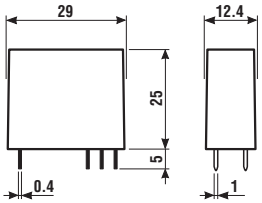
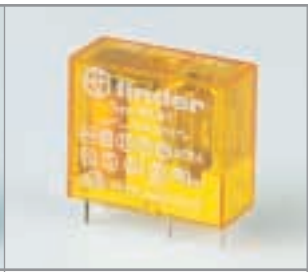
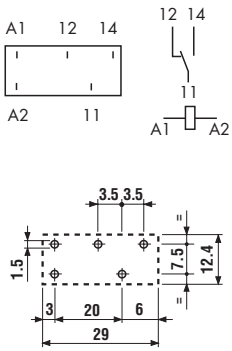
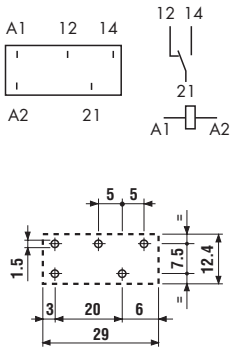
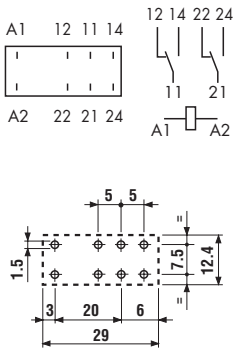
40 Series - Miniature P.C.B. Relays 8 - 10 - 16 A

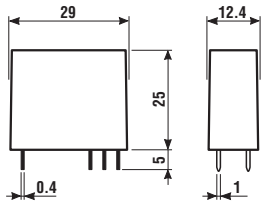
- *P.C.B. or plug-in mount*
- *AC, DC, sensitive DC or single bistable coil versions available*
- *8 mm, 6 kV (1.2/50 µs) between coil and contacts*
- *Ambient temperature +85°C*
- *Sockets and accessories: see 95, 99 and 86 series*



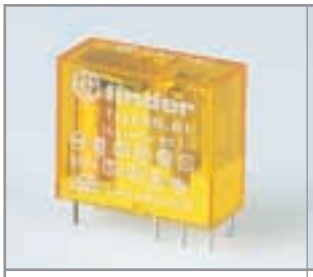
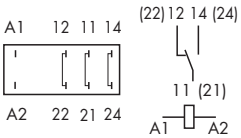
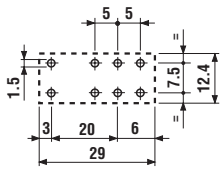
* for 400 V applications, requirements for pollution degree 2 are met.

		40.31	40.51	40.52
				
		- 1 pole, 10 A - 3.5 mm pinning - PCB / for use with 95 series sockets	- 1 pole, 10 A - 5 mm pinning - PCB / for use with 95 series sockets	- 2 pole, 8 A - 5 mm pinning - PCB / for use with 95 series sockets
				
Contact specifications				
Contact configuration		1 CO (SPDT)	1 CO (SPDT)	2 CO (DPDT)
Rated current/Maximum peak current	A	10/20	10/20	8/15
Rated voltage/Maximum switching voltage	V AC	250/400*	250/400*	250/250
Rated load in AC1	VA	2,500	2,500	2,000
Rated load in AC15 (230 VAC)	VA	500	500	400
Single phase motor rating (230 VAC)	kW/HP	0.37/0.6	0.37/0.6	0.3/0.4
Breaking capacity in DC1: 30/110/220V	A	10/0.3/0.12	10/0.3/0.12	8/0.3/0.12
Minimum switching load	mW (V/mA)	300 (5/5)	300 (5/5)	300 (5/5)
Standard contact material		AgNi	AgNi	AgNi
Coil specifications				
Nominal voltage (U_N)	V AC (50/60 Hz)	6 - 12 - 24 - 48 - 60 - 110 - 120 - 230 - 240		
	V DC	5 - 6 - 7 - 9 - 12 - 14 - 18 - 21 - 24 - 28 - 36 - 48 - 60 - 90 - 110		
Rated power AC/DC/sens. DC	VA (50 Hz)/W	1.2/0.65/0.5	1.2/0.65/0.5	1.2/0.65/0.5
Operating range	AC (50 Hz)	(0.8...1.1)U_N	(0.8...1.1)U_N	(0.8...1.1)U_N
	DC/sens. DC	(0.73...1.5)U_N/(0.73...1.75)U_N	(0.73...1.5)U_N/(0.73...1.75)U_N	(0.73...1.5)U_N/(0.73...1.75)U_N
Holding voltage	AC/DC	0.8 U_N /0.4 U_N	0.8 U_N /0.4 U_N	0.8 U_N /0.4 U_N
Must drop-out voltage	AC/DC	0.2 U_N /0.1 U_N	0.2 U_N /0.1 U_N	0.2 U_N /0.1 U_N
Technical data				
Mechanical life AC/DC	cycles	10 · 10^6/20 · 10^6	10 · 10^6/20 · 10^6	10 · 10^6/20 · 10^6
Electrical life at rated load AC1	cycles	200 · 10^3	200 · 10^3	100 · 10^3
Operate/release time (bounce included)	ms	10/10 - (15/12 sens.)	10/10 - (15/12 sens.)	10/10 - (15/12 sens.)
Insulation according to EN 61810-5		3.6 kV/3	3.6 kV/3	3.6 kV/2
Insulation between coil and contacts (1.2/50µs)	kV	6 (8mm)	6 (8mm)	6 (8mm)
Dielectric strenght between open contacts	V AC	1,000	1,000	1,000
Ambient temperature range	°C	–40...+85	–40...+85	–40...+85
Protection category		IP 50	IP 50	IP 50
Approvals: (according to type)		GOST RINA		

- *P.C.B. or plug-in mount*
- *AC, DC, sensitive DC or single bistable coil versions available*
- *8 mm, 6 kV (1.2/50 µs) between coil and contacts*
- *Ambient temperature +85°C*
- *Sockets and accessories: see 95, 99 and 86 series*



