

General purpose relays 7 - 10 A



Automation for
blinds, grilles
and shutters



Control and
management of
electric power



Shipyards



Road / tunnel
lighting



Hoists and
cranes



Circuit breakers
and switches



Control panels



Panels for electrical
distribution



General purpose relays
For socket mounting**Type 55.32**

- 2 CO 10 A

Type 55.33

- 3 CO 10 A

Type 55.34

- 4 CO 7 A

- AC & DC coils
- Lockable test button and mechanical flag indicator as standard on 2 & 4 pole types
- Integral LED and coil suppression options
- 94 series sockets for PCB or 35 mm rail mounting (EN 60715) with Screw, Screwless or Push-in terminals
- Coil Indication and EMC suppression modules 99 series and Timer module 86.30 options
- Optional alternative mounting adaptors
- UL Listing (certain relay/socket combinations)
- Cadmium Free contacts
- Contact material options
- European Patent

FOR UL RATINGS SEE:

"General technical information" page V

For outline drawing see page 7

Contact specification

Contact configuration

Rated current/Maximum peak current

A

Rated voltage/

Maximum switching voltage

V AC

Rated load AC1

VA

Rated load AC15 (230 V AC)

VA

Single phase motor rating (230 V AC)

kW

Breaking capacity DC1: 30/110/220 V

A

Minimum switching load

mW (V/mA)

Standard contact material

Coil specificationNominal voltage (U_N)

V AC (50/60 Hz)

V DC

Rated power AC/DC

VA (50 Hz)/W

Operating range

AC

 $(0.8 \dots 1.1) U_N$ $(0.8 \dots 1.1) U_N$

Holding voltage

AC/DC

 $0.8 U_N / 0.5 U_N$

Must drop-out voltage

AC/DC

 $0.2 U_N / 0.1 U_N$ **Technical data**

Mechanical life AC/DC

cycles

 $20 \cdot 10^6 / 50 \cdot 10^6$

Electrical life at rated load AC1

cycles

 $200 \cdot 10^3$

Operate/release time

ms

10/5

Insulation between coil
and contacts (1.2/50 μ s)

kV

4

Dielectric strength

between open contacts

V AC

1000

Ambient temperature range

°C

-40...+85

Environmental protection

RT I

RT I

Approvals (according to type)



Ordering information

Example: 55 series plug-in relay, 4 CO, 12 V DC coil, lockable test button and mechanical indicator.

55.32.4.9.012.00.40

Series 55

Type 3 = Plug-in

No. of poles 4 = 4 pole, 7 A

Coil version 9 = DC

Coil voltage 012 = 12 V DC

A: Contact material
0 = Standard AgNi
5 = AgNi + Au

B: Contact circuit
0 = CO (nPDT)

C: Options
0 = None
1 = Lockable test button
2 = Mechanical indicator
3 = LED (AC)
4 = Lockable test button + mechanical indicator
5 = Lockable test button + LED (AC)
54 = Lockable test button + LED (AC) + mechanical indicator
6* = Double LED (DC non-polarized)
7* = Lockable test button + double LED (DC non-polarized)
74* = Lockable test button + double LED (DC non-polarized) + mechanical indicator
8* = LED + diode (DC, polarity positive to pin A1/13)
9* = Lockable test button + LED + diode (DC, polarity positive to pin A1/13)
94* = Lockable test button + LED + diode (DC, polarity positive to pin A1/13) + mechanical indicator

D: Special versions
0 = Standard
1 = Wash tight (RT III) for 55.12, 55.13 and 55.14 only

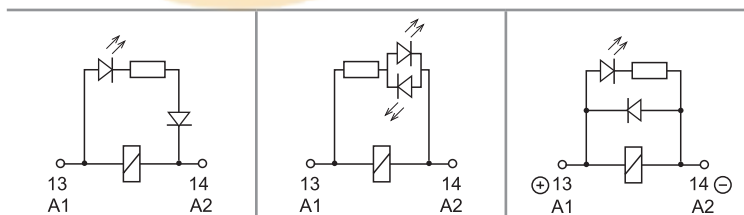
See coil specifications

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
55.32/34	AC - DC	0 - 5	0	0	0
	AC	0 - 5	0	2 - 3 - 4 - 5	0
	AC	0 - 5	0	54	/
	DC	0 - 5	0	2 - 4 - 6 - 7 - 8 - 9	0
	DC	0 - 5	0	74 - 94	/
55.33	AC - DC	0 - 5	0	0	0
	AC	0 - 5	0	1 - 3 - 5	0
	DC	0 - 5	0	1 - 6 - 7 - 8 - 9	0
55.12/13/14	AC - DC	0 - 5	0	0	0 - 1

