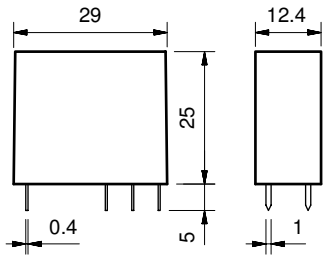
Features

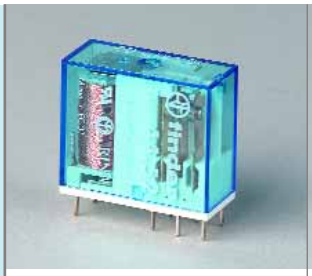
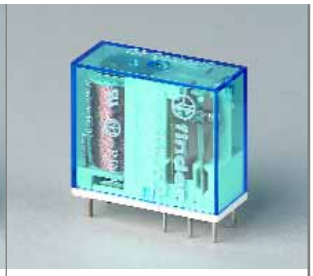
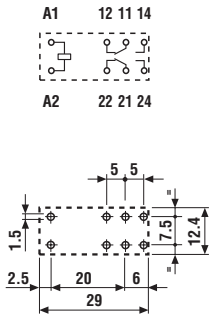
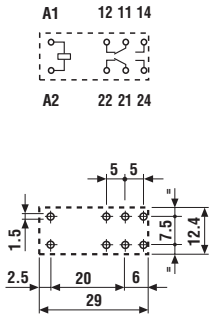
2 Pole relay range
44.52 - 2 Pole 6 A (5 mm pin pitch)
44.62 - 2 Pole 10 A (5 mm pin pitch)

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 µs) isolation, coil-contacts
- UL Listing (certain relay/socket combinations)
- Flux proof: RT II
- 95 series sockets
- Coil EMC suppression
- Timer accessories 86 series

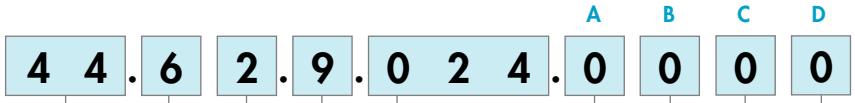


For UL Horsepower and Pilot Duty ratings
See "General technical information" page V

	44.52	44.62
		
	• 2 Pole, 6 A • 5 mm contact pin pitch • PCB or 95 series sockets	• 2 Pole, 10 A • 5 mm contact pin pitch • PCB or 95 series sockets
	 Copper side view	 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 µs) 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)	CE SP EAC RINA cULus VDE	

Ordering information

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



Series

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

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

Coil version
7 = Sensitive DC
9 = DC

Coil voltage
See coil specifications

A: Contact material
0 = Standard AgNi
4 = $AgSnO_2$
for 44.62 only
5 = AgNi + Au (5 µm)
for 44.52 only

B: Contact circuit
0 = CO (DPDT)

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

C: Options
0 = None

Selecting features and options: only combinations in the same row are possible.
Preferred selections for best avaliability are shown in **bold.**

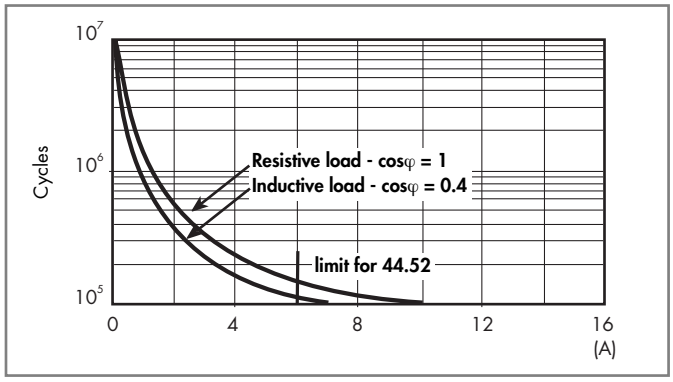
Type	Coil version	A	B	C	D
44.52	DC - sens. DC	**0** - 5	**0**	**0**	**0**
44.62	DC - sens. DC	**0** - 4	**0**	**0**	**0**

Technical data

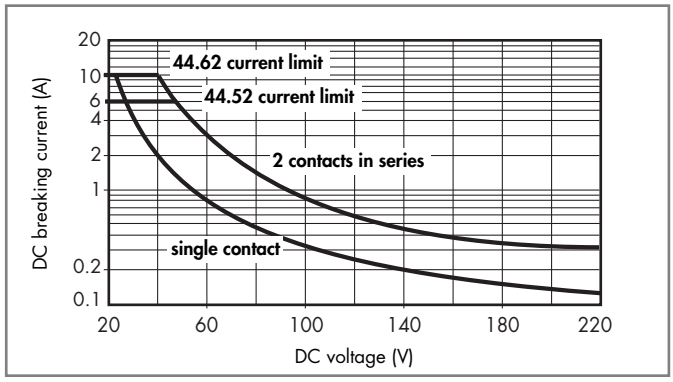
Insulation according to EN 61810-1:2004				
Nominal voltage of supply system		V AC	230/400	
Rated insulation voltage		V AC	250	400
Pollution degree			3	2
Insulation between coil and contact set				
Type of Insulation			Reinforced (8 mm)	
Overvoltage category			III	
Rated impulse voltage		kV (1.2/50 µs)	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 ≥ $100 \cdot 10^3$ 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

