

Low profile PCB relays 10 – 16 A



Medical and
dentistry



Alarm systems



Air conditioners



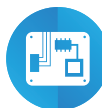
Burners,
boilers and
furnaces



Electric and
electronic toys
and games



Door and
gate openers



Electronic circuit
boards



Vending
machines



1 Pole - Low profile (15.4 mm height)

Type 43.41

- 1 Pole, 10 A (3.2 mm pin pitch)

Type 43.41-0300

- 1 Pole NO, 10 A (5 mm pin pitch)

Type 43.61-0300

- 1 Pole NO, 16 A (5 mm pin pitch)

PCB mount - direct or via PCB socket (43.41 version)

- Sensitive DC coil:
 - 250 mW (10 A version)
 - 400 mW (16 A version)
- Very high coil-contact isolation 10 mm, 6 kV (1.2/50 µs)
- Cadmium Free contacts (preferred version)
- Flux proof: RT II standard, (RT III option)

For UL RATINGS SEE:

"General technical information" page V

For outline drawing see page 5

Contact specification

Contact configuration		1 CO (SPDT)	1 NO (SPST-NO)	1 NO (SPST-NO)
Rated current/Maximum peak current	A	10/15	10/15	16/25
Rated voltage/Maximum switching voltage	V AC	250/400	250/400	250/400
Rated load AC1	VA	2500	2500	4000
Rated load AC15 (230 V AC)	VA	500	500	750
Single phase motor rating (230 V AC)	kW	—	—	—
Breaking capacity DC1: 24/110/220 V	A	10/0.3/0.12	10/0.3/0.12	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	3 - 6 - 9 - 12 - 18 - 24 - 36 - 48	3 - 6 - 9 - 12 - 18 - 24 - 36 - 48	12 - 24 - 48
Rated power AC/DC	VA (50 Hz)/W	—/0.25	—/0.25	—/0.4
Operating range	AC	—	—	—
	DC	(0.7...1.5)U _N	(0.7...1.5)U _N	(0.7...1.2)U _N
Holding voltage	AC/DC	—/0.4 U _N	—/0.4 U _N	—/0.4 U _N
Must drop-out voltage	AC/DC	—/0.05 U _N	—/0.05 U _N	—/0.05 U _N

Technical data

Mechanical life AC/DC	cycles	—/10 · 10 ⁶	—/10 · 10 ⁶	—/10 · 10 ⁶
Electrical life at rated load AC1	cycles	100 · 10 ³	100 · 10 ³	50 · 10 ³
Operate/release time	ms	6/4	6/2	6/2
Insulation between coil and contacts (1.2/50 µs)	kV	6 (10 mm)	6 (10 mm)	6 (10 mm)
Dielectric strength between open contacts	V AC	1000	1000	1000
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: 43 series low-profile PCB relay, 1 CO (SPDT), 24 V DC coil.

A

Series

Type

4 = PCB - 3.2 mm pinning
(CO/SPDT, 10 A)
PCB - 5 mm pinning
(NO/SPST-NO, 10 A)
6 = PCB - 5 mm pinning
(NO/SPST-NO, 16 A)

No. of poles

1 = 1 pole

Coil version

7 = Sensitive DC (only for 43.41)
9 = DC (only for 43.61)

Coil voltage

See coil specifications

A: Contact material

0 = AgNi
2 = AgCdO
4 = AgSnO₂
5 = AgNi + Au

B: Contact circuit

0 = CO (SPDT) - (for 43.41 only)
3 = NO (SPST)

D: Special versions

0 = Flux proof (RT II)
1 = Wash tight (RT III)

- **C: Options**

0 = 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
43.41	sensitive DC	0 - 2 - 4 - 5	0 - 3	0	0 - 1
43.61	DC	0 - 2 - 4	3	0	0

Technical data

Insulation according to EN 61810-1

Nominal voltage of supply system	V AC	230/400	
Rated insulation voltage	V AC	250	400
Pollution degree		3	2

Insulation between coil and contact set

Type of insulation	Reinforced (10 mm)
Overvoltage category	III
Rated impulse voltage	kV (1.2/50 μs) 6
Dielectric strength	V AC 4000

Insulation between open contacts

Type of disconnection	Micro-disconnection
Dielectric strength	V AC/kV (1.2/50 μ s) 1000/1.5

Insulation between coil terminals

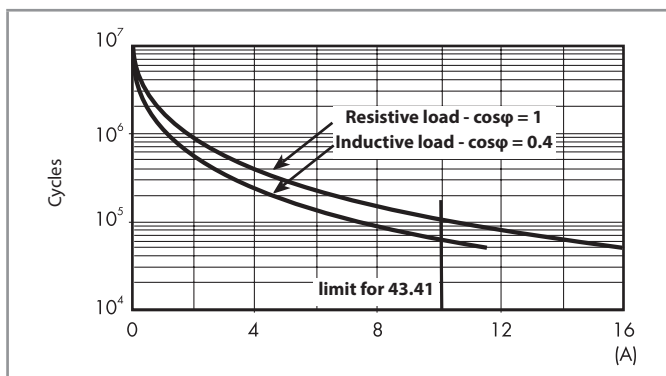
Rated impulse voltage (surge) differential mode (according to EN 61000-4-5)	kV (1.2/50 µs)	2
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Other data

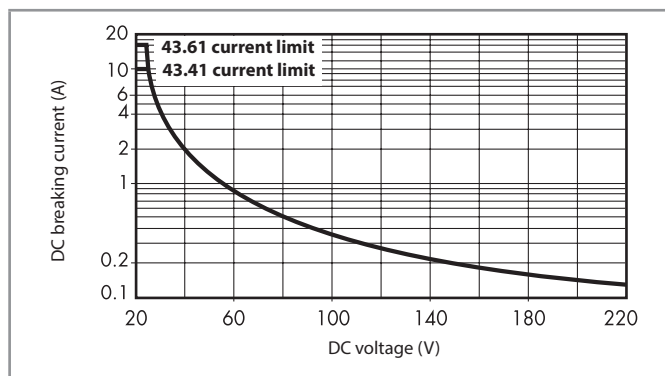
Bounce time: NO/NC		ms	3/6	
Vibration resistance (5...55)Hz: NO/NC		g	15/3	
Shock resistance		g	15	
Power lost to the environment	without contact current	W	0.25 (43.41)	0.4 (43.61)
	with rated current	W	1.3 (43.41)	2 (43.61)
Recommended distance between relays mounted on PCB		mm	≥ 5	

Contact specification

F 43 - Electrical life (AC) v contact current



H 43 - Maximum DC1 breaking capacity



