

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)

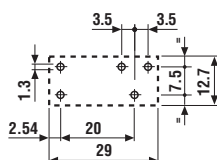
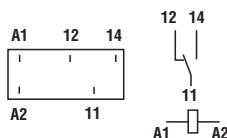
PCB mount - direct or via PCB socket

- 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



- 3.5 mm contact pin pitch
- 1 Pole 12 A
- PCB direct or via socket

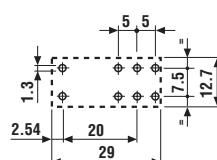
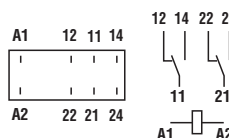


Copper side view

41.52



- 5 mm contact pin pitch
- 2 Pole 8 A
- PCB direct or via socket

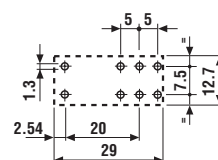
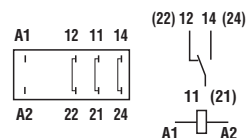


Copper side view

41.61



- 5 mm contact pin pitch
- 1 Pole 16 A
- PCB direct or via socket



Copper side view

41

Contact specification		41.31	41.52	41.61
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		41.31	41.52	41.61
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		41.31	41.52	41.61
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.

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 = AgSnO₂

5 = AgNi + Au (5 µm)

B: Contact circuit

0 = CO (nPDT)

3 = NO (nPST)

D: Special versions

0 = Flux proof (RT II)

1 = Wash tight (RT III)

C: Options

1 = None

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
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)
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Dielectric strength between open contacts	V AC	1,000
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Dielectric strength between adjacent contacts	V AC	2,000
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Conducted disturbance immunity

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

Bounce time: NO/NC	ms	2/5
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Vibration resistance (5...55)Hz, max. ± 1 mm: NO/NC	g/g	15/2
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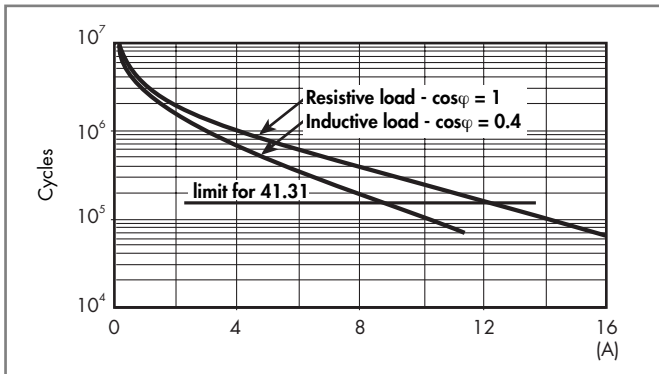
Shock resistance	g	16
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Power lost to the environment	without contact current	W	0.4		
	with rated current	W	1.7 (41.31)	1.2 (41.52)	1.8 (41.61)

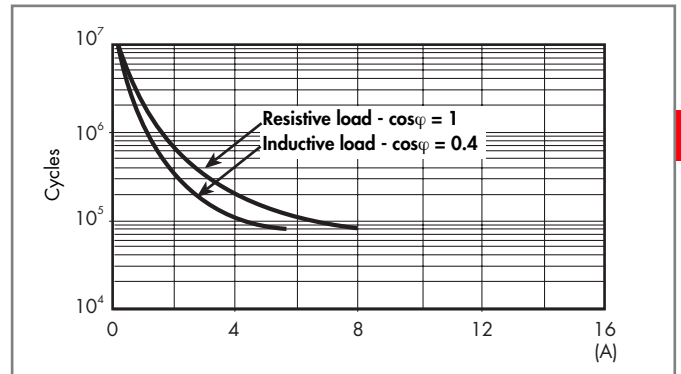
Recommended distance between relays mounted on PCB	mm	≥ 5
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Contact specification