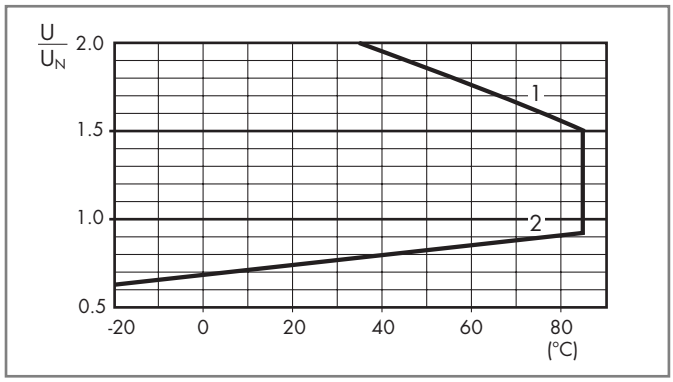
Nominal voltage U_N	Coil code	Operating range U_{min}	Operating range U_{max}	Resistance R	Rated coil consumption I at U_N
V		V	V	Ω	mA
6	**9**.006	4.4	9	55	109
9	**9**.009	6.6	13.5	125	72
12	**9**.012	8.8	18	220	55
14	**9**.014	10.2	21	300	47
24	**9**.024	17.5	36	900	27
28	**9**.028	20.5	42	1,200	23
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	187.5	23,500	5.3

DC coil data - 0.5 W sensitive

Nominal voltage U_N	Coil code	Operating range U_{min}*	Operating range U_{max}	Resistance R	Rated coil consumption I at U_N
V		V	V	Ω	mA
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	218.7	32,000	3.9

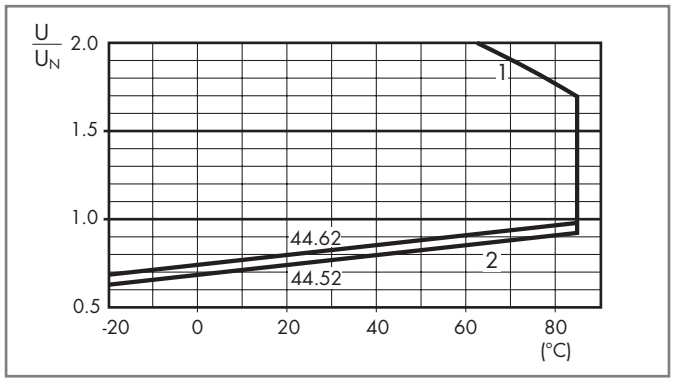
*U_{min} = 0.8 U_N for 44.62

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


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 50022) 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 50022) mount	- Coil indication and EMC suppression modules - Plastic retainig 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 50022) 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 50022) mount	- Coil indication and EMC suppression modules - Timer modules - Plastic retaining and release clip


95.55.3

See page 9

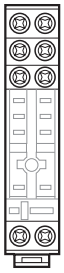
Module	Socket	Relay	Description	Mounting	Accessories
99.80	95.55.3	44.52 44.62	**Screwless terminal socket** - For fast cable connections - Top terminals - Contacts - Bottom terminals - Coil	Panel or 35 mm rail (EN 50022) mount	- Coil indication and EMC suppression modules - Plastic retaining and release clip


95.15.2

See page 10

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

Top terminals



Bottom terminals


95.05

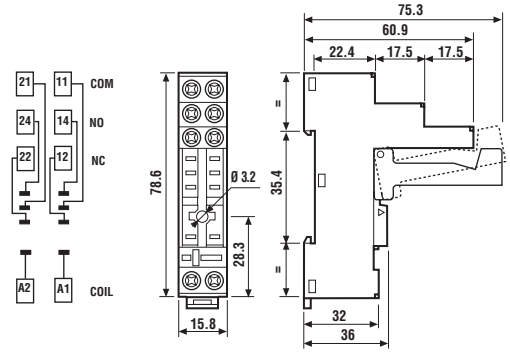
Approvals (according to type):

Certain relay/socket combinations

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	
Insulation		6 kV (1.2/50 µs) between coil and contacts	
Protection category		IP 20	
Ambient temperature	°C	–40...+70	
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

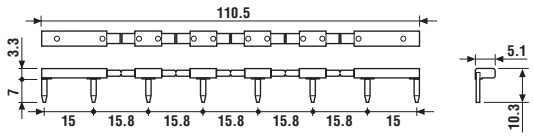

095.01


060.72




095.18

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




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):


99.02

Approvals (according to type):

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

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

95 Series - Sockets and accessories for 44 series relays

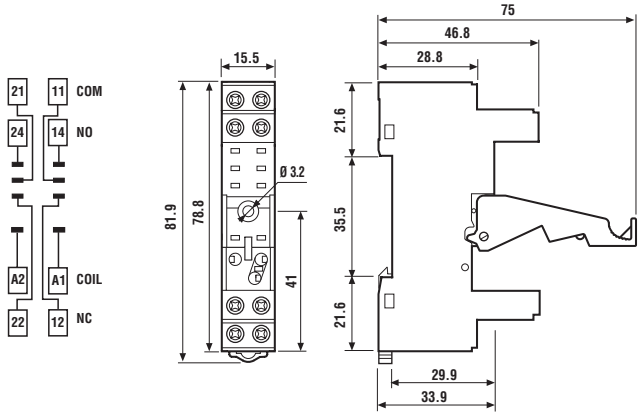

95.85.3

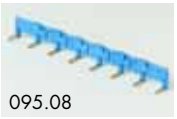
Approvals (according to type):


095.91.3

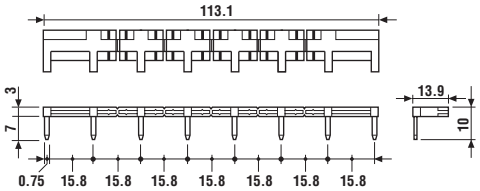

060.72

Screw terminal (Box clamp) socket panel or 35 mm rail mount		**95.85.3 (blue)**	**95.85.30 (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)		095.91.3	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	
Insulation		6 kV (1.2/50 µs) between coil and contacts	
Protection category		IP 20	
Ambient temperature	°C	–40...+70	
Screw torque	Nm	0.5	
Wire strip length	mm	7	
Max. wire size for 95.85.3 sockets		solid wire	stranded wire
	mm^2	1x6 / 2x2.5	1x4 / 2x2.5
	AWG	1x10 / 2x14	1x12 / 2x14




095.08

8-way jumper link for 95.85.3 socket	095.08 (blue)	095.08.0 (black)
Rated values	10 A - 250 V	




99.80

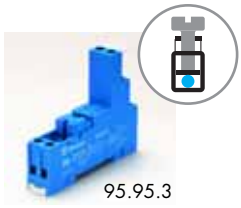
Approvals (according to type):

* 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 95.85.3 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

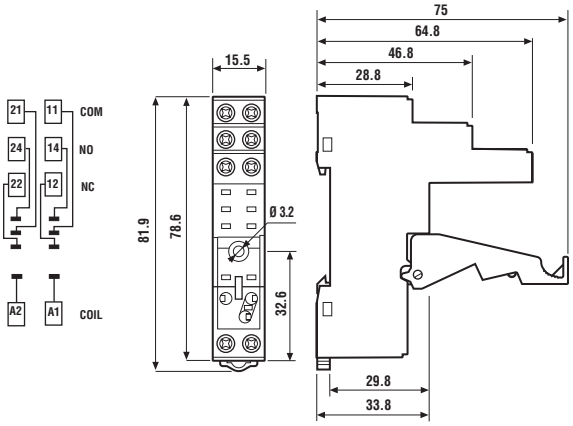

95.95.3

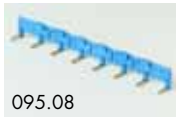
Approvals (according to type):


095.91.3

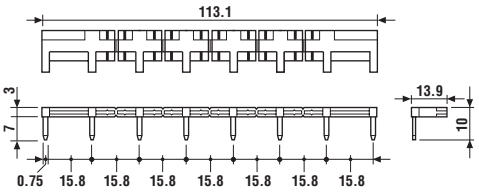

060.72

Screw terminal (Box clamp) socket panel or 35 mm rail mount		**95.95.3 (blue)**	**95.95.30 (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)		095.91.3	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	
Insulation		6 kV (1.2/50 µs) between coil and contacts	
Protection category		IP 20	
Ambient temperature	°C	–40...+70	
Screw torque	Nm	0.5	
Wire strip length	mm	8	
Max. wire size for 95.95.3 sockets		solid wire	stranded wire
	mm^2	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):

* 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 95.95.3 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

