

- Low-profile, only 15.7 mm high
- DC coil versions 0.4 W
- 8 mm, 6 kV(1.2/50 μs) between coil and contacts
- Ambient temperature +85°C
- Sockets and accessories: see 95 and 99 series

41

41.31

41.52

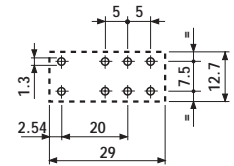
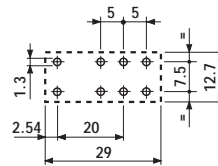
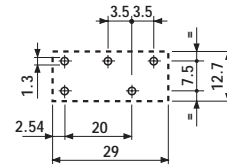
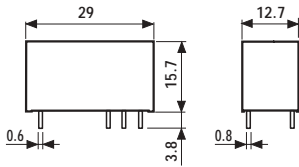
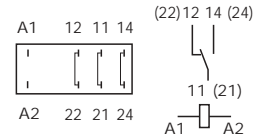
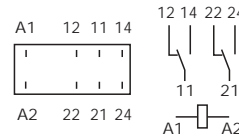
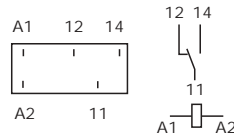
41.61



- 1 pole, 12 A
- low profile, 3.5 mm pinning
- P.C.B. / for use with 95 series sockets

- 2 pole, 8 A
- low profile, 5 mm pinning
- P.C.B. / for use with 95 series sockets

- 1 pole, 16 A
- low profile, 5 mm pinning
- P.C.B. / for use with 95 series sockets



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

Copper side view

Copper side view

Copper side view

Contact specifications				
Contact configuration		1 CO	2 CO	1 CO
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	0.5	0.3	0.5
Breaking capacity in DC1: 30/110/220V	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 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/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 according to EN 61810-5		4 kV/3	4 kV/3	4 kV/3
Insulation between coil and contacts (1.2/50μs)	kV	6 (8mm)	6 (8mm)	6 (8mm)
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: a 41 series low-profile P.C.B. relay with 2 CO contacts, with coil rated 24 V DC.

Series ——— 4 1 . 5 2 . 9 . 0 2 4 . 0 0 1 0

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 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

B: Contact circuit
0 = CO
3 = NO

C: Options
1 = None

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

Only combinations in the same row are possible

Preferred versions

	coil version	A	B	C	D
41.31/52/ 61	DC	0	0	1	0

All versions

	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

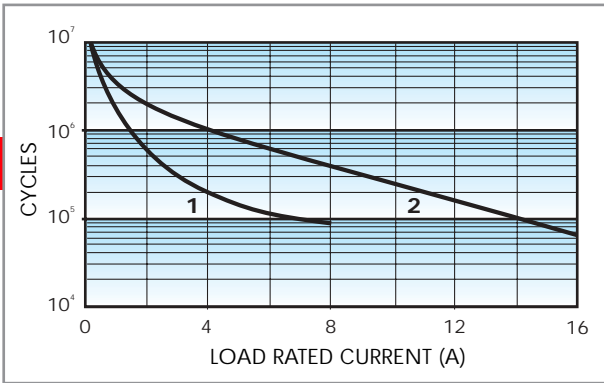
INSULATION according to EN 61810-5	insulation rated voltage	V	250
	rated impulse withstand voltage	kV	4
	pollution degree		3
	overvoltage category		III

OTHER DATA

BOUNCE TIME: NO/NC	ms	2/5	
VIBRATION RESISTANCE (10...55Hz): NO/NC	g/g	20/5	
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 P.C.B.s	mm	≥5	

CONTACT SPECIFICATIONS

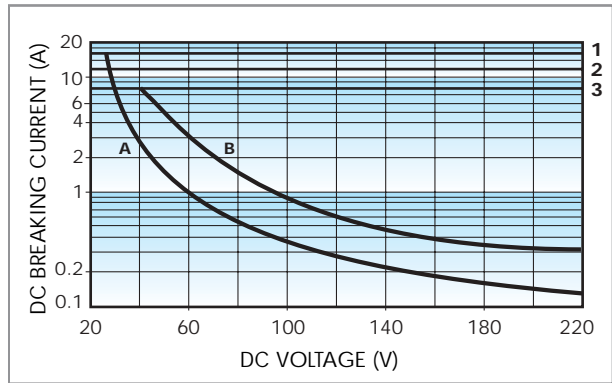
F 41



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

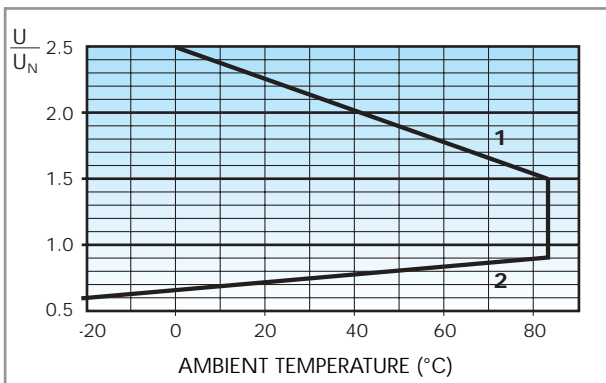
- When switching a resistive load (DC1) having voltage and current values under the curve the expected electrical life is $\geq 100 \cdot 10^3$ cycles.
 - In case of DC13 loads the connection of a diode in parallel with the load will permit the same electrical life as for a DC1 load.
- Note:** the release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

COIL SPECIFICATIONS

DC VERSION DATA

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



Operating range vs ambient temperature.

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

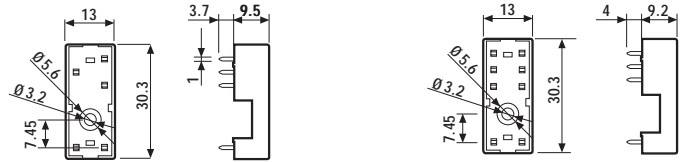


Approvals
(according to type):



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

Relay type	41.31		41.52, 41.61	
Colour	BLUE	BLACK	BLUE	BLACK
P.C.B. socket	95.13.2	95.13.20	95.15.2	95.15.20
retaining clip 095.41 supplied with socket packaging code SNA				
Metal retaining clip	095.41			
Plastic retaining clip	095.42			



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 Low profile metal retaining clip
SL Low profile plastic retaining clip
SX No retaining clip