

- Low-profile, only 15.7 mm high
- DC coil 400 mW
- 8 mm, 6 kV (1.2/50 μ s) between coil and contacts
- Ambient temperature + 85 °C
- Sockets and accessories: see 95 and 99 series

	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
	Copper side view	Copper side view	Copper side view
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 V AC) VA	600	400	750
Single phase motor rating (230 V AC) kW	0.5	0.3	0.5
Breaking capacity in 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 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 61810-1 ed. 2	4 kV/3	4 kV/3	4 kV/3
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 °C	−40...+85	−40...+85	−40...+85
Environmental protection	RT II	RT II	RT II
Approvals: (according to type)		GOST	cRU [®] US

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

ORDERING INFORMATION

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

41.52.9024.0010

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 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 (nPDT)
 3 = NO (nPST)

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

C: Options
 1 = None

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 61810-1 ed. 2	insulation rated voltage	V	250
	rated impulse withstand voltage	kV	4
	pollution degree		3
	overvoltage category		III
Dielectric strength between adjacent contacts	V AC	2,000	

CONDUCTED DISTURBANCE IMMUNITY

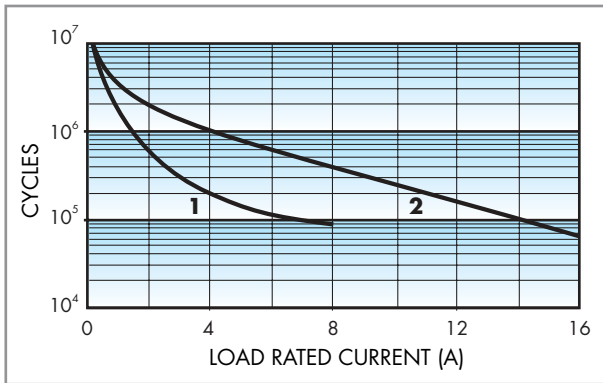
Burst (5...50)ns, 5 kHz, on A1 - A2	EN 61000-4-4	level 4 (4 kV)
Surge (1.2/50 μs) on A1 - A2 (differential mode)	EN 61000-4-5	level 3 (2 kV)

OTHER DATA

Bounce time: NO/NC	ms	2/5		
Vibration resistance (10...55)Hz, max. ± 1 mm: 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

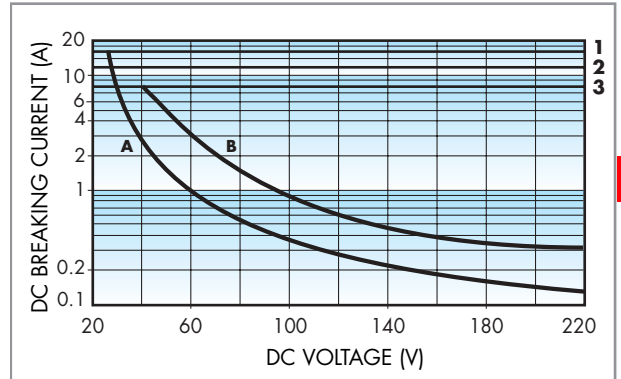
F 41



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

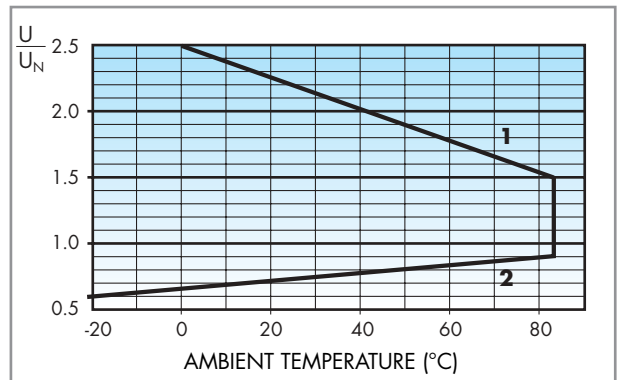
- When switching a resistive load (DC1) having voltage and current values under the curve the expected electrical life is $\geq 100 \cdot 10^3$ cycles.
 - In case of DC13 loads the connection of a diode in parallel with the load will permit the same electrical life as for a DC1 load.
- Note:** the release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

COIL SPECIFICATIONS

DC VERSION DATA

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



Operating range vs ambient temperature.

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



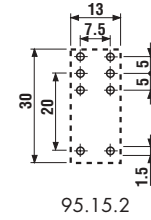
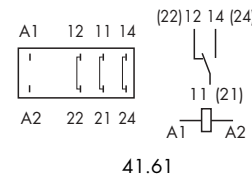
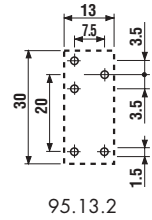
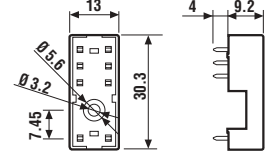
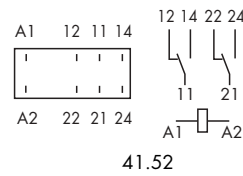
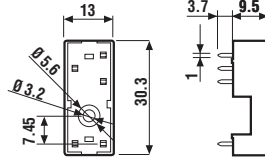
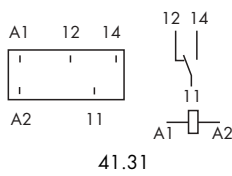
Relay type	41.31		41.52, 41.61	
Colour	BLUE	BLACK	BLUE	BLACK
P.C.B. socket retaining clip 095.41 supplied with socket packaging code SNA	95.13.2	95.13.20	95.15.2	95.15.20
Metal retaining clip	095.41			
Plastic retaining clip	095.42			

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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) $^{\circ}$ C



Copper side view

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 S N A

A Standard packaging

SN Metal retaining clip
SL Plastic retaining clip

9 5 . 1 3 [] []

Without retaining clip