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

	40.61	40.xx.6
		
	- 1 pole, 16 A - 5 mm pinning - PCB / for use with 95 series sockets	- Bistable version (1 coil) - PCB / for use with 95 series sockets
	  	Bistable version (1 coil) types: 40.31.6... 40.51.6... 40.52.6... 40.61.6... For wiring diagrams see page 16
Contact specifications		
Contact configuration	1 CO (SPDT)	See relays 40.31 40.51 40.52 40.61
Rated current/Maximum peak current A	16/30	
Rated voltage/Maximum switching voltage V AC	250/400*	
Rated load in AC1 VA	4,000	
Rated load in AC15 (230 VAC) VA	750	
Single phase motor rating (230 VAC) kW/HP	0.55/0.8	
Breaking capacity in DC1: 30/110/220V A	16/0.3/0.12	
Minimum switching load mW (V/mA)	500 (10/5)	
Standard contact material	AgCdO	
Coil specifications		
Nominal voltage (U_N) V AC (50/60 Hz)	6 - 12 - 24 - 48 - 60 - 110 - 120 - 230 - 240	5 - 6 - 12 - 24 - 48 - 110
V DC	**See below	5 - 6 - 12 - 24 - 48 - 110
Rated power AC/DC/sens. DC VA (50 Hz)/W	1.2/0.65/0.5	1.0/1.0/—
Operating range AC (50 Hz)	(0.8...1.1)U_N	(0.8...1.1)U_N
DC/sens. DC	(0.73...1.5)U_N/(0.8...1.5)U_N	(0.8...1.1)U_N/—
Holding voltage AC/DC	0.8 U_N /0.4 U_N	—
Must drop-out voltage AC/DC	0.2 U_N /0.1 U_N	—
Technical data		
Mechanical life AC/DC cycles	$10 \cdot 10^6/20 \cdot 10^6$	See relays 40.31 40.51 40.52 40.61
Electrical life at rated load AC1 cycles	$100 \cdot 10^3$	
Operate/release time (bounce included) ms	10/10 - (15/12 sens.)	
Insulation according to EN 61810-5	3.6 kV/3	
Insulation between coil and contacts (1.2/50µs) kV	6 (8mm)	
Dielectric strenght between open contacts V AC	1,000	
Ambient temperature range °C	–40...+85	Min. impulse duration ≥ 20 ms
Protection category	IP 50	
Approvals: (according to type)		

** Nominal voltage (U_N):
5 - 6 - 7 - 9 - 12 - 14 - 18 - 21 - 24 - 28 - 36 - 48 - 60 - 90 - 110 V DC

ORDERING INFORMATION

Example: a 40 series P.C.B. relay with 2 CO (DPDT) contacts, with coil rated at 230 V AC.

4 0	. 5	2	. 8	. 2 3 0	. 0 (A)	0 (B)	0 (C)	0 (D)

Series

Type
3 = P.C.B. - 3.5 mm pinning
5 = P.C.B. - 5 mm pinning
6 = P.C.B. - 5 mm pinning

No. of poles
1 = 1 CO (SPDT)
for: 40.31, 10 A
40.51, 10 A
40.61, 16 A
2 = 2 CO (DPDT)
for 40.52, 8 A

Coil version
6 = AC/DC bistable
7 = Sensitive DC
8 = AC (50/60 Hz)
9 = DC

Coil voltage
see coil specifications

A: Contact material
0 = Standard AgNi
for: 40.31/51/52
AgCdO for 40.61
2 = AgCdO
4 = $AgSnO_2$
5 = AgNi + Au (5µm)

B: Contact circuit
0 = Standard
3 = Contact NO

C: Options
0 = Standard

D: Special applications
0 = Standard
1 = Sealed version (IP67)
3 = High temperature (+125°C) sealed version

Only combinations in the same row are possible

Preferred versions

	coil version	A	B	C	D
40.31/51	AC/DC/sens.DC	0	0	0	0
40.52	AC/DC/sens.DC	0	0	0	0
40.61	AC/DC/sens.DC	0	0	0	0

All versions

	coil version	A	B	C	D
40.31/51	AC/sens.DC	0 - 2 - 4 - 5	0 - 3	0	0 - 1
40.31/51	DC	0 - 2 - 4 - 5	0 - 3	0	0 - 1 - 3
40.52	AC/sens.DC	0 - 2 - 5	0 - 3	0	0 - 1
40.52	DC	0 - 2 - 5	0 - 3	0	0 - 1 - 3
40.61	AC/sens.DC	0 - 4	0 - 3	0	0 - 1
40.61	DC	0 - 4	0 - 3	0	0 - 1 - 3
40.31/51/52/61	bistable	0	0	0	0

TECHNICAL DATA

INSULATION

INSULATION according to EN 61810-5	insulation rated voltage V	250	
	rated impulse withstand voltage kV	3.6	
	pollution degree	3 (1 CO)	2 (2CO)
	overvoltage category	III	

IMMUNITY

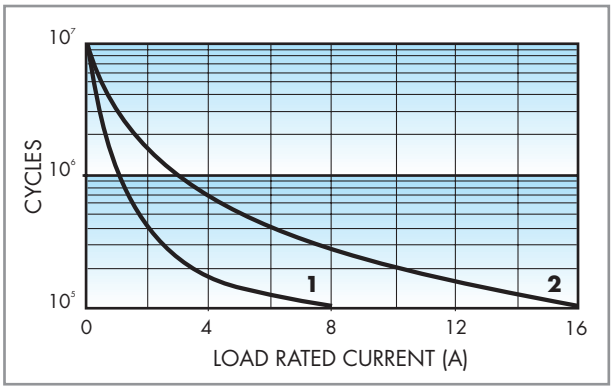
CONDUCTED DISTURBANCE IMMUNITY	BURST (according to EN 61000-4-4) level 4 (4kV)
	SURGE (according to EN 61000-4-5) level 3 (2kV)

