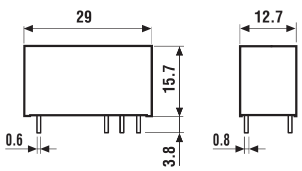
Features

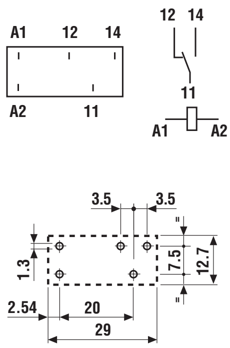
1 & 2 Pole - Low profile (15.7 mm height)
41.31 - 1 Pole 12 A (3.5 mm pin pitch)
41.52 - 2 Pole 8 A (5 mm pin pitch)
41.61 - 1 Pole 16 A (5 mm pin pitch)

PCB mount - direct or via PCB socket

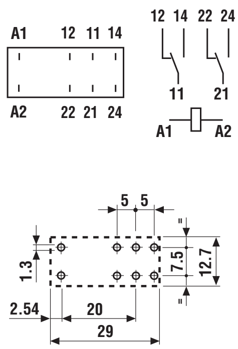
- DC coils - 400 mW
- 8 mm, 6 kV (1.2/50 µs) isolation, coil-contacts
- Cadmium Free contact materials
- Flux proof: RT II standard, (RT III option)

41.31	41.52	41.61
		
• 3.5 mm contact pin pitch • 1 Pole 12 A • PCB direct or via socket	• 5 mm contact pin pitch • 2 Pole 8 A • PCB direct or via socket	• 5 mm contact pin pitch • 1 Pole 16 A • PCB direct or via socket

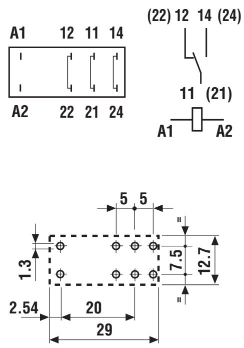




Copper side view



Copper side view



Copper side view

		41.31	41.52	41.61
Contact specification				
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 AC1	VA	3,000	2,000	4,000
Rated load AC15 (230 V AC)	VA	600	400	750
Single phase motor rating (230 V AC)	kW	0.5	0.3	0.5
Breaking capacity DC1: 30/110/220 V	A	12/0.3/0.12	8/0.3/0.12	16/0.3/0.12
Minimum switching load	mW (V/mA)	300 (5/5)	300 (5/5)	300 (5/5)
Standard contact material		AgNi	AgNi	AgNi
Coil specification				
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/DC	VA (50 Hz)/W	—/0.4	—/0.4	—/0.4
Operating range	AC	—	—	—
	DC	(0.7…1.5)U_N	(0.7…1.5)U_N	(0.7…1.5)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	—/30·10^6	—/30·10^6	—/30·10^6
Electrical life at rated load AC1	cycles	150 · 10^3	80 · 10^3	70 · 10^3
Operate/release time	ms	5/4	5/4	5/4
Insulation between coil and contacts (1.2/50 µs)	kV	6 (8 mm)	6 (8 mm)	6 (8 mm)
Dielectric strength between open contacts	V AC	1,000	1,000	1,000
Ambient temperature range	°C	–40…+85	–40…+85	–40…+85
Environmental protection		RT II	RT II	RT II
Approvals (according to type)				

Ordering information

Example: 41 series low-profile PCB relay, 2 CO (DPDT), 24 V DC coil.

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

41

Series

Type
3 = PCB - 3.5 mm pinning
5 = PCB - 5 mm pinning
6 = PCB - 5 mm pinning

No. of poles
1 = 1 pole for
41.31, 12 A
41.61, 16 A
2 = 2 pole for
41.52, 8 A

Coil version
9 = DC

Coil voltage
see coil specifications

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

B: Contact circuit
0 = CO (nPDT)
3 = NO (nPST)

C: Options
1 = None

D: Special versions
0 = Flux proof (RT II)
1 = Wash tight (RT III)

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

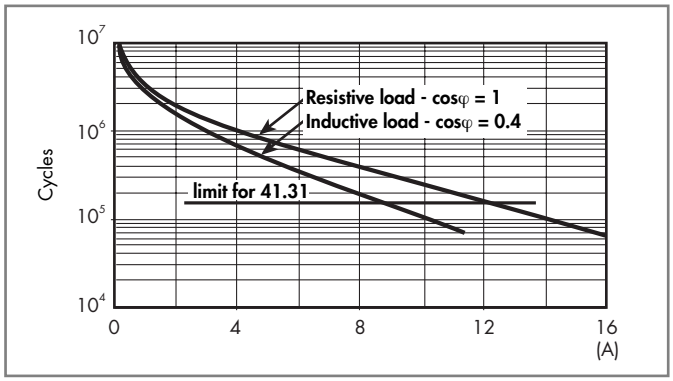
Type	Coil version	A	B	C	D
41.31	DC	**0** - 4 - 5	**0** - 3	**1**	**0** - 1
41.52	DC	**0** - 5	**0** - 3	**1**	**0** - 1
41.61	DC	**0** - 4	**0** - 3	**1**	**0** - 1

