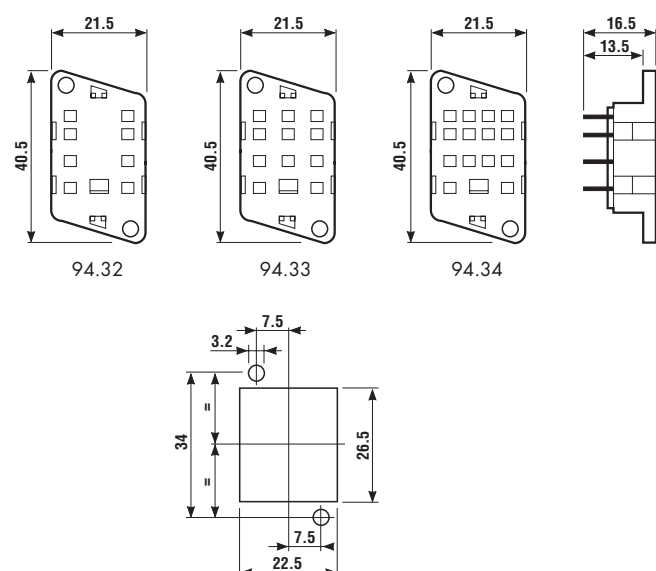
TYPE 94.62 for types 85.32 - 85.52

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.

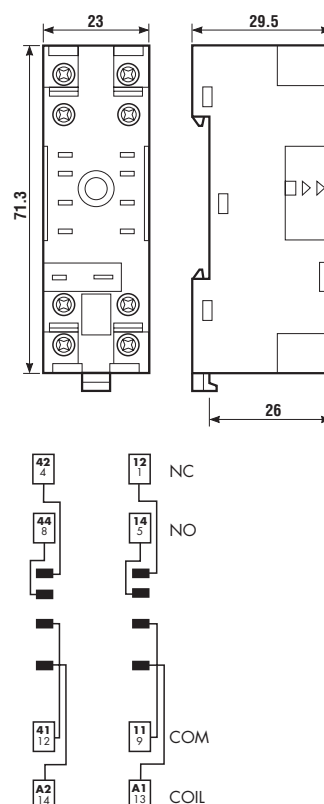
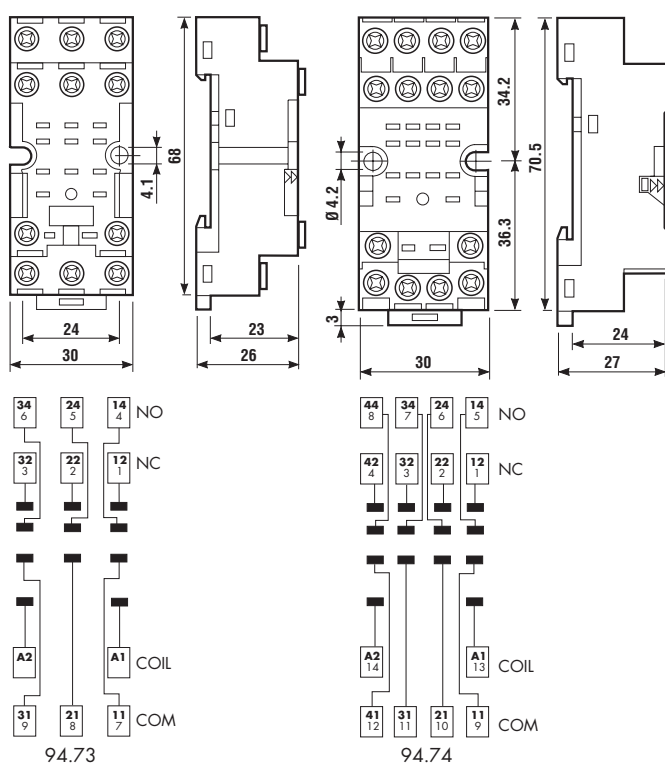
SCREW TERMINALS SOCKETS (panel or 35 mm rail - EN 50022- mount)

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.





94.04



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