OTHER DATA

VIBRATION RESISTANCE (10...55Hz): NO/NC g/g		10/4 (1CO)	3/3 (2CO)
POWER LOST IN THE ENVIRONMENT	without contact current W	0.6	
	with rated current W	1.2 (40.31/51)	2 (40.61/52)
RECOMMENDED DISTANCE between RELAY mounted on P.C.B.s mm		≥5	

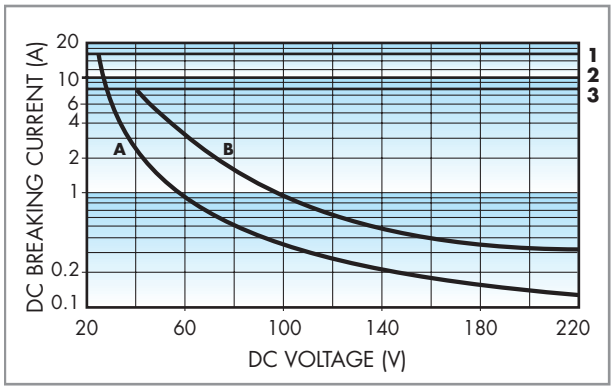
CONTACT SPECIFICATIONS

F 40



Electrical life vs AC1 load.
1 - Type 40.52 (8 A)
2 - Type 40.31 - 40.51 (10 A)
Type 40.61 (16 A)

H 40



Breaking capacity for DC1 load.
1 - Type 40.61
2 - Type 40.31 - 40.51
3 - Type 40.52
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 ≥ $100 \cdot 10^3$ 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	Coil code	Operating range U_{min}	Operating range U_{max}	Resistance R	Rated coil absorption I at U_N
V		V	V	Ω	mA
5	**9**.005	3.65	7.5	38	130
6	**9**.006	4.4	9	55	109
7	**9**.007	5.1	10.5	75	93
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
18	**9**.018	13.1	27	500	36
21	**9**.021	15.3	31.5	700	30
24	**9**.024	17.5	36	900	27
28	**9**.028	20.5	42	1,200	23
36	**9**.036	26.3	54	2,000	18
48	**9**.048	35	72	3,500	14
60	**9**.060	43.8	90	5,500	11
90	**9**.090	65.7	135	12,500	7.2
110	**9**.110	80.3	165	18,000	6.1

DC VERSION DATA (0.5 W sensitive)

Nominal voltage U_N	Coil code	Operating range U_{min}*	Operating range U_{max}**	Resistance R	Rated coil absorption I at U_N
V		V	V	Ω	mA
5	**7**.005	3.7	8.8	50	100
6	**7**.006	4.4	10.5	75	80
7	**7**.007	5.1	12.2	100	70
9	**7**.009	6.6	15.8	160	56
12	**7**.012	8.8	21	300	40
14	**7**.014	10.2	24.5	400	35
18	**7**.018	13.2	31.5	650	27.7
21	**7**.021	15.4	36.9	900	23.3
24	**7**.024	17.5	42	1,200	20
28	**7**.028	20.5	49	1,600	17.5
36	**7**.036	26.3	63	2,600	13.8
48	**7**.048	35	84	4,800	10
60	**7**.060	43.8	105	7,200	8.3
90	**7**.090	65.7	157	16,200	5.5
110	**7**.110	80.3	192	23,500	4.7

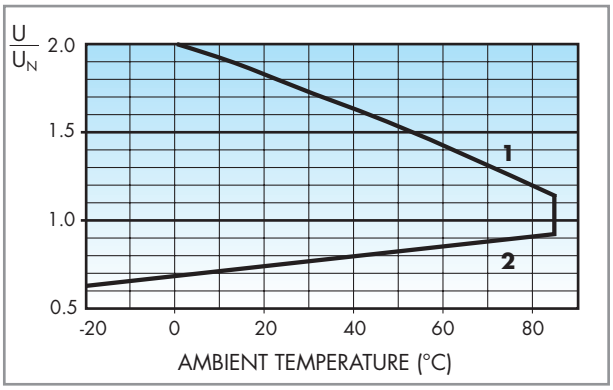
*U_{min} = 0.8 U_N for 40.61 **U_{max} = 1.5 U_N for 40.61

AC VERSION DATA

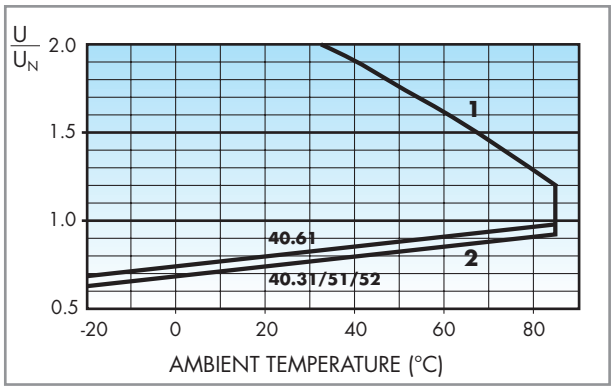
Nominal voltage U_N	Coil code	Operating range U_{min}	Operating range U_{max}	Resistance R	Rated coil absorption I at U_N (50Hz)
V		V	V	Ω	mA
6	**8**.006	4.8	6.6	21	168
12	**8**.012	9.6	13.2	80	90
24	**8**.024	19.2	26.4	320	45
48	**8**.048	38.4	52.8	1,350	21
60	**8**.060	48	66	2,100	16.8
110	**8**.110	88	121	6,900	9.4
120	**8**.120	96	132	9,000	8.4
230	**8**.230	184	253	28,000	4.5
240	**8**.240	192	264	31,500	4.1

