

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 μ s) isolation, coil-contacts
- Cadmium Free contact materials
- Flux proof: RT II standard, (RT III option)

	41.31	41.52	41.61
	<ul style="list-style-type: none"> • 3.5 mm contact pin pitch • 1 Pole 12 A • PCB direct or via socket 	<ul style="list-style-type: none"> • 5 mm contact pin pitch • 2 Pole 8 A • PCB direct or via socket 	<ul style="list-style-type: none"> • 5 mm contact pin pitch • 1 Pole 16 A • PCB direct or via socket
	<p>Copper side view</p>	<p>Copper side view</p>	<p>Copper side view</p>
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
Rated power AC/DC VA (50 Hz)/W	—/0.4	—/0.4	—/0.4
Operating range	AC	—	—
	DC	$(0.7 \dots 1.5)U_N$	$(0.7 \dots 1.5)U_N$
Holding voltage AC/DC	$—/0.4U_N$	$—/0.4U_N$	$—/0.4U_N$
Must drop-out voltage AC/DC	$—/0.1U_N$	$—/0.1U_N$	$—/0.1U_N$
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 ms	5/4	5/4	5/4
Insulation between coil and contacts (1.2/50 μ s) 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 $^{\circ}$ C	$-40 \dots +85$	$-40 \dots +85$	$-40 \dots +85$
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 . **5** . **2** . **9** . **0 2 4** . **0** **0** **1** **0**

- 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)
- 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 availability are shown in **bold**.

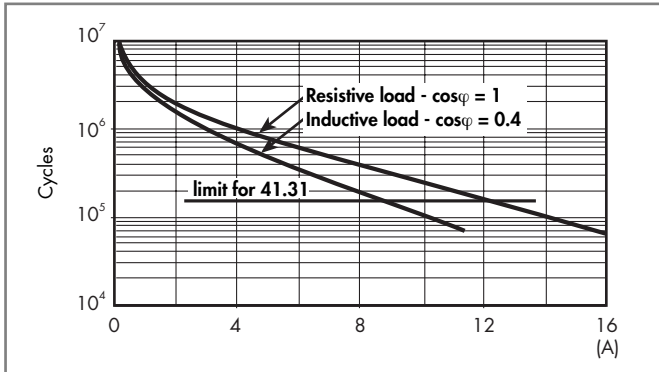
Type	Coil version	A	B	C	D
41.31	DC	0 - 4 - 5	0 - 3	1	0 - 1
41.52	DC	0 - 5	0 - 3	1	0 - 1
41.61	DC	0 - 4	0 - 3	1	0 - 1

Technical data

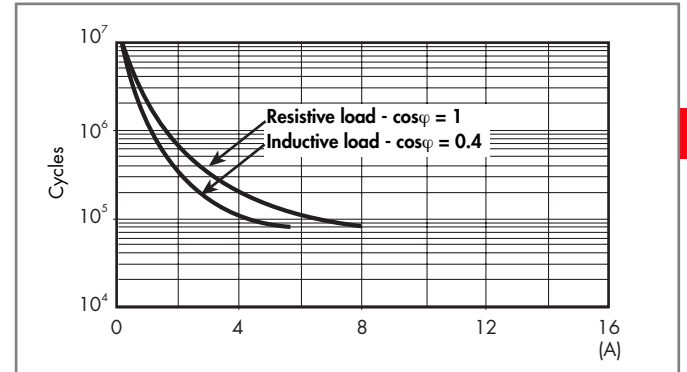
Insulation				
Insulation according to EN 61810-1 ed. 2	insulation rated voltage	V	250	400
	rated impulse withstand voltage	kV	4	4
	pollution degree		3	2
	overvoltage category		III	III
Insulation between coil and contacts (1.2/50 µs)		kV	6 (8 mm)	
Dielectric strength between open contacts		V AC	1,000	
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