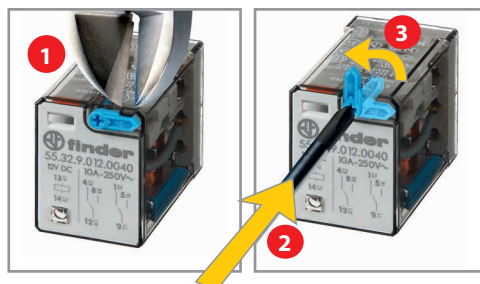
Descriptions: options and special versions



C: Option 3, 5, 54
LED (AC)

C: Option 6, 7, 74
Double LED
(DC non-polarized)

C: Option 8, 9, 94
LED + diode (DC, polarity positive to pin A1/13)



Lockable test button and mechanical flag indicator
(0010, 0040, 0050, 0054, 0070, 0074, 0090, 0094)



The dual-purpose Finder test button can be used in two ways:

Case 1) The plastic pip (located directly above the test button) remains intact. In this case, when the test button is pushed, the contacts operate. When the test button is released the contacts return to their former state.

Case 2) The plastic pip is broken-off (using an appropriate cutting tool). In this case, (in addition to the above function), when the test button is pushed and rotated, the contacts are latched in the operating state, and remain so until the test button is rotated back to its former position.

In both cases ensure that the test button actuation is swift and decisive.

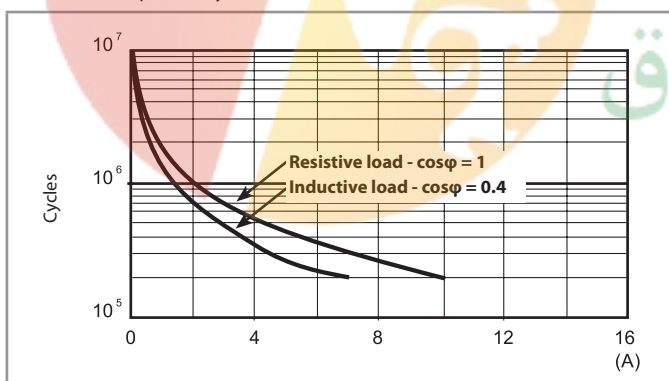
Technical data

Insulation according to EN 61810-1		2 pole - 3 pole	4 pole
Nominal voltage of supply system	V AC	230/400	230
Rated insulation voltage	V AC	400	250
Pollution degree		2	2
Insulation between coil and contact set			
Type of Insulation		Basic	Basic
Overvoltage category		III	III
Rated impulse voltage	kV (1.2/50 μ s)	4	4
Dielectric strength	V AC	2000	2000
Insulation between adjacent contacts			
Type of insulation		Basic	Basic
Overvoltage category		III	II
Rated impulse voltage	kV (1.2/50 μ s)	4	2.5
Dielectric strength	V AC	2000	2000
Insulation between open contacts			
Type of disconnection		Micro-disconnection	Micro-disconnection
Dielectric strength	V AC/kV (1.2/50 μ s)	1000/1.5	1000/1.5
Insulation between coil terminals			
Rated impulse voltage (surge) differential mode (according to EN 61000-4-5)	kV (1.2/50 μ s)	4	
Other data			
Bounce time: NO/NC	ms	1/4 (2 pole), 1/6 (3 pole), 2/4 (4 pole)	
Vibration resistance (5...55)Hz: NO/NC	g	15/15	
Shock resistance	g	16	
Power lost to the environment	without contact current	W	1
	with rated current	W	3 (2 pole) 4 (3 pole) 3 (4 pole)
Recommended distance between relays mounted on PCB	mm	≥ 5	

