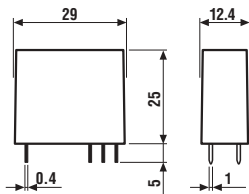


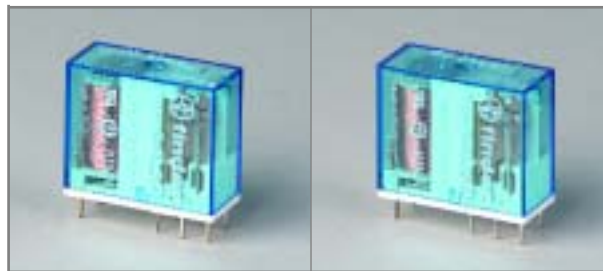
- Plug-in or P.C.B. versions
- DC and sensitive DC available
- 8 mm, 6 kV (1.2/50 μs) between coil and contacts
- Ambient temperature + 85 °C
- High physical separation between adjacent contacts
- Sockets and accessories: see 95, 99 and 86 series



\* For 400 V applications, where requirements for pollution degree 2 are met.

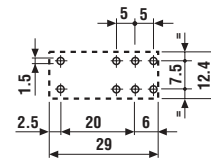
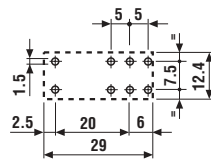
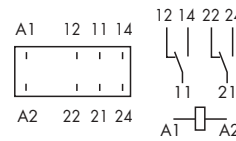
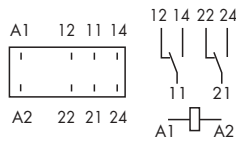
### 44.52

### 44.62



- 2 pole, 6 A
- 5 mm pinning
- P.C.B./ for use with 95 series sockets

- 2 pole, 10 A
- 5 mm pinning
- P.C.B./ for use with 95 series sockets



Copper side view

Copper side view

Contact specifications			
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 in AC1	VA	1,500	2,500
Rated load in AC15 (230 V AC)	VA	250	500
Single phase motor rating (230 V AC)	kW	0.185	0.37
Breaking capacity in 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 specifications			
Nominal voltage (U <sub>N</sub> )	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 <sub>N</sub> /(0.73...1.7)U <sub>N</sub>	(0.73...1.5)U <sub>N</sub> /(0.8...1.7)U <sub>N</sub>
Holding voltage	AC/DC	—/0.4 U <sub>N</sub>	—/0.4 U <sub>N</sub>
Must drop-out voltage	AC/DC	—/0.1 U <sub>N</sub>	—/0.1 U <sub>N</sub>
Technical data			
Mechanical life AC/DC	cycles	—/20 · 10 <sup>6</sup>	—/20 · 10 <sup>6</sup>
Electrical life at rated load AC1	cycles	150 · 10 <sup>3</sup>	100 · 10 <sup>3</sup>
Operate/release time	ms	8/5 - (12/5 sens.)	8/5 - (12/5 sens.)
Insulation according to EN 61810-1 ed. 2		4 kV/3	4 kV/3
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
<b>Approvals:</b> (according to type)			

## ORDERING INFORMATION

Example: a 44 series P.C.B. relay with 2 CO (DPDT) 10 A contacts, coil rated 24 V DC.

4 4 . 6 2 . 9 . 0 2 4 . 0 0 0 0

**Series**

**Type**

5 = P.C.B. - 5 mm pinning  
6 = P.C.B. - 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<sub>2</sub>  
for 44.62 only

**B: Contact circuit**

0 = CO (DPDT)

**D: Special versions**

0 = Flux proof (RT II)

**C: Options**

0 = None

Only combinations in the same row are possible

Preferred versions

	coil version	A	B	C	D
44.52	DC - sens. DC	0	0	0	0
44.62	DC - sens. DC	0	0	0	0

All versions

	coil version	A	B	C	D
44.62	DC - sens. DC	0 - 4	0	0	0

## TECHNICAL DATA

### INSULATION

Insulation according to EN 61810-1 ed. 2	insulation rated voltage	V	250
	rated impulse withstand voltage	kV	4
	pollution degree		3
	overvoltage category		III
Dielectric strength between adjacent contacts	V AC	2,500	