95 Series - Sockets and accessories for 44 series relays

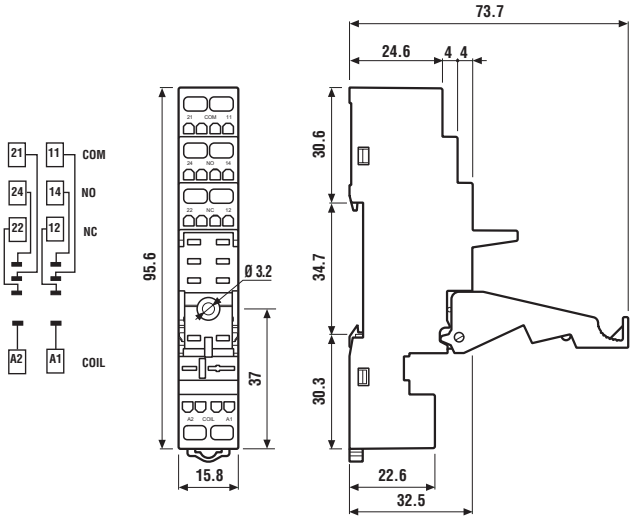

95.55

Approvals (according to type):


095.91.3


060.72

Screwless terminal socket panel or 35 mm rail mount		**95.55 (blue)**	**95.55.0 (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)		095.91.3	
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 095.91.3 plastic, 72 tags, 6x12 mm		060.72	
Technical data			
Rated values		10 A - 250 V	
Insulation		6 kV (1.2/50 µs) between coil and contacts	
Protection category		IP 20	
Ambient temperature	°C	–25…+70	
Wire strip length	mm	8	
Max. wire size for 95.55 socket		solid wire	stranded wire
	mm²	2x(0.2…1.5)	2x(0.2…1.5)
	AWG	2x(24…18)	2x(24…18)




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):


99.02

Approvals (according to type):

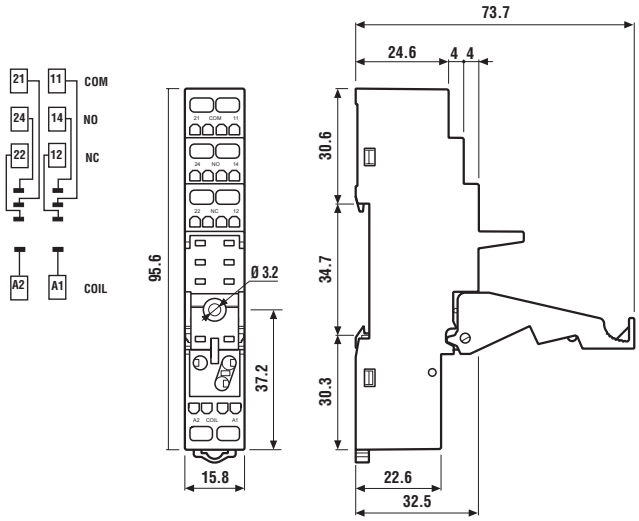
DC Modules with non-standard polarity (+A2) on request.

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 Series - Sockets and accessories for 44 series relays

Approvals (according to type):

Screwless terminal socket panel or 35 mm rail mount		**95.55.3 (blue)**	**95.55.30 (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)		095.91.3	
Identification tag		095.00.4	
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	
Insulation		6 kV (1.2/50 µs) between coil and contacts	
Protection category		IP 20	
Ambient temperature	°C	–25...+70	
Wire strip length	mm	8	
Max. wire size for 95.55.3 socket		solid wire	stranded wire
	mm²	2x(0.2...1.5)	2x(0.2...1.5)
	AWG	2x(24...18)	2x(24...18)



Approvals (according to type):

* Modules in Black housing are available on request.

Green LED is standard. Red LED available on request.

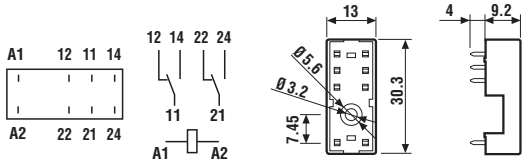
99.80 coil indication and EMC suppression modules for 95.55.3 socket

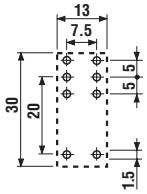
		Blue*
Diode (+A1, standard polarity)	(6...220)V DC	99.80.3.000.00
LED	(6...24)V DC/AC	99.80.0.024.59
LED	(28...60)V DC/AC	99.80.0.060.59
LED	(110...240)V DC/AC	99.80.0.230.59
LED + Diode (+A1, standard polarity)	(6...24)V DC	99.80.9.024.99
LED + Diode (+A1, standard polarity)	(28...60)V DC	99.80.9.060.99
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

95.15.2

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	
Insulation	6 kV (1.2/50 µs) between coil and contacts	
Protection category	IP 20	
Ambient temperature °C	–40...+70	





Copper side view

Packaging codes

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

Example:

9 5 . 0 5 S P A

A Standard packaging

SM Metal retaining clip
SP Plastic retaining clip

9 5 . 0 5 _ _ _

Without retaining clip