Contact specification

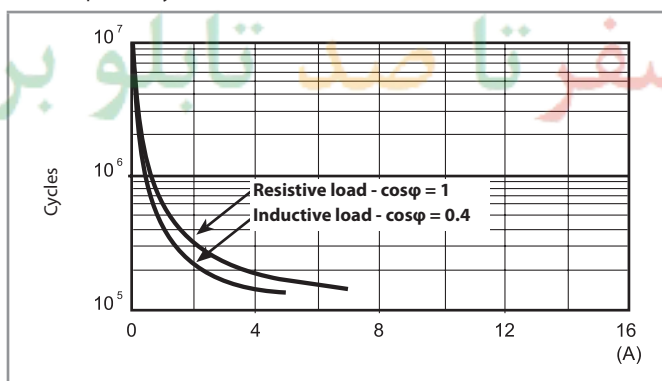
F 55 - Electrical life (AC) v contact current

2 and 3 pole relays

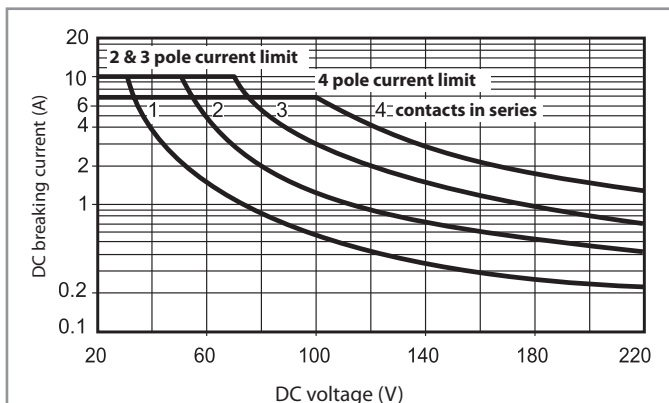


F 55 - Electrical life (AC) v contact current

4 pole relays



H 55 - Maximum DC1 breaking capacity



- When switching a resistive load (DC1) having voltage and current values under the curve, an electrical life of $\geq 100 \cdot 10^3$ 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 of the load will be increased.

Coil specifications

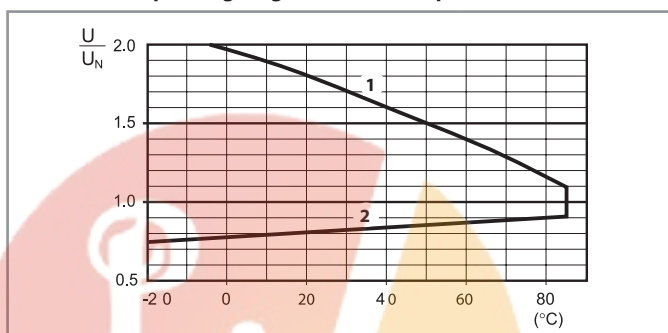
DC coil data

Nominal voltage U_N	Coil code	Operating range		Resistance R	Rated coil consumption I at U_N
V		U_{min} V	U_{max} V	Ω	mA
6	9.006	4.8	6.6	40	150
12	9.012	9.6	13.2	140	86
24	9.024	19.2	26.4	600	40
48	9.048	38.4	52.8	2400	20
60	9.060	48	66	4000	15
110	9.110	88	121	12500	8.8
125	9.125	100	138	17300	7.2
220	9.220	176	242	54000	4

AC coil data

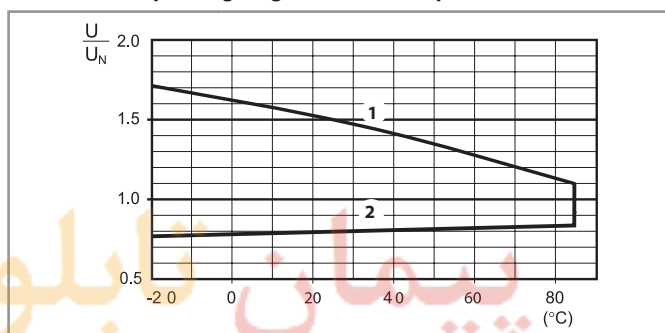
Nominal voltage U_N	Coil code	Operating range		Resistance R	Rated coil consumption I at U_N
V		U_{min} V	U_{max} V	Ω	mA
6	8.006	4.8	6.6	12	200
12	8.012	9.6	13.2	50	97
24	8.024	19.2	26.4	190	53
48	8.048	38.4	52.8	770	25
60	8.060	48	66	1200	21
110	8.110	88	121	3940	12.5
120	8.120	96	132	4700	12
230	8.230	184	253	17000	6
240	8.240	192	264	19100	5.3