### CONDUCTED DISTURBANCE IMMUNITY

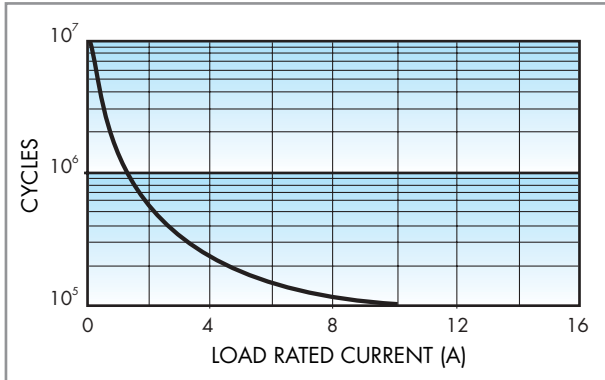
Burst (5...50)ns, 5 kHz, on A1 - A2	EN 61000-4-4	level 4 (4 kV)
Surge (1.2/50 μs) on A1 - A2 (differential mode)	EN 61000-4-5	level 3 (2 kV)

### OTHER DATA

Bounce time: NO/NC	ms	4/4	
Vibration resistance (10...55)Hz, max. ± 1 mm: NO/NC	g/g	3/3	
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 P.C.B.s	mm	≥ 5	

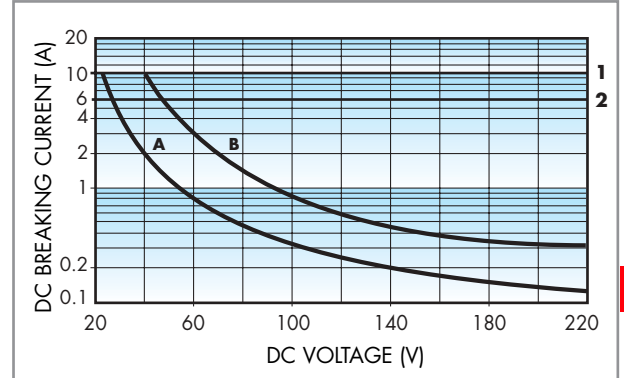
## CONTACT SPECIFICATIONS

### F 44



Electrical life vs AC1 load.  
Type 44.52 (6 A).  
Type 44.52 (10 A).

### H 44



Breaking capacity for DC1 load.

1 - Type 44.62

2 - Type 44.52

A - Load applied to 1 contact

B - Load applied to 2 contacts in series

- When switching a resistive load (DC1) having voltage and current values under the curve the expected electrical life is  $\geq 100 \cdot 10^3$  cycles.

- In case of DC13 loads the connection of a diode in parallel with the load will permit the same electrical life as for a DC1 load.

**Note:** the release time of load will be increase.

## COIL SPECIFICATIONS

### DC VERSION DATA (0.65 W standard)

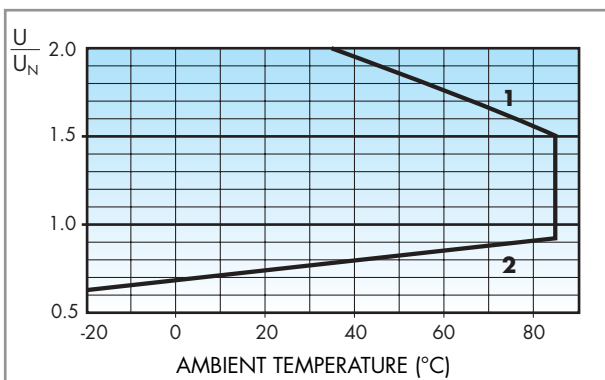
Nominal voltage $U_N$ V	Coil code	Operating range		Resistance R $\Omega$	Rated coil consumption I at $U_N$ mA
		$U_{min}$ V	$U_{max}$ V		
6	9.006	4.4	9	55	109
9	9.009	6.6	13.5	125	72
12	9.012	8.8	18	220	55
14	9.014	10.2	21	300	47
24	9.024	17.5	36	900	27
28	9.028	20.5	42	1,200	23
48	9.048	35	72	3,500	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	187.5	23,500	5.3