COIL SPECIFICATIONS

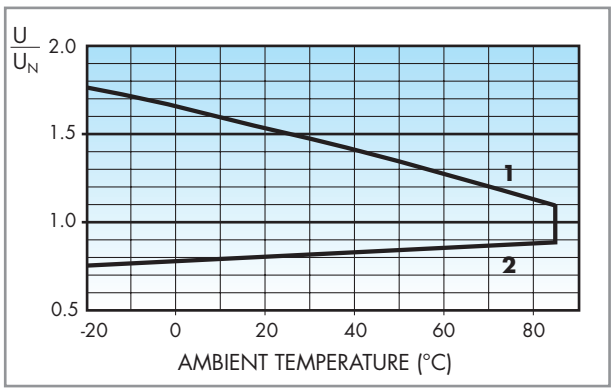
R 40 DC



R 40 sens. DC



R 40 AC



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

BISTABLE COIL SPECIFICATIONS

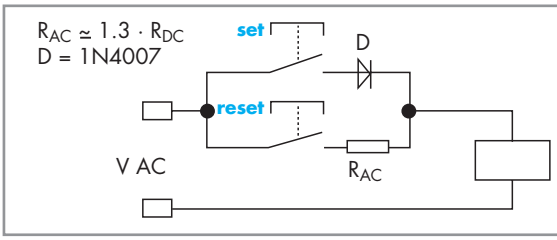
AC/DC VERSION DATA (bistable)

Nominal voltage U_N	Coil	Operating range U_{min}	Operating range U_{max}	Resistance R	Rated coil absorption I at U_N	DC: Release resistance** R_{DC}
V		V	V	Ω	mA	Ω
5	**6**.005	4	5.5	23	215	37
6	**6**.006	4.8	6.6	33	165	62
12	**6**.012	9.6	13.2	130	83	220
24	**6**.024	19.2	26.4	520	40	910
48	**6**.048	38.4	52.8	2,100	21	3,600
110	**6**.110	88	121	11,000	10	16,500

** R_{DC} = Resistance in DC, R_{AC} = 1.3 x R_{DC}

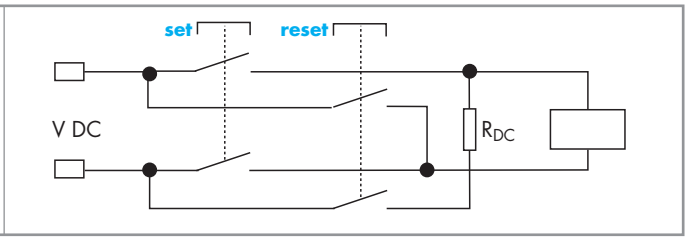
Wiring Diagram for 40 Series bistable coil version

AC Operation



On momentary closure of the SET switch the relay is magnetised through the diode and the relay contacts transfer to the set position and remain in this position.
On momentary closure of the RESET switch the relay is demagnetised through current limiting resistor (RAC) and the contacts return to the reset position.

DC Operation



On momentary closure of the SET switch the relay is magnetised and the relay contacts transfer to the set position and remain in this position.
On momentary closure of the RESET switch the relay is demagnetised through limiting resistor (RDC) and the contacts return to the reset position.

Notes: The minimum SET or RESET impulse time is 20 ms. The maximum time can be continuous. In practice, always ensure that the SET and RESET contacts cannot be operated simultaneously.

95 Series - Sockets and Accessories for 40 Series Relays

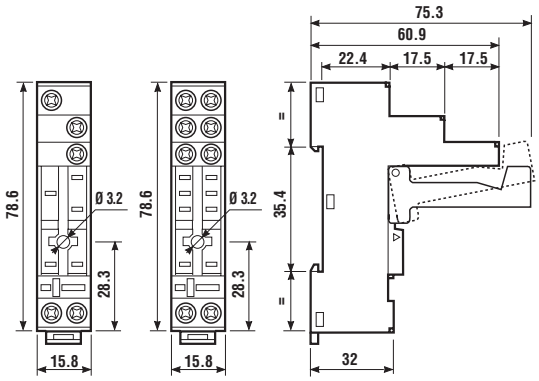

95.05

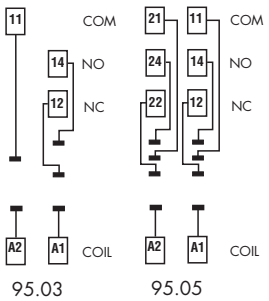
Approvals (according to type):

Relay type		40.31	40.51, 40.52, 40.61
Clamp terminal socket: panel or 35 mm rail (EN 50022) mount	BLUE	95.03	95.05
	BLACK*	95.03.0	95.05.0
Retaining and release clip (supplied with socket)		095.01	095.01
Identification tag		095.00.4	095.00.4
Modules		99.02	99.02
Timer modules		86.10, 86.20	86.10, 86.20
8-way jumper link for 95.03 and 95.05 sockets		095.18	095.18

- RATED VALUES: 10 A - 250 V
  with a current >10 A, the contact terminal must be connected in parallel (21 with 11, 24 with 14, 22 with 12)
- INSULATION: ≥ 6 kV (1.2/50μs) between coil and contacts
- PROTECTION CATEGORY: IP 20
- AMBIENT TEMPERATURE: (-40...+70) °C
- TORQUE: 0.5 Nm
- MAX WIRE SIZE:

	solid wire	flexible wire
mm²	1x6 / 2x2.5	1x4 / 2x2.5
AWG	1x10 / 2x14	1x12 / 2x14





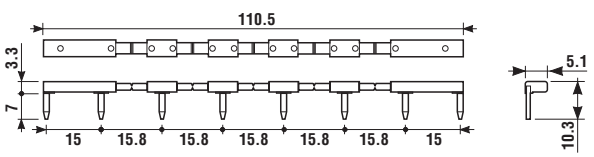
95.03 95.05


99.02

99 Series modules for 95.03 and 95.05 sockets		BLUE	BLACK*
Diode	(6...220) V DC	99.02.3.000.00	99.02.3.000.00.0
Diode (inverted polarity)	(6...220) V DC	99.02.2.000.00	99.02.2.000.00.0
LED	(6...24) V DC/AC	99.02.0.024.59	99.02.0.024.59.0
LED	(28...60) V DC/AC	99.02.0.060.59	99.02.0.060.59.0
LED	(110...240) V DC/AC	99.02.0.230.59	99.02.0.230.59.0
LED + Diode	(6...24) V DC	99.02.9.024.99	99.02.9.024.99.0
LED + Diode	(28...60) V DC	99.02.9.060.99	99.02.9.060.99.0
LED + Diode	(110...220) V DC	99.02.9.220.99	99.02.9.220.99.0
LED + Diode (inverted polarity)	(6...24) V DC	99.02.0.024.79	99.02.0.024.79.0
LED + Diode (inverted polarity)	(28...60) V DC	99.02.9.060.79	99.02.9.060.79.0
LED + Diode (inverted polarity)	(110...220) V DC	99.02.9.220.79	99.02.9.220.79.0
LED + Varistor	(6...24) V DC/AC	99.02.0.024.98	99.02.0.024.98.0
LED + Varistor	(28...60) V DC/AC	99.02.0.060.98	99.02.0.060.98.0
LED + Varistor	(110...240) V DC/AC	99.02.0.230.98	99.02.0.230.98.0
RC	(6...24) V DC/AC	99.02.0.024.09	99.02.0.024.09.0
RC	(28...60) V DC/AC	99.02.0.060.09	99.02.0.060.09.0
RC	(110...240) V DC/AC	99.02.0.230.09	99.02.0.230.09.0
No - remanence	(110...240) V AC	99.02.8.230.07	99.02.8.230.07.0


095.18

8-way jumper link for 95.03, and 95.05 sockets	095.18



- RATED VALUES: 10 A - 250 V

*Available on request

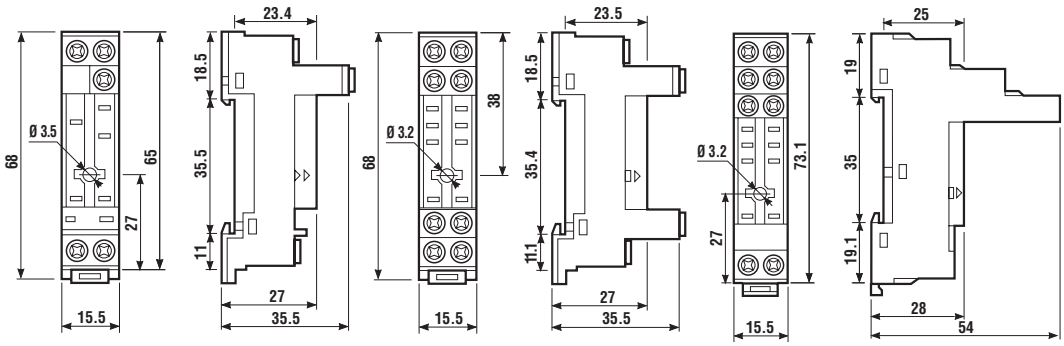
95 Series - Sockets and Accessories for 40 Series Relays


95.63


95.65


95.75

Relay type		40.31	40.51, 40.52, 40.61	
Clamp terminal socket: panel or 35 mm rail (EN 50022) mount	BLUE	95.63	95.65	95.75
	BLACK*	95.63.0	95.65.0	95.75.0
Retaining clip (supplied with socket)		095.71	095.71	095.71
Modules		99.01	—	99.01
8-way jumper link for 95.63 and 95.75 sockets		095.08	095.08	095.08

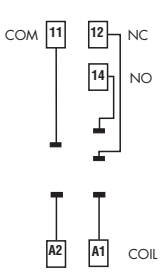


Approvals (according to type):

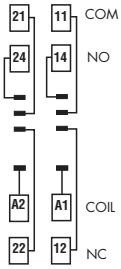
GOST

- RATED VALUES: 10 A - 250 V
  with a current >10 A, the contact terminal must be connected in parallel (21 with 11, 24 with 14, 22 with 12)
- INSULATION: ≥ 6 kV (1.2/50µs) between coil and contacts (Types 95.63/75 only)
- PROTECTION CATEGORY: IP 20
- AMBIENT TEMPERATURE: (-40...+70) °C
- TORQUE: 0.5 Nm
- MAX WIRE SIZE:

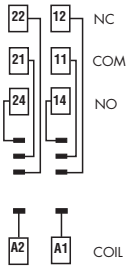
	solid wire	flexible wire
mm²	1x6 / 2x2.5	1x4 / 2x2.5
AWG	1x10 / 2x14	1x12 / 2x14



95.63



95.65



95.75

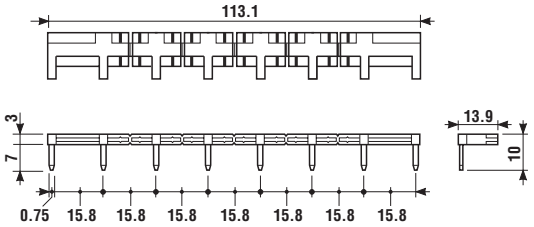

99.01

99 Series modules for 95.63 and 95.75 sockets		BLUE	BLACK*
Diode	(6...220) V DC	99.01.3.000.00	99.01.3.000.00.0
Diode (inverted polarity)	(6...220) V DC	99.01.2.000.00	99.01.2.000.00.0
LED	(6...24) V DC/AC	99.01.0.024.59	99.01.0.024.59.0
LED	(28...60) V DC/AC	99.01.0.060.59	99.01.0.060.59.0
LED	(110...240) V DC/AC	99.01.0.230.59	99.01.0.230.59.0
LED + Diode	(6...24) V DC	99.01.9.024.99	99.01.9.024.99.0
LED + Diode	(28...60) V DC	99.01.9.060.99	99.01.9.060.99.0
LED + Diode	(110...220) V DC	99.01.9.220.99	99.01.9.220.99.0
LED + Diode (inverted polarity)	(6...24) V DC	99.01.0.024.79	99.01.0.024.79.0
LED + Diode (inverted polarity)	(28...60) V DC	99.01.9.060.79	99.01.9.060.79.0
LED + Diode (inverted polarity)	(110...220) V DC	99.01.9.220.79	99.01.9.220.79.0
LED + Varistor	(6...24) V DC/AC	99.01.0.024.98	99.01.0.024.98.0
LED + Varistor	(28...60) V DC/AC	99.01.0.060.98	99.01.0.060.98.0
LED + Varistor	(110...240) V DC/AC	99.01.0.230.98	99.01.0.230.98.0
RC	(6...24) V DC/AC	99.01.0.024.09	99.01.0.024.09.0
RC	(28...60) V DC/AC	99.01.0.060.09	99.01.0.060.09.0
RC	(110...240) V DC/AC	99.01.0.230.09	99.01.0.230.09.0
No - remanence	(110...240) V AC	99.01.8.230.07	99.01.8.230.07.0