Technical data

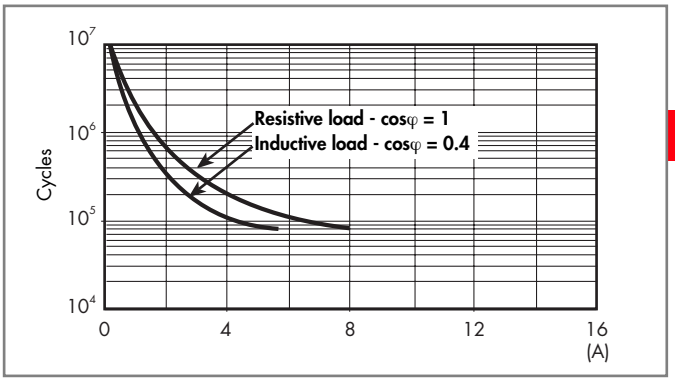
Insulation					
Insulation according to EN 61810-1 ed. 2	insulation rated voltage	V	250	400	
	rated impulse withstand voltage	kV	4	4	
	pollution degree		3	2	
	overvoltage category		III	III	
Insulation between coil and contacts (1.2/50 µs)		kV	6 (8 mm)		
Dielectric strength between open contacts		V AC	1,000		
Dielectric strength between adjacent contacts		V AC	2,000		
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	2/5		
Vibration resistance (5...55)Hz, max. ± 1 mm: NO/NC		g/g	15/2		
Shock resistance		g	16		
Power lost to 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 relays mounted on PCB		mm	≥ 5		

Contact specification

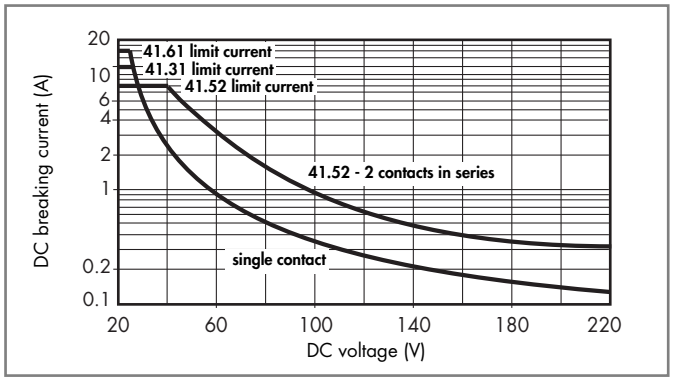
F 41 - Electrical life (AC) v contact current
Types 41.31/61



F 41 - Electrical life (AC) v contact current
Type 41.52



H 41- Maximum DC1 breaking capacity



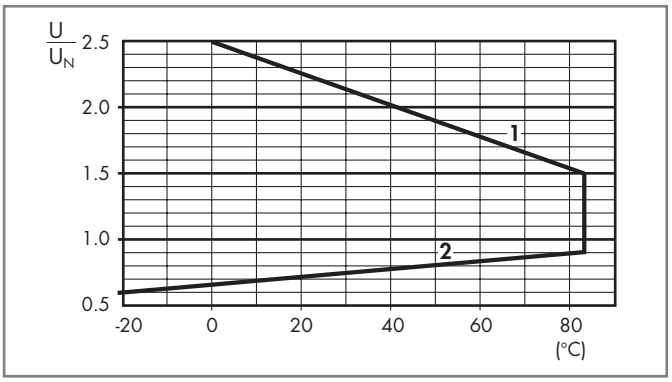
- When switching a resistive load (DC1) having voltage and current values under the curve, an electrical life of ≥ 100·10³ can be expected.
- In the case of DC13 loads, the connection of a diode in parallel with the load will permit a similar electrical life as for a DC1 load. Note: the release time for the load will be increased.

Coil specifications

DC coil data

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
12	**9**.012	8.4	18	360	33.3
24	**9**.024	16.8	36	1,440	19.7
48	**9**.048	33.6	72	5,760	8.3
60	**9**.060	42	90	9,000	6.6
110	**9**.110	77	165	24,200	4.5

R 41 - DC coil operating range v ambient temperature



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

95 Series - Sockets and accessories for 41 series relays

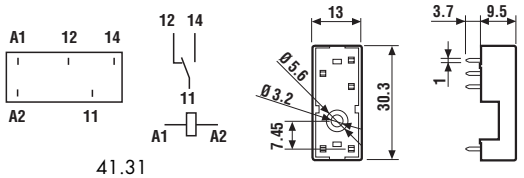

95.13.2


95.15.2

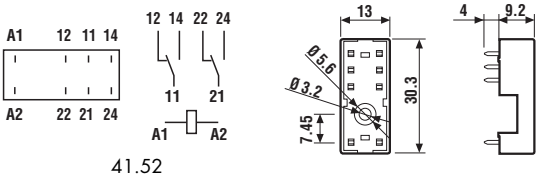
Approvals (according to type):

PCB socket	95.13.2 (blue)	95.13.20 (black)	95.15.2 (blue)	95.15.20 (black)
For relay type	41.31		41.52, 41.61	
Accessories				
Metal retaining clip (supplied with socket - packaging code SNA)	095.41.3			
Plastic retaining clip	095.42			
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			

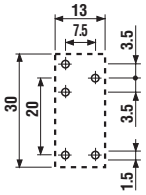
* For currents >10 A, contact terminals must be connected in parallel (21 with 11, 24 with 14, 22 with 12).



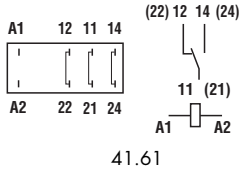
41.31



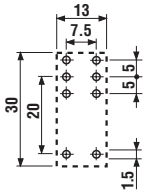
41.52



95.13.2
Copper side view



41.61



95.15.2
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:

9 5 . 1 3 . 2	S N	A

A Standard packaging

SN Metal retaining clip
SL Plastic retaining clip

9 5 . 1 3 . 2		

Without retaining clip