

Features

2 Pole relay range

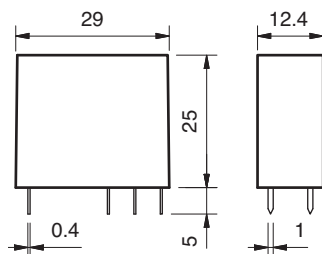
44.52 - 2 Pole 6 A (5 mm pin pitch)

44.62 - 2 Pole 10 A (5 mm pin pitch)

PCB mount - direct or via PCB socket

35 mm rail mount - via screw and screwless sockets

- High physical separation between adjacent contacts
- DC coils (Standard or sensitive)
- Cadmium Free contact materials
- 8 mm, 6 kV (1.2/50 μ s) isolation, coil-contacts
- UL Listing (certain relay/socket combinations)
- Flux proof: RT II
- 95 series sockets
- Coil EMC suppression
- Timer accessories 86 series



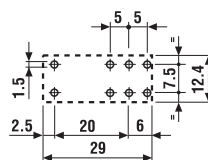
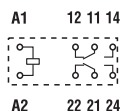
FOR UL RATINGS SEE:

"General technical information" page V

44.52



- 2 Pole, 6 A
- 5 mm contact pin pitch
- PCB or 95 series sockets

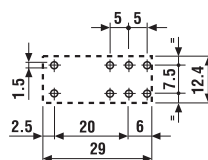
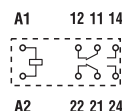


Copper side view

44.62



- 2 Pole, 10 A
- 5 mm contact pin pitch
- PCB or 95 series sockets



Copper side view

Contact specification

Contact configuration	2 CO (DPDT)	2 CO (DPDT)
Rated current/Maximum peak current A	6/10	10/20
Rated voltage/Maximum switching voltage V AC	250/400	250/400
Rated load AC1 VA	1,500	2,500
Rated load AC15 (230 V AC) VA	250	500
Single phase motor rating (230 V AC) kW	0.185	0.37
Breaking capacity DC1: 30/110/220 V A	6/0.3/0.13	10/0.3/0.13
Minimum switching load mW (V/mA)	300 (5/5)	300 (5/5)
Standard contact material	AgNi	AgNi

Coil specification

Nominal voltage (U_N) V AC (50/60 Hz)	—	—
V DC	6 - 9 - 12 - 14 - 24 - 28 - 48 - 60 - 110 - 125	—
Rated power AC/DC/sens. DC VA (50 Hz)/W/W	—/0.65/0.5	—/0.65/0.5
Operating range AC	—	—
DC/sens. DC	(0.73...1.5) U_N /(0.73...1.7) U_N	(0.73...1.5) U_N /(0.8...1.7) U_N
Holding voltage AC/DC	—/0.4 U_N	—/0.4 U_N
Must drop-out voltage AC/DC	—/0.1 U_N	—/0.1 U_N

Technical data

Mechanical life AC/DC cycles	—/20 · 10 ⁶	—/20 · 10 ⁶
Electrical life at rated load AC1 cycles	150 · 10 ³	100 · 10 ³
Operate/release time ms	8/5 - (12/5 sensitive)	8/5 - (12/5 sensitive)
Insulation between coil and contacts (1.2/50 μ s) kV	6 (8 mm)	6 (8 mm)
Dielectric strength between open contacts V AC	1,000	1,000
Ambient temperature range °C	—40...+85	—40...+85
Environmental protection	RT II	RT II

Approvals (according to type)



44 Series - Miniature PCB relays 6 - 10 A

Ordering information

Example: 44 series PCB relay, 2 CO (DPDT) 10 A contacts, 24 V DC coil.