*Available on request


095.08

8-way jumper link for 95.63, 95.65 and 95.75 sockets	095.08

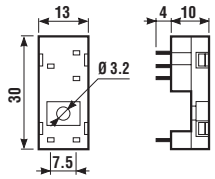


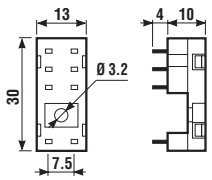
- RATED VALUES: 10 A - 250 V


95.13


95.15

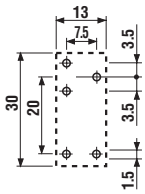
Relay type		**40.31**	**40.51, 40.52, 40.61**
P.C.B. socket	BLUE	95.13	95.15
	BLACK*	95.13.0	95.15.0
Metal retaining clip		095.51	095.51
Plastic retaining clip		095.52	095.52



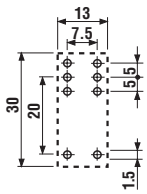


Approvals
(according to type):

- RATED VALUES: 10 A - 250 V
- INSULATION: ≥ 6 kV (1.2/50μs) between coil and contacts
- PROTECTION CATEGORY: IP 20
- AMBIENT TEMPERATURE: (-40...+70) °C



95.13

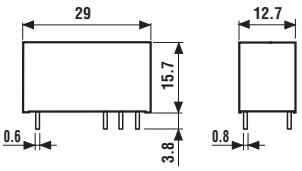


95.15

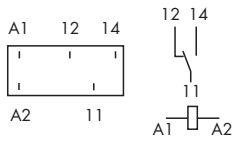
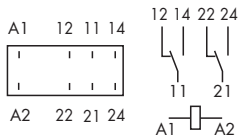
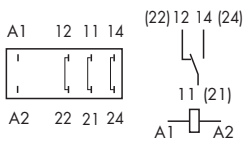
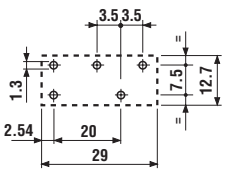
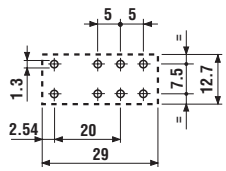
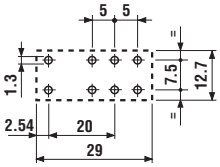
*Available on request

41 Series - Low-Profile P.C.B. Relays 8 - 12 - 16 A

- *Low-profile, only 15.7 mm high*
- *DC coil versions*
- *8 mm, 6 kV(1.2/50 µs) between coil and contacts*
- *Ambient temperature +85°C*
- *Sockets and accessories: see 95 and 99 series*



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

	41.31	41.52	41.61
			
	- 1 pole, 12 A - low profile, 3.5 mm pinning - PCB / for use with 95 series sockets	- 2 pole, 8 A - low profile, 5 mm pinning - PCB / for use with 95 series sockets	- 1 pole, 16 A - low profile, 5 mm pinning - PCB / for use with 95 series sockets
			
			
Contact specifications			
Contact configuration	1 CO (SPDT)	2 CO (DPDT)	1 CO (SPDT)
Rated current/Maximum peak current A	12/25	8/15	16/30
Rated voltage/Maximum switching voltage V AC	250/400*	250/400*	250/400*
Rated load in AC1 VA	3,000	2,000	4,000
Rated load in AC15 (230 VAC) VA	600	400	750
Single phase motor rating (230 VAC) kW/HP	0.5/0.75	0.3/0.5	0.5/0.75
Breaking capacity in DC1: 30/110/220V A	12/0.4/0.12	8/0.4/0.12	16/0.4/0.12
Minimum switching load mW (V/mA)	300 (5/5)	300 (5/5)	300 (5/5)
Standard contact material	AgNi	AgNi	AgNi
Coil specifications			
Nominal voltage (U_N) V AC (50/60 Hz)	—	—	—
V DC	12 - 24 - 48 - 60 - 110	12 - 24 - 48 - 60 - 110	12 - 24 - 48 - 60 - 110
Rated power AC/sens. DC VA (50 Hz)/W	—/0.4	—/0.4	—/0.4
Operating range AC (50 Hz)	—	—	—
DC	$(0.7...2.5)U_N$	$(0.7...2.5)U_N$	$(0.7...2.5)U_N$
Holding voltage AC/DC	$—/0.4U_N$	$—/0.4\ U_N$	$—/0.4\ U_N$
Must drop-out voltage AC/DC	$—/0.1U_N$	$—/0.1\ U_N$	$—/0.1\ U_N$
Technical data			
Mechanical life AC/DC cycles	$—/30{\cdot}10^6$	$—/30{\cdot}10^6$	$—/30{\cdot}10^6$
Electrical life at rated load AC1 cycles	$150 \cdot 10^3$	$80 \cdot 10^3$	$70 \cdot 10^3$
Operate/release time (bounce included) ms	7/8	7/8	7/8
Insulation according to EN 61810-5	3.6kV/3	3.6kV/3	3.6kV/3
Insulation between coil and contacts (1.2/50µs) kV	6 (8mm)	6 (8mm)	6 (8mm)
Dielectric strenght between open contacts V AC	1,000	1,000	1,000
Ambient temperature range °C	–40...+85	–40...+85	–40...+85
Protection category	IP 50	IP 50	IP 50
Approvals: (according to type)	GOST		

ORDERING INFORMATION

Example: a 41 series low-profile P.C.B. relay with 2 CO (DPDT) contacts, with coil rated 24 V DC.