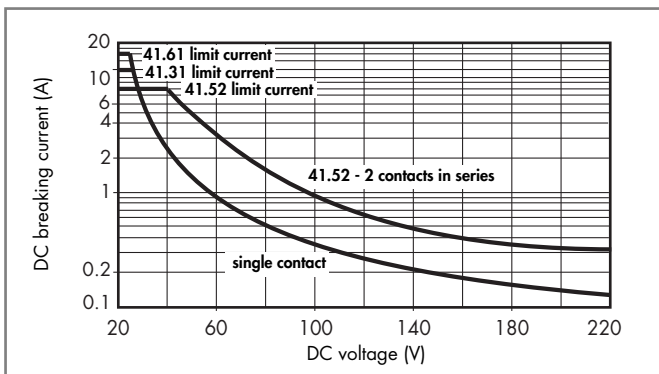


F 41 - Electrical life (AC) v contact current
Type 41.52



41

H 41- Maximum DC1 breaking capacity



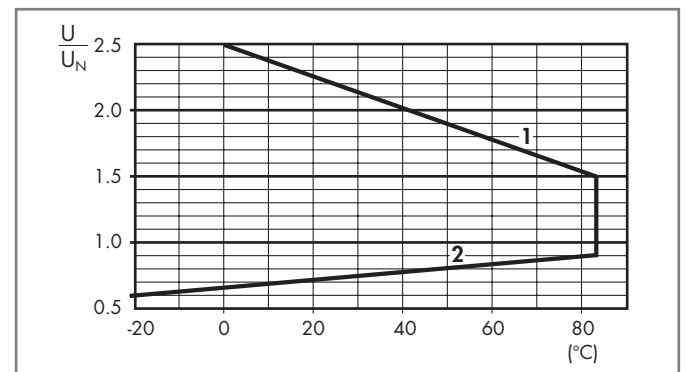
- When switching a resistive load (DC1) having voltage and current values under the curve, an electrical life of $\geq 100 \cdot 10^3$ can be expected.
- In the case of DC13 loads, the connection of a diode in parallel with the load will permit a similar electrical life as for a DC1 load. Note: the release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

Coil specifications

DC coil data

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

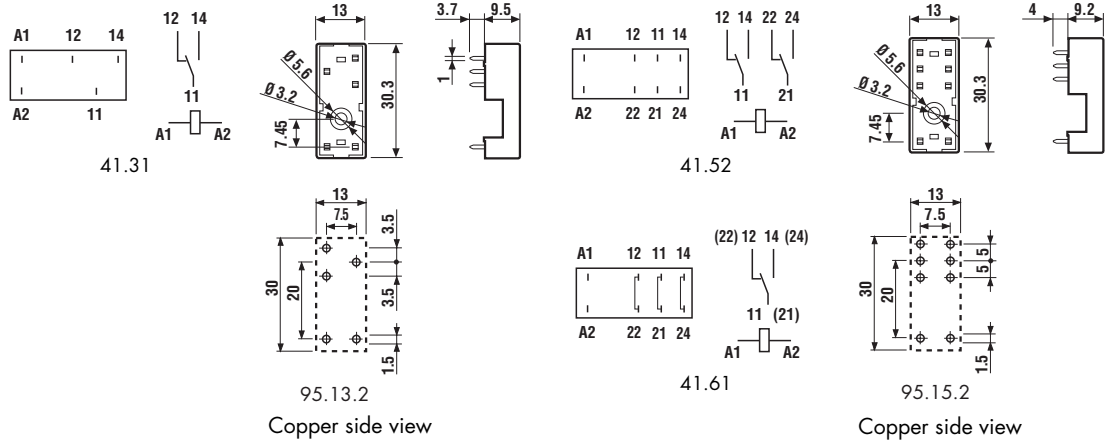


PCB socket	95.13.2 (blue)	95.13.20 (black)	95.15.2 (blue)	95.15.20 (black)
For relay type	41.31		41.52, 41.61	
Accessories				
Metal retaining clip (supplied with socket - packaging code SNA)	095.41.3			
Plastic retaining clip	095.42			
Technical data				
Rated values	10 A - 250 V *			
Insulation	≥ 6 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).

41

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:



A Standard packaging

SN Metal retaining clip

SL Plastic retaining clip



Without retaining clip