A

Series — 44

Type — 6
5 = PCB - 5 mm pinning
6 = PCB - 5 mm pinning

No. of poles — 2
2 = 2 pole for
44.52, 6 A
44.62, 10 A

Coil version — 9
7 = Sensitive DC
9 = DC

Coil voltage — 024
See coil specifications

A: Contact material
0 = Standard AgNi
4 = AgSnO₂
for 44.62 only
5 = AgNi + Au
for 44.52 only

B: Contact circuit
0 = CO (DPDT)

C: Options
0 = None

D: Special versions
0 = Flux proof (RT II)

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
44.52	DC - sens. DC	0 - 5	0	0	0
44.62	DC - sens. DC	0 - 4	0	0	0

Technical data

Insulation according to EN 61810-1

Nominal voltage of supply system	V AC	230/400
Rated insulation voltage	V AC	250 400
Pollution degree		3 2

Insulation between coil and contact set

Type of Insulation	Reinforced (8 mm)
Overvoltage category	III
Rated impulse voltage	kV (1.2/50 µs) 6
Dielectric strength	V AC 4,000

Insulation between adjacent contacts

Type of insulation	Basic
Overvoltage category	III
Rated impulse voltage	kV (1.2/50 µs) 4
Dielectric strength	V AC 2,500

Insulation between open contacts

Type of disconnection	Micro-disconnection
Dielectric strength	V AC/kV (1.2/50 µs) 1,000/1.5

Conducted disturbance immunity

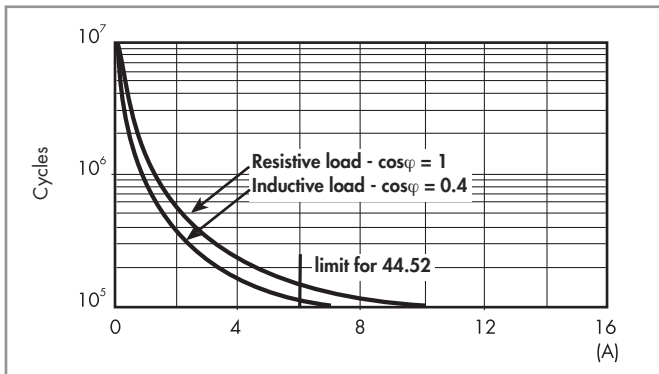
Burst (5...50)ns, 5 kHz, on A1 - A2	EN 61000-4-4	level 4 (4 kV)
Surge (1.2/50 µs) on A1 - A2 (differential mode)	EN 61000-4-5	level 3 (2 kV)

Other data

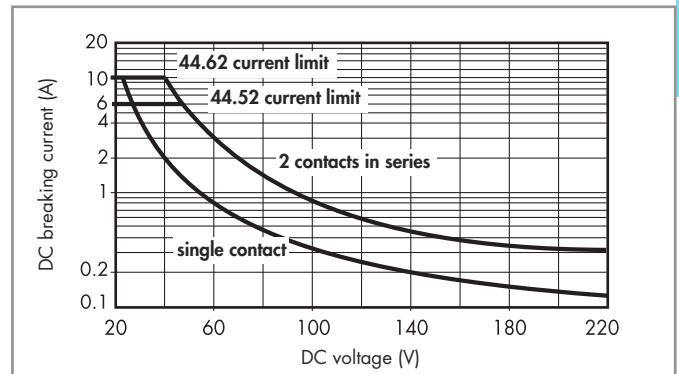
Bounce time: NO/NC	ms	4/4
Vibration resistance (5...55)Hz: NO/NC	g	15/12
Shock resistance	g	16
Power lost to the environment	without contact current	W 0.6
	with rated current	W 1.2 (44.52) 2.7 (44.62)
Recommended distance between relays mounted on PCB	mm	≥ 5

Contact specification

F 44 - Electrical life (AC) v contact current



H 44 - 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 for the load will be increased.