R 55 - DC coil operating range v ambient temperature



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

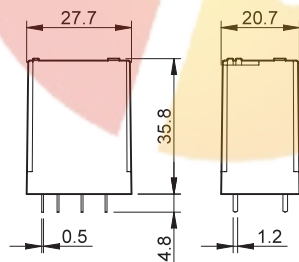
R 55 - AC coil operating range v ambient temperature



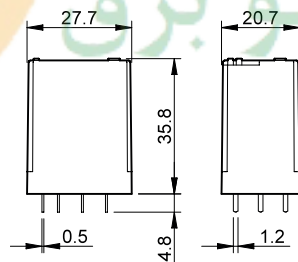
- 1 - Max. permitted coil voltage.
2 - Min. pick-up voltage with coil at ambient temperature.

Outline drawings

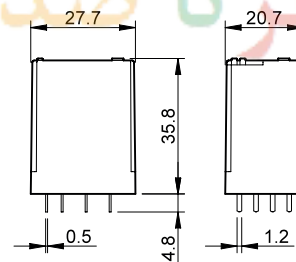
Type 55.12



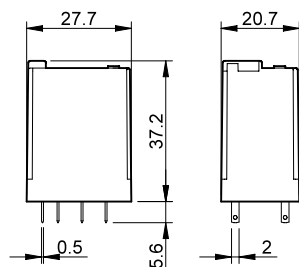
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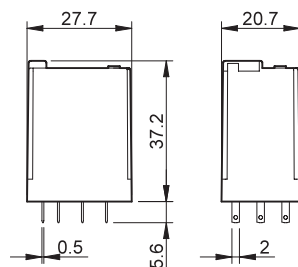
Type 55.14



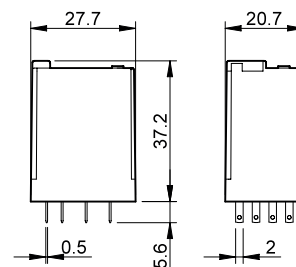
Type 55.32



Type 55.33



Type 55.34



94.P4

See page 10



Module	Socket	Relay	Description	Mounting	Accessories
99.02	94.P3	55.33	Push-in terminal socket	Panel or 35 mm rail (EN 60715) mount	- Coil indication and EMC suppression modules - Jumper link - Timer modules - Plastic retaining and release clip
	94.P4	55.32	- For fast cable connections		
		55.34	- Top terminals - Contacts - Bottom terminals - Coil		

94.04

See page 12



Module	Socket	Relay	Description	Mounting	Accessories
99.02	94.02	55.32	Screw terminal (Box clamp) socket	Panel or 35 mm rail (EN 60715) mount	- Coil indication and EMC suppression modules - Jumper link - Timer modules - Plastic retaining and release clip
	94.03	55.33	- Top terminals - Contacts		
	94.04	55.32	- Bottom terminals - Coil		

94.54

See page 13



Module	Socket	Relay	Description	Mounting	Accessories
99.02	94.54	55.32 55.34	Screwless terminal socket - Top terminals - Contacts - Bottom terminals - Coil	Panel or 35 mm rail (EN 60715) mount	- Coil indication and EMC suppression modules - Jumper link - Timer modules - Plastic retaining and release clip

94.84.2

See page 14



Module	Socket	Relay	Description	Mounting	Accessories
99.80	94.84.2	55.32 55.34	Screw terminal (Box clamp) socket	Panel or 35 mm rail (EN 60715) mount	- Coil indication and EMC suppression modules - Jumper link - Plastic retaining and release clip

94.94.3

See page 15



Module	Socket	Relay	Description	Mounting	Accessories
99.80	94.92.3	55.32	Screw terminal (Box clamp) socket	Panel or 35 mm rail (EN 60715) mount	- Coil indication and EMC suppression modules - Jumper link - Plastic retaining and release clip
	94.94.3	55.32	- Top terminals - Contacts		
		55.34	- Bottom terminals - Coil		

94.74

See page 16



Module	Socket	Relay	Description	Mounting	Accessories
99.01	94.72	55.32	Screw terminal (Plate clamp) socket	Panel or 35 mm rail (EN 60715) mount	- Coil indication and EMC suppression modules - Plastic retaining and release clip
	94.73	55.33			
	94.74	55.32	For 94.82:		
	94.82	55.34	- 23 mm wide for space saving		