4 1	. 5	2	. 9	. 0 2 4	. 0	0	0	0
					A	B	C	D

Series

Type
3 = P.C.B. - 3.5 mm pinning
5 = P.C.B. - 5 mm pinning
6 = P.C.B. - 5 mm pinning

No. of poles
1 = 1 CO (SPDT) for
41.31, 12 A
41.61, 16A
2 = 2 CO (DPDT)
for 41.52, 8 A

Coil version
9 = DC

Coil voltage
see coil specifications

A: Contact material
0 = AgNi Standard

B: Contact circuit
0 = Standard

C: Options
0 = Standard

D: Special applications
0 = Standard

TECHNICAL DATA

INSULATION

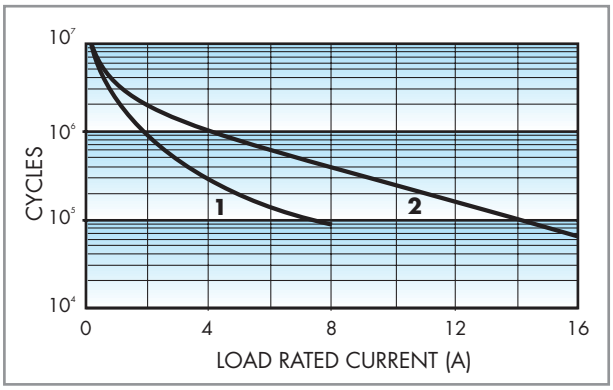
INSULATION according to EN 61810-5	insulation rated voltage	V	250
	rated impulse withstand voltage	kV	3.6
	pollution degree		3
	overvoltage category		III

OTHER DATA

VIBRATION RESISTANCE (10...55Hz): NO/NC		g/g	20/5		
POWER LOST IN THE ENVIRONMENT	without contact current	W	0.4		
	with rated current	W	1.7 (41.31)	1.2 (41.52)	1.8 (41.61)
RECOMMENDED DISTANCE between RELAY mounted on P.C.B.s		mm	≥5		

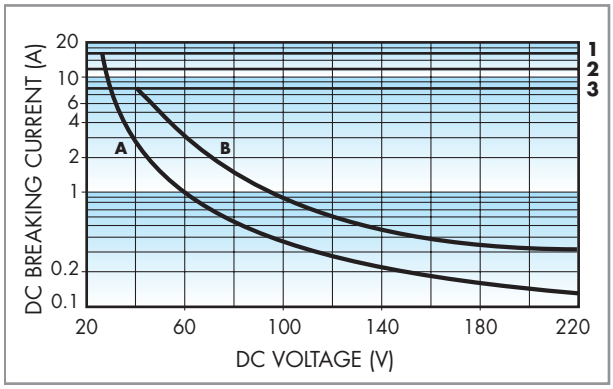
CONTACT SPECIFICATIONS

F 41



Contact life vs AC1 load.
1 - Type 41.52 (8 A) at 360 cycles/h.
2 - Type 41.31 (12 A) at 360 cycles/h.
Type 41.61 (16 A) at 360 cycles/h.

H 41



Breaking capacity for DC1 load.
1 - type 41.61
2 - type 41.31
3 - type 41.52
A - load applied to 1 contact
B - load applied to 2 contacts in series

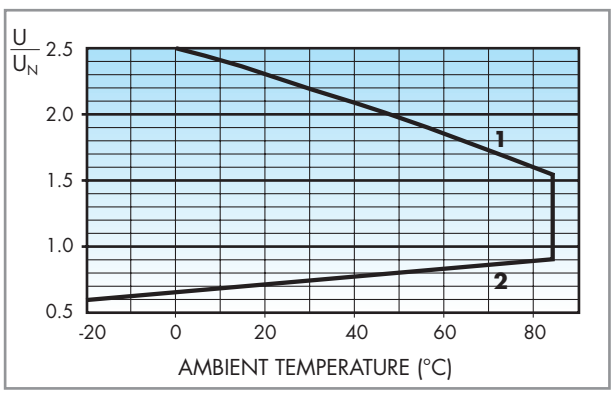
• When switching a resistive load (DC1) having voltage and current values under the curve the expected electrical life is ≥ 100·10³ cycles.
• In case of DC13 loads the connection of a diode in parallel with the load will permit the same electrical life as for a DC1 load.
Note: the release time of load will be increase.

COIL SPECIFICATIONS

DC VERSION DATA

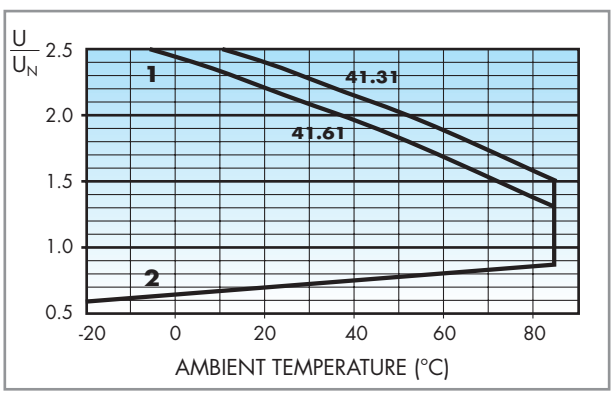
Nominal voltage U_N	Coil code	Operating range U_{min}	Operating range U_{max}	Resistance R	Rated coil absorption I at U_N
V		V	V	Ω	mA
12	**9**.012	8.4	30.6	360	33.3
24	**9**.024	16.8	61.2	1,440	19.7
48	**9**.048	33.6	122	5,520	8.7
60	**9**.060	42.0	153	7,340	8.1
110	**9**.110	77.0	280	26,600	4.1