Coil specifications

DC coil data - 0.65 W standard

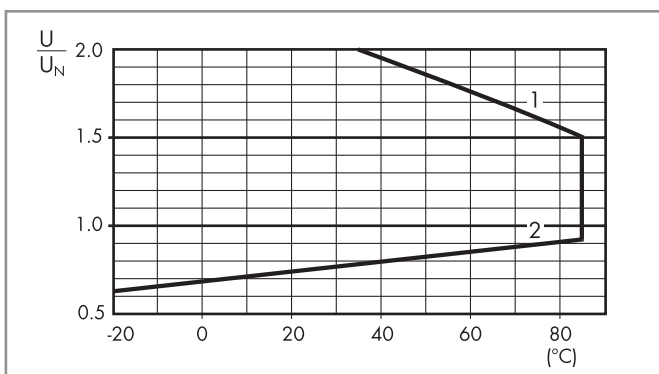
Nominal voltage U_N V	Coil code	Operating range		Resistance R Ω	Rated coil consumption I at U_N mA
		U_{min} V	U_{max} V		
6	9.006	4.4	9	55	109
9	9.009	6.6	13.5	125	72
12	9.012	8.8	18	220	55
14	9.014	10.2	21	300	47
24	9.024	17.5	36	900	27
28	9.028	20.5	42	1,200	23
48	9.048	35	72	3,500	14
60	9.060	43.8	90	5,500	11
110	9.110	80.3	165	18,000	6.2
125	9.125	91.2	188	23,500	5.3

DC coil data - 0.5 W sensitive

Nominal voltage U_N V	Coil code	Operating range		Resistance R Ω	Rated coil consumption I at U_N mA
		U_{min}^* V	U_{max} V		
6	7.006	4.4	10.2	75	80
9	7.009	6.6	15.3	160	56
12	7.012	8.8	20.4	300	40
14	7.014	10.2	23.8	400	35
24	7.024	17.5	40.8	1,200	20
28	7.028	20.5	47.6	1,600	17.5
48	7.048	35	81.6	4,800	10
60	7.060	43.8	102	7,200	8.4
110	7.110	80.3	187	23,500	4.7
125	7.125	100	219	32,000	3.9

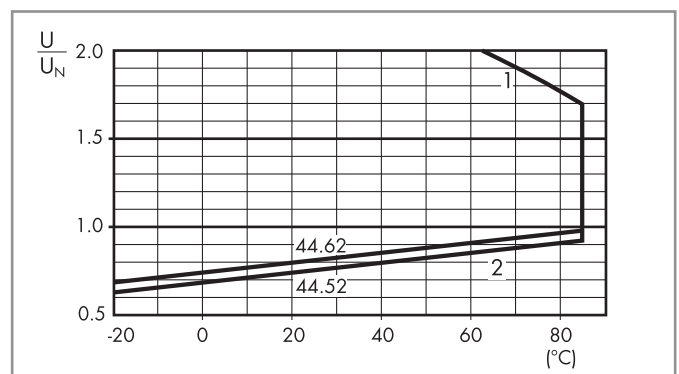
* $U_{min} = 0.8 U_N$ for 44.62

R 44 - DC coil operating range v ambient temperature
Standard coil



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

R 44 - DC coil operating range v ambient temperature
Sensitive coil



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

95 Series - Socket overview for 44 series relays

A

95.05
See page 5

Module	Socket	Relay	Description	Mounting	Accessories
99.02	95.05	44.52 44.62	Screw terminal (Box clamp) 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

95.85.3
See page 6

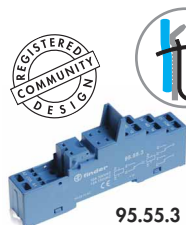
Module	Socket	Relay	Description	Mounting	Accessories
99.80	95.85.3	44.52 44.62	Screw terminal (Box clamp) socket	Panel or 35 mm rail (EN 60715) mount	- Coil indication and EMC suppression modules - Plastic retaining and release clip

95.95.3
See page 7

Module	Socket	Relay	Description	Mounting	Accessories
99.80	95.95.3	44.52 44.62	Screw terminal (Box clamp) socket - Top terminals - Contacts - Bottom terminals - Coil	Panel or 35 mm rail (EN 60715) mount	- Coil indication and EMC suppression modules - Plastic retaining and release clip