94.14

See page 17



Module	Socket	Relay	Description	Mounting	Accessories
—	94.12	55.32	PCB socket	PCB mounting	- Metal retaining clip
—	94.13	55.33			
—	94.14	55.32 55.34			

94.22

See page 17



Module	Socket	Relay	Description	Mounting	Accessories
—	94.22	55.32	Panel mount with solder connections	Panel mount on 1 mm thick panel	- Metal retaining clip
—	94.23	55.33			
—	94.24	55.32 55.34			

94.34

See page 18



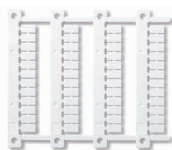
Module	Socket	Relay	Description	Mounting	Accessories
—	94.32	55.32	Panel mount with solder connections	M3 screw fixing	- Metal retaining clip
—	94.33	55.33			
—	94.34	55.32 55.34			

A

94.04

Approvals
(according to type):Certain relay/socket
combinations

094.91.3



060.48

**Screw terminal (Box clamp) socket panel or 35 mm
(EN 60715) rail mount**

For relay type

94.02 Blue	94.02.0 Black	94.03 Blue	94.03.0 Black	94.04 Blue	94.04.0 Black
55.32		55.33		55.32, 55.34	

Accessories

Metal retaining clip

094.71

Plastic retaining and release clip
(supplied with socket - packaging code SPA)

094.91.3	094.91.30	094.91.3	094.91.30	094.91.3	094.91.30
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6-way jumper link

094.06	094.06.0	094.06	094.06.0	094.06	094.06.0
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Identification tag

094.00.4

Marker tag holder

097.00

Modules (see table below)

99.02

Timer modules (see table below)

86.30

Sheet of marker tags for plastic retaining and release clip
094.91.3 and 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

Screw torque

Nm

0.5

Wire strip length

mm

8

Max. wire size for 94.02/03/04 sockets

solid wire

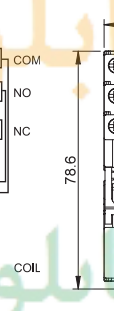
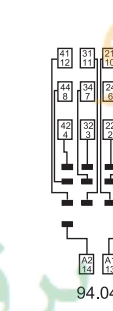
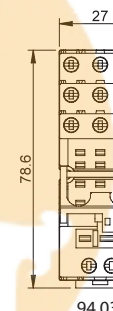
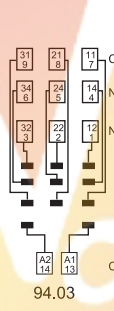
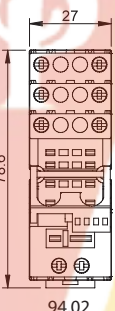
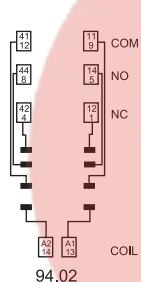
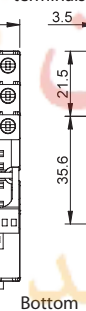
stranded wire

mm² 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

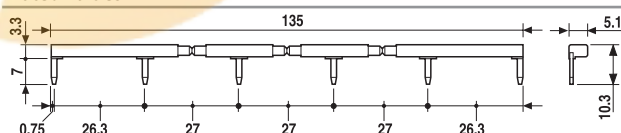
Top
terminalsBottom
terminals**6-way jumper link for 94.02, 94.03 and 94.04 sockets**

Rated values

094.06 (blue)

094.06.0 (black)

10 A - 250 V



094.06

**86 series timer modules**

(12...24)V AC/DC; Bi-function: AI, DI; (0.05 s...100 h)

86.30.0.024.0000

(110...125)V AC; Bi-function: AI, DI; (0.05 s...100 h)

86.30.8.120.0000

(230...240)V AC; Bi-function: AI, DI; (0.05 s...100 h)

86.30.8.240.0000

Approvals (according to type):

**99.02 coil indication and EMC suppression modules for 94.02, 94.03 and 94.04 sockets**

Diode (+A1, standard polarity)

(6...220)V DC

99.02.3.000.00

LED

(6...24)V DC/AC

99.02.0.024.59

LED

(28...60)V DC/AC

99.02.0.060.59

LED

(110...240)V DC/AC

99.02.0.230.59

LED + Diode (+A1, standard polarity)

(6...24)V DC

99.02.9.024.99

LED + Diode (+A1, standard polarity)

(28...60)V DC

99.02.9.060.99

LED + Diode (+A1, standard polarity)

(110...220)V DC

99.02.9.220.99

LED + Varistor

(6...24)V DC/AC

99.02.0.024.98

LED + Varistor

(28...60)V DC/AC

99.02.0.060.98

LED + Varistor

(110...240)V DC/AC

99.02.0.230.98

RC circuit

(6...24)V DC/AC

99.02.0.024.09

RC circuit

(28...60)V DC/AC

99.02.0.060.09

RC circuit

(110...240)V DC/AC

99.02.0.230.09

Residual current by-pass*

(110...240)V AC

99.02.8.230.07

*Additional 0.9 W power dissipation

86.30

Approvals
(according to type):DC Modules with
non-standard polarity
(+A2) on request.

A

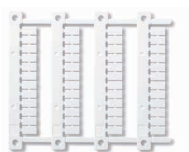


94.84.2

Approvals
(according to type):



094.91.3



060.48



Screw terminal (Box clamp) socket panel or 35 mm (EN 60715) rail mount

For relay type

94.84.2

Blue

94.84.20

Black

55.32, 55.34

Accessories

Metal retaining clip
(supplied with socket - packaging code SMA)

094.71

Plastic retaining and release clip

094.91.3

094.91.30

6-way jumper link

094.06

094.06.0

Identification tag

094.80.3

Modules (see table below)

99.80

Sheet of marker tags for retaining and release clip 094.91.3, plastic, 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

7

Max. wire size for 94.84.2 socket

solid wire

stranded wire

mm²

1 x 6 / 2 x 2.5

1 x 4 / 2 x 2.5

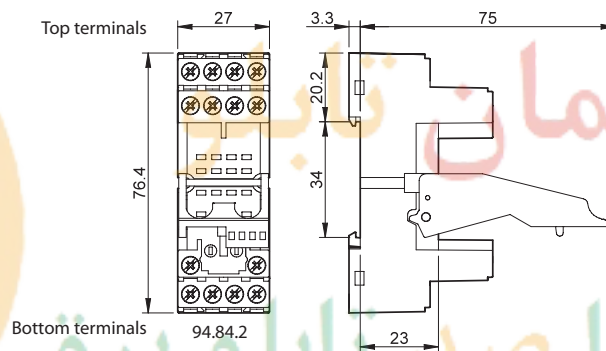
AWG

1 x 10 / 2 x 14

1 x 12 / 2 x 14



94.84.2



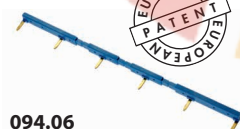
6-way jumper link for 94.84.2 socket

094.06 (blue)

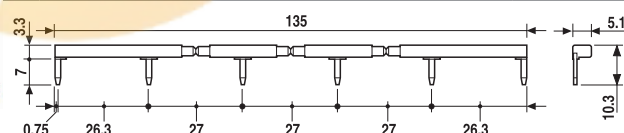
094.06.0 (black)

Rated values

10 A - 250 V



94.06



99.80 coil indication and EMC suppression modules for 94.84.2 socket

Blue*

Diode (+A1, standard polarity)

(6...220)V DC

99.80.3.000.00

LED

(6...24)V DC/AC

99.80.0.024.59

LED

(28...60)V DC/AC

99.80.0.060.59

LED

(110...240)V DC/AC

99.80.0.230.59

LED + Diode (+A1, standard polarity)

(6...24)V DC

99.80.9.024.99

LED + Diode (+A1, standard polarity)

(28...60)V DC

99.80.9.060.99

LED + Diode (+A1, standard polarity)

(110...220)V DC

99.80.9.220.99

LED + Varistor

(6...24)V DC/AC

99.80.0.024.98

LED + Varistor

(28...60)V DC/AC

99.80.0.060.98

LED + Varistor

(110...240)V DC/AC

99.80.0.230.98

RC circuit

(6...24)V DC/AC

99.80.0.024.09

RC circuit

(28...60)V DC/AC

99.80.0.060.09

RC circuit

(110...240)V DC/AC

99.80.0.230.09

Residual current by-pass*

(110...240)V AC

99.80.8.230.07

*Additional 0.9 W power dissipation



99.80

Approvals
(according to type):



* Modules in Black
housing are available on
request.

Green LED is standard.
Red LED available on
request.