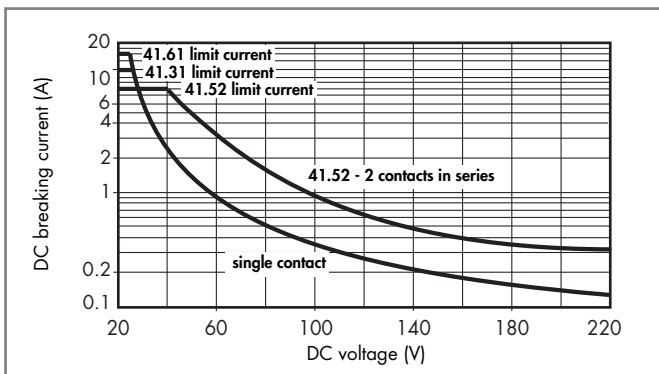
F 41 - Electrical life (AC) v contact current
Types 41.31/61



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



H 41- Maximum DC1 breaking capacity



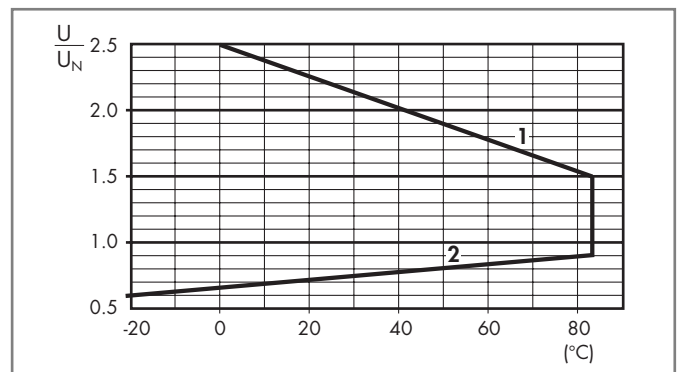
- When switching a resistive load (DC1) having voltage and current values under the curve, an electrical life of $\geq 100 \cdot 10^3$ can be expected.
- In the case of DC13 loads, the connection of a diode in parallel with the load will permit a similar electrical life as for a DC1 load.
Note: the release time for the load will be increased.

Coil specifications

DC coil data

Nominal voltage U_N	Coil code	Operating range		Resistance	Rated coil consumption I at U_N
V		U_{min} V	U_{max} V	R 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



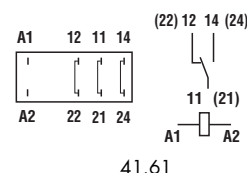
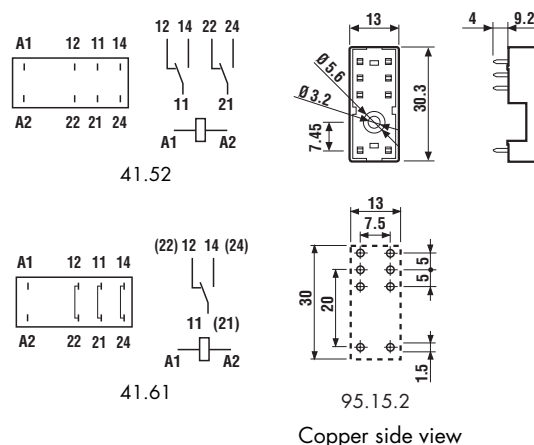
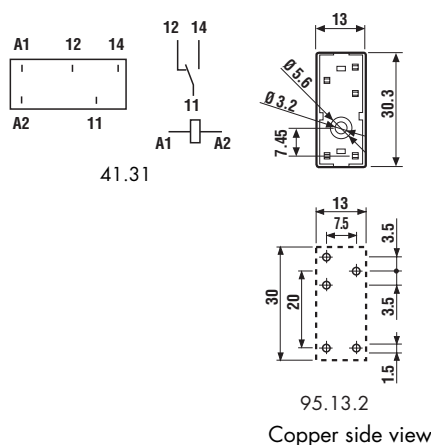
- 1 - Max. permitted coil voltage.
2 - Min. pick-up voltage with coil at ambient temperature.



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).

Approvals
(according to type):



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