95.55
See page 8

Module	Socket	Relay	Description	Mounting	Accessories
99.02	95.55	44.52 44.62	Screwless terminal socket - For fast cable connections - Top terminals - Contacts - Bottom terminals - Coil	Panel or 35 mm rail (EN 60715) mount	- Coil indication and EMC suppression modules - Timer modules - Plastic retaining and release clip

95.55.3
See page 9

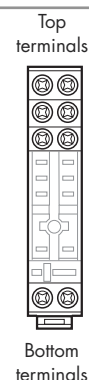
Module	Socket	Relay	Description	Mounting	Accessories
99.80	95.55.3	44.52 44.62	Screwless terminal socket - For fast cable connections - Top terminals - Contacts - Bottom terminals - Coil	Panel or 35 mm rail (EN 60715) mount	- Coil indication and EMC suppression modules - Plastic retaining and release clip

95.65
See page 10

Module	Socket	Relay	Description	Mounting	Accessories
—	95.65	44.52 44.62	Screw terminal (Box clamp) socket	Panel or 35 mm rail (EN 60715) mount	- Metal retaining clip

95.15.2
See page 11

Module	Socket	Relay	Description	Mounting	Accessories
—	95.15.2	44.52 44.62	PCB socket	PCB mounting	- Metal retaining clip

Top
terminalsBottom
terminals



95.05

Approvals
(according to type):



UL US Certain relay/socket
combinations



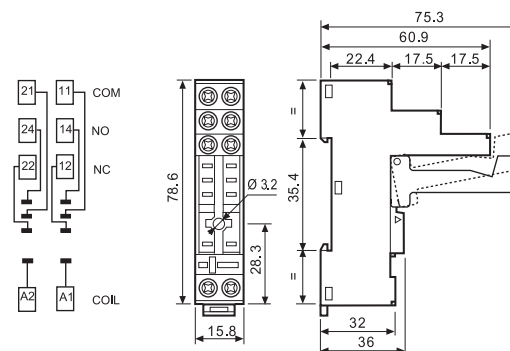
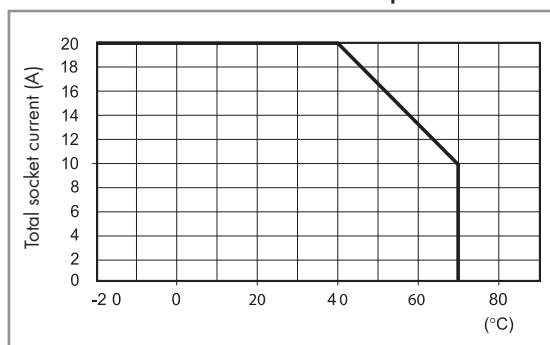
095.01



060.72

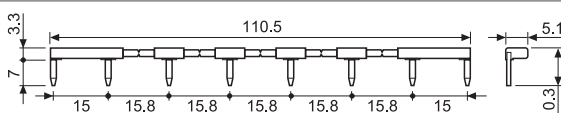
Screw terminal (Box clamp) socket panel or 35 mm rail mount		95.05 (blue)	95.05.0 (black)
For relay type		44.52, 44.62	
Accessories			
Metal retaining clip		095.71	
Plastic retaining and release clip (supplied with socket - packaging code SPA)		095.01	095.01.0
8-way jumper link		095.18	095.18.0
Identification tag		095.00.4	
Modules (see table below)		99.02	
Timer modules (see table below)		86.30	
Sheet of marker tags for retaining and release clip 095.01 plastic, 72 tags, 6x12 mm		060.72	
Technical data			
Rated values		10 A - 250 V	
Dielectric strength		6 kV (1.2/50 µs) between coil and contacts	
Protection category		IP 20	
Ambient temperature		°C -40...+70 (see diagram L95)	
Screw torque		Nm 0.5	
Wire strip length		mm 8	
Max. wire size for 95.05 socket		solid wire	stranded wire
		mm ² 1x6 / 2x2.5	1x4 / 2x2.5
		AWG 1x10 / 2x14	1x12 / 2x14

L 95 - Total socket current vs ambient temperature



095.18

8-way jumper link for 95.05 socket	095.18 (blue)	095.18.0 (black)
Rated values	10 A - 250 V	



86 series timer modules		
(12...24)V AC/DC; Bi-function: AI, DI; (0.05s...100h)	86.30.0.024.0000	

Approvals (according to type): **CE ENEC EAC cULus**



86.30

99.02 coil indication and EMC suppression modules for 95.05 socket		
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



99.02

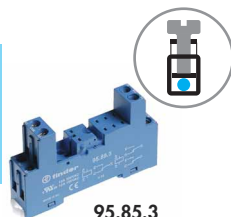
Approvals
(according to type):



DC Modules with
non-standard polarity
(+A2) on request.

95 Series - Sockets and accessories for 44 series relays

A



95.85.3

Approvals
(according to type):

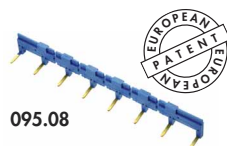
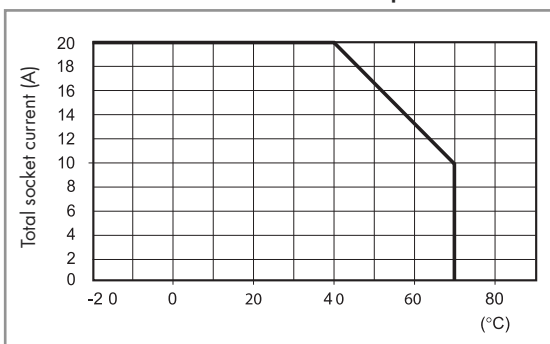


095.91.3



060.72

L 95 - Total socket current vs ambient temperature



095.08



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

For relay type

95.85.3 (blue)

95.85.30 (black)

44.52, 44.62

Accessories

Metal retaining clip

095.71

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

095.91.3

095.91.30

8-way jumper link

095.08

095.08.0

Identification tag

095.80.3

Modules (see table below)

99.80

Sheet of marker tags for retaining and release clip 095.91.3
plastic, 72 tags, 6x12 mm

060.72

Technical data

Rated values

10 A - 250 V

Dielectric strength

6 kV (1.2/50 µs) between coil and contacts

Protection category

IP 20

Ambient temperature

°C -40...+70 (see diagram L95)

⊕ Screw torque

Nm 0.5

Wire strip length

mm 7

Max. wire size for 95.85.3 sockets

solid wire

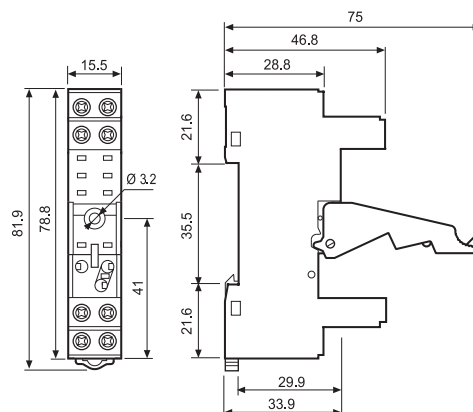
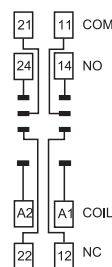
stranded wire

mm² 1x6 / 2x2.5

1x4 / 2x2.5

AWG 1x10 / 2x14

1x12 / 2x14



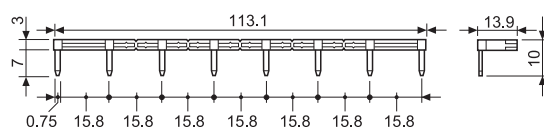
8-way jumper link for 95.85.3 socket

Rated values

095.08 (blue)

095.08.0 (black)

10 A - 250 V



99.80 coil indication and EMC suppression modules for 95.85.3 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



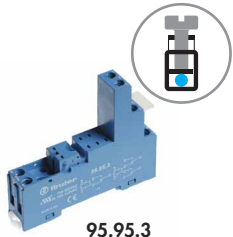
99.80

Approvals
(according to type):



* Modules in Black
housing are
available on request.

Green LED is standard.
Red LED available
on request.



95.95.3

Approvals
(according to type):

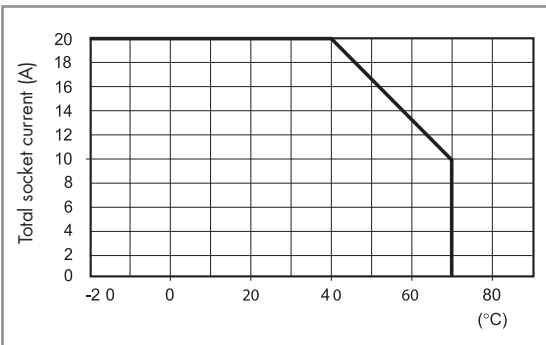


095.91.3

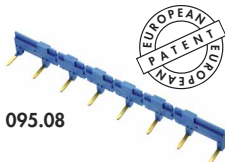
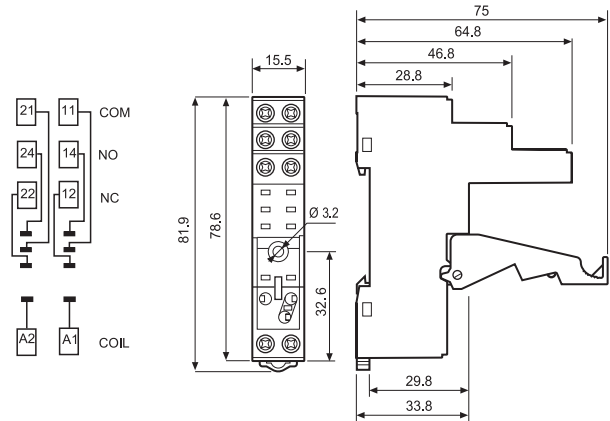


060.72

L 95 - Total socket current vs ambient temperature

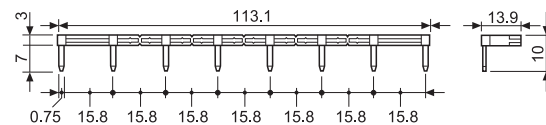


rail mount	95.95.3 (blue)	95.95.30 (black)
	44.52, 44.62	
	095.71	
	095.91.3	095.91.30
	095.08	095.08.0
	095.80.3	
	99.80	
095.91.3	060.72	
	10 A - 250 V	
	6 kV (1.2/50 µs) between coil and contacts	
	IP 20	
°C	-40...+70 (see diagram L95)	
Nm	0.5	
mm	8	
	solid wire	stranded wire
m²	1x6 / 2x2.5	1x4 / 2x2.5
AWG	1x10 / 2x14	1x12 / 2x14



095.08

8-way jumper link for 95.95.3 socket		095.08 (blue)	095.08.0 (black)
Rated values		10 A - 250 V	



99.80

Approvals
(according to type):



99.80 coil indication and EMC suppression modules for 95.95.3 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	

* Modules in Black
housing are
available on request.

Green LED is standard.
Red LED available
on request.

95 Series - Sockets and accessories for 44 series relays

A



95.55

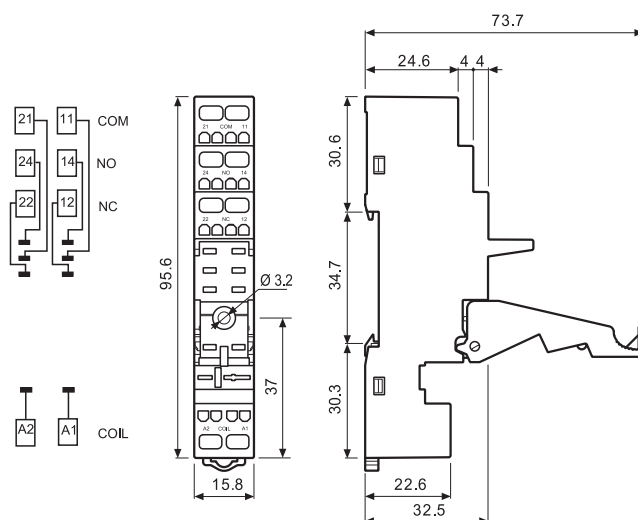
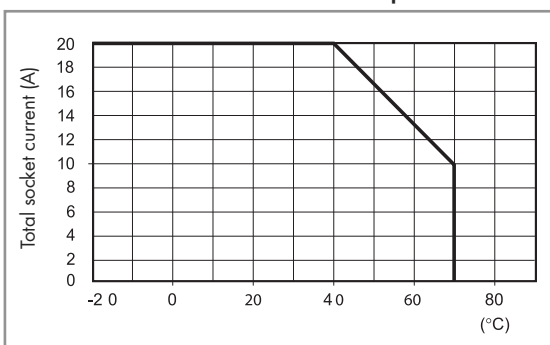
Approvals
(according to type):

095.91.3



060.72

L 95 - Total socket current vs ambient temperature



86.30

86 series timer modules

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

86.30.0.024.0000

Approvals

(according to type): CE ENEC EAC cULUS



99.02

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

99.02 coil indication and EMC suppression modules for 95.55 socket

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



95.55.3

Approvals
(according to type):

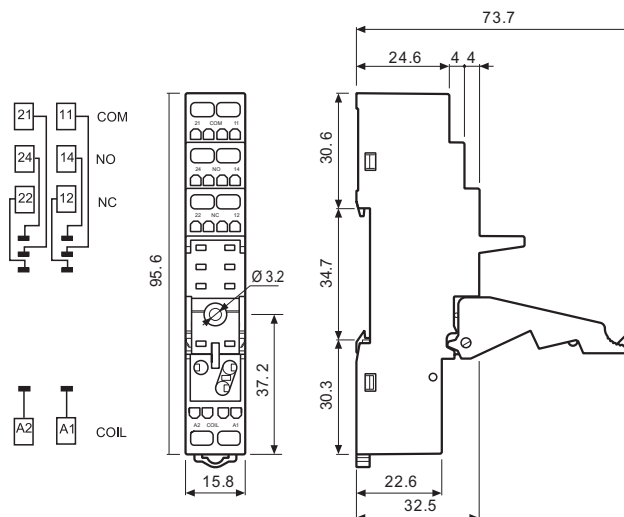
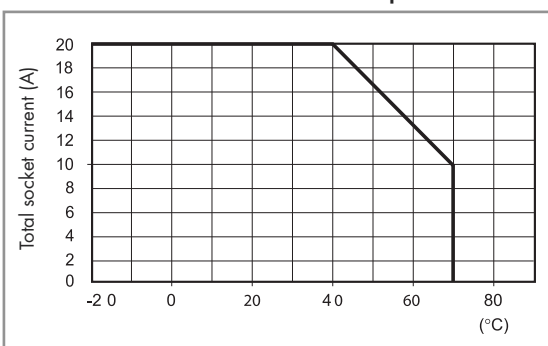


095.91.3



060.72

L 95 - Total socket current vs ambient temperature



99.80

Approvals
(according to type):



* Modules in Black housing are available on request.

Green LED is standard.
Red LED available
on request.

99.80 coil indication and EMC suppression modules for 95.55.3 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

95 Series - Sockets and accessories for 44 series relays

A



95.65

Approvals
(according to type):



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

95.65 (blue)

For relay type

44.52, 44.62

Accessories

Metal retaining clip

095.71

8-way jumper link

095.08

Modules

—

Technical data

Rated values

10 A - 250 V

Dielectric strength (between coil and contacts)

2 kV AC

Protection category

IP 20

Ambient temperature

°C -40...+70 (see diagram L95)

⊕ Screw torque

Nm 0.5

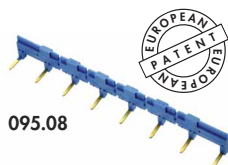
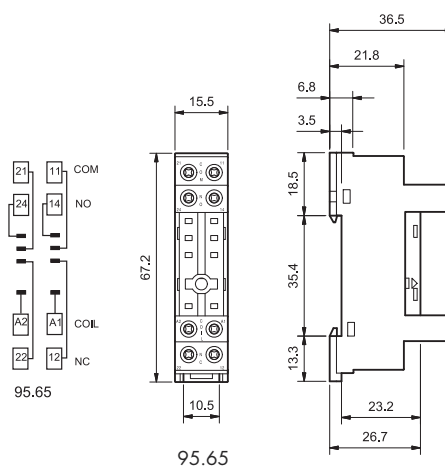
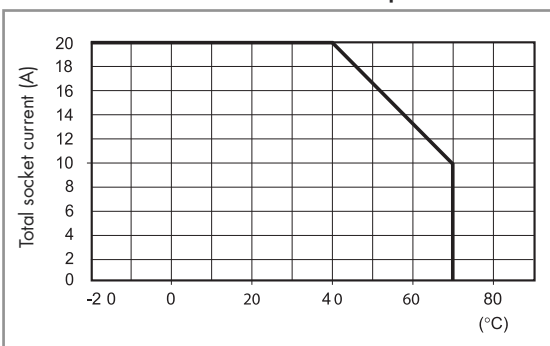
Wire strip length

mm 7

Max. wire size for 95.65 sockets

	solid wire	stranded wire
m ²	1x6 / 2x2.5	1x4 / 2x2.5
AWG	1x10 / 2x14	1x12 / 2x14

L 95 - Total socket current vs ambient temperature



095.08

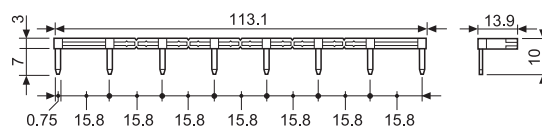


8-way jumper link for 95.65 sockets

095.08 (blue)

Rated values

10 A - 250 V





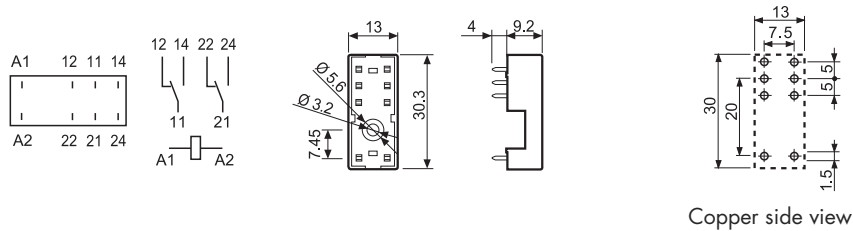
95.15.2

Approvals
(according to type):



PCB socket	95.15.2 (blue)	95.15.20 (black)
For relay type	44.52, 44.62	
Accessories		
Metal retaining clip (supplied with socket - packaging code SMA)		095.51
Plastic retaining clip		095.52
Technical data		
Rated values	10 A - 250 V	
Dielectric strength	6 kV (1.2/50 µs) between coil and contacts	
Protection category	IP 20	
Ambient temperature	°C	-40...+70

A



Copper side view

Packaging codes

How to code and identify retaining clip and packaging options for sockets.

Example:



A Standard packaging

SM Metal retaining clip
SP Plastic retaining clip



Without retaining clip