R 41/1 DC



Type 41.52 operating range vs ambient temperature.
1 - Max coil voltage permitted
2 - Min pick-up voltage with coil at ambient temperature

R 41/2 DC



Type 41.31, 41.61 operating range vs ambient temperature.
1 - Max coil voltage permitted
2 - Min pick-up voltage with coil at ambient temperature

95 Series - Sockets and Accessories for 41 Series Relays

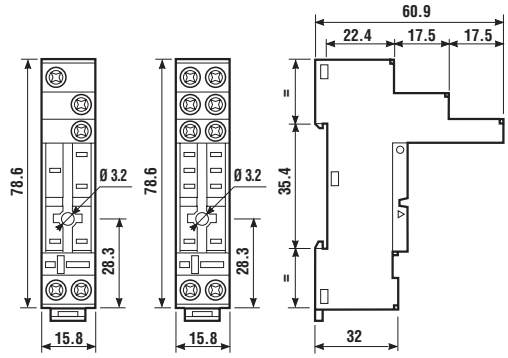

95.05

Approvals (according to type):

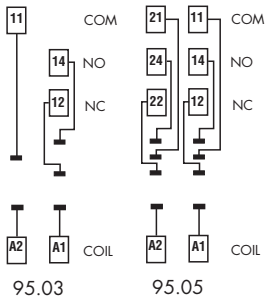
Relay type		41.31	41.52, 41.61
Clamp terminal socket: panel or 35 mm rail (EN 50022) mount	BLUE	95.03	95.05
	BLACK*	95.03.0	95.05.0
Identification tag		095.00.4	095.00.4
Modules		99.02	99.02
Timer modules		86.10, 86.20	86.10, 86.20
8-way jumper link for 95.03 and 95.05 sockets		095.18	095.18

- RATED VALUES: 10 A - 250 V
  with a current >10 A, the contact terminal must be connected in parallel (21 with 11, 24 with 14, 22 with 12)
- INSULATION: ≥ 6 kV (1.2/50μs) between coil and contacts
- PROTECTION CATEGORY: IP 20
- AMBIENT TEMPERATURE: (-40...+70) °C
- TORQUE: 0.5 Nm
- MAX WIRE SIZE:

	solid wire	flexible wire
mm²	1x6 / 2x2.5	1x4 / 2x2.5
AWG	1x10 / 2x14	1x12 / 2x14



95.03 95.05



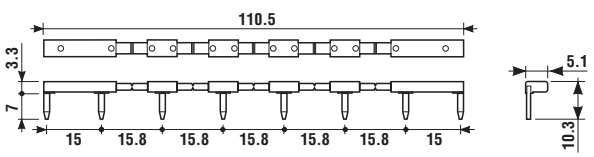
95.03 95.05


99.02

99 Series modules for 95.03 and 95.05 sockets		BLUE	BLACK*
Diode	(6...220) V DC	99.02.3.000.00	99.02.3.000.00.0
Diode (inverted polarity)	(6...220) V DC	99.02.2.000.00	99.02.2.000.00.0
LED	(6...24) V DC/AC	99.02.0.024.59	99.02.0.024.59.0
LED	(28...60) V DC/AC	99.02.0.060.59	99.02.0.060.59.0
LED	(110...240) V DC/AC	99.02.0.230.59	99.02.0.230.59.0
LED + Diode	(6...24) V DC	99.02.9.024.99	99.02.9.024.99.0
LED + Diode	(28...60) V DC	99.02.9.060.99	99.02.9.060.99.0
LED + Diode	(110...220) V DC	99.02.9.220.99	99.02.9.220.99.0
LED + Diode (inverted polarity)	(6...24) V DC	99.02.0.024.79	99.02.0.024.79.0
LED + Diode (inverted polarity)	(28...60) V DC	99.02.9.060.79	99.02.9.060.79.0
LED + Diode (inverted polarity)	(110...220) V DC	99.02.9.220.79	99.02.9.220.79.0
LED + Varistor	(6...24) V DC/AC	99.02.0.024.98	99.02.0.024.98.0
LED + Varistor	(28...60) V DC/AC	99.02.0.060.98	99.02.0.060.98.0
LED + Varistor	(110...240) V DC/AC	99.02.0.230.98	99.02.0.230.98.0
RC	(6...24) V DC/AC	99.02.0.024.09	99.02.0.024.09.0
RC	(28...60) V DC/AC	99.02.0.060.09	99.02.0.060.09.0
RC	(110...240) V DC/AC	99.02.0.230.09	99.02.0.230.09.0
No - remanence	(110...240) V AC	99.02.8.230.07	99.02.8.230.07.0


095.18

8-way jumper link for 95.03, and 95.05 sockets	095.18



- RATED VALUES: 10 A - 250 V

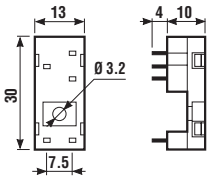
*Available on request

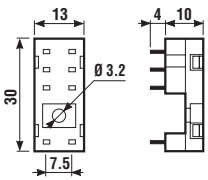
95 Series - Sockets and Accessories for 41 Series Relays

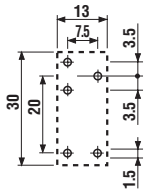

95.13


95.15

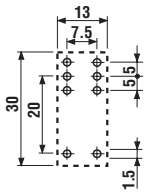
Relay type		41.31	41.52, 41.61
P.C.B. socket	BLUE	95.13	95.15
	BLACK*	95.13.0	95.15.0
Metal retaining clip		095.41	095.41
Plastic retaining clip		095.42	095.42







95.13



95.15

Approvals
(according to type):

- RATED VALUES: 10 A - 250 V
- INSULATION: ≥ 6 kV (1.2/50μs) between coil and contacts
- PROTECTION CATEGORY: IP 20
- AMBIENT TEMPERATURE: (-40...+70) °C

*Available on request