### DC VERSION DATA (0.5 W sensitive)

Nominal voltage $U_N$ V	Coil code	Operating range		Resistance R $\Omega$	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	218.7	32,000	3.9

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

### R 44 DC

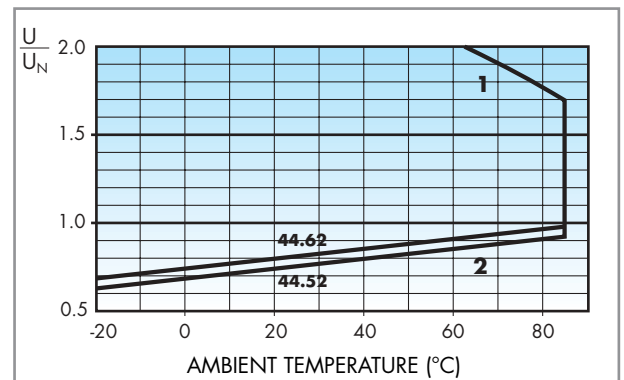


Operating range (DC version) vs ambient temperature.

1 - Max coil voltage permitted.

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

### R 44 sens. DC



Operating range (DC version) vs ambient temperature.

1 - Max coil voltage permitted.

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



95.05

Approvals  
(according to type):

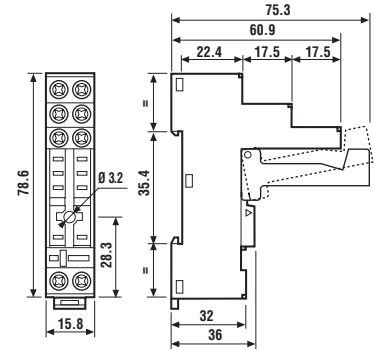


<b>Relay type</b>	<b>44.52, 44.62</b>	
Colour	BLUE	BLACK
<b>Clamp terminal socket:</b> panel or 35 mm rail (EN 50022) mount retaining clip 095.01 supplied with socket packaging code SPA	95.05	95.05.0
Plastic retaining and release clip	095.01	095.01.0
Metal retaining clip	095.71	
8-way jumper link	095.18	095.18.0
Identification tag	095.00.4	
Modules (see table below)	99.02	
Timer modules (see table below)	86.10, 86.20	
Sheet of marker tags for retaining and release clip 095.01	060.72	

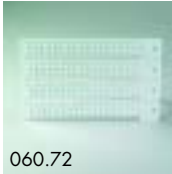
44

- Rated values: 10 A - 250 V
- Insulation:  $\geq 6$  kV (1.2/50  $\mu$ s) *between coil and contacts*
- Protection category: IP 20
- Ambient temperature: (-40...+70) $^{\circ}$ C
- $\oplus$  Screw torque: 0.5 Nm
- Wire strip length: 8 mm
- Max wire size:

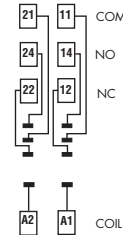
	solid wire	stranded wire
mm <sup>2</sup>	1x6 / 2x2.5	1x4 / 2x2.5
AWG	1x10 / 2x14	1x12 / 2x14



095.01



060.72



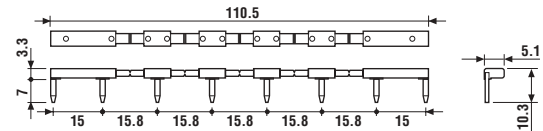
**FOR 95.05 SOCKET:**



095.18

<b>8-way jumper link</b>	095.18
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- Rated values: 10 A - 250 V



86.10

<b>86 series module timers</b> (see technical data pages 151/156)	BLUE
Mono-function: (12...24)V AC/DC; function AI; (1.5s...60min)	86.10.0.024.0000
Mono-function: (12...24)V AC/DC; function DI; (1.5s...60min)	86.20.0.024.0000

Approvals  
(according to type): GOST



99.02

Approvals  
(according to type):



<b>99.02 coil indication and EMC suppression modules</b> (see technical data page 209)	BLUE*
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 (6...24)V DC/AC	99.02.0.024.09
RC (28...60)V DC/AC	99.02.0.060.09
RC (110...240)V DC/AC	99.02.0.230.09
Residual current by-pass (62 k $\Omega$ /1W) (110...240)V AC	99.02.8.230.07

\* Modules in Black housing are available on request.

\*\*For DC supply, apply the positive to terminal A1.



95.85.3

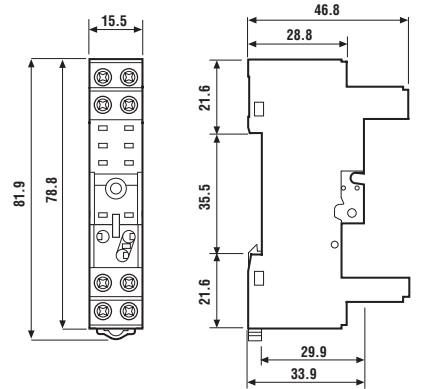
Approvals  
(according to type):



- Rated values: 10 A - 250 V
- Insulation:  $\geq 6$  kV (1.2/50  $\mu$ s) *between coil and contacts*
- Protection category: IP 20
- Ambient temperature: (-40...+70)°C
- Screw torque: 0.5 Nm
- Wire strip length: 7 mm
- Max wire size:

	solid wire	stranded wire
mm <sup>2</sup>	1x6 / 2x2.5	1x4 / 2x2.5
AWG	1x10 / 2x14	1x12 / 2x14

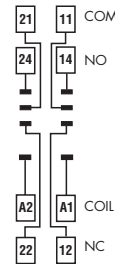
Relay type	44.52, 44.62	
Colour	BLUE	BLACK
Clamp terminal socket: panel or 35 mm rail (EN 50022) mount retaining clip 095.91.3 supplied with socket packaging code SPA	95.85.3	95.85.30
Metal retaining clip	095.71	
Plastic retaining and release clip	095.91.3	
8-way jumper link	095.08	095.08.0
Modules (see table below)	99.80	
Sheet of marker tags for retaining and release clip 095.91.3	060.72	


**44**


095.91.3



060.72



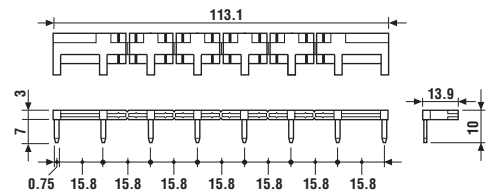
**FOR 95.85.3 SOCKET:**



095.08

<b>8-way jumper link</b>	095.08
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- Rated values: 10 A - 250 V



99.80

Approvals  
(according to type):

GOST

\* Modules in Black housing are available on request.

\*\*For DC supply, apply the positive to terminal A1.

Green LED is standard.  
Red LED available on request.

99.80 coil indication and EMC suppression modules (see technical data page 209)		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 (62 k $\Omega$ /1W)	(110...240)V AC	99.80.8.230.07



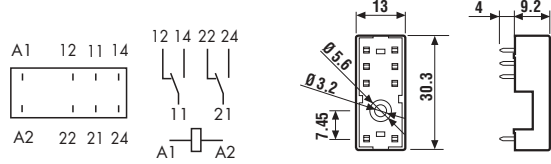
95.15.2

Approvals  
(according to type):



- Rated values: 10 A - 250 V
- Insulation:  $\geq 6$  kV (1.2/50  $\mu$ s) *between coil and contacts*
- Protection category: IP 20
- Ambient temperature: (-40...+70) $^{\circ}$ C

<b>Relay type</b>	<b>44.52, 44.62</b>	
Colour	BLUE	BLACK
<b>P.C.B. socket</b>	95.15.2	95.15.20
retaining clip 095.51 supplied with socket with packaging code SMA		
Metal retaining clip	095.51	
Plastic retaining clip	095.52	



Copper side view

## PACKAGING CODES

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

Code options according to the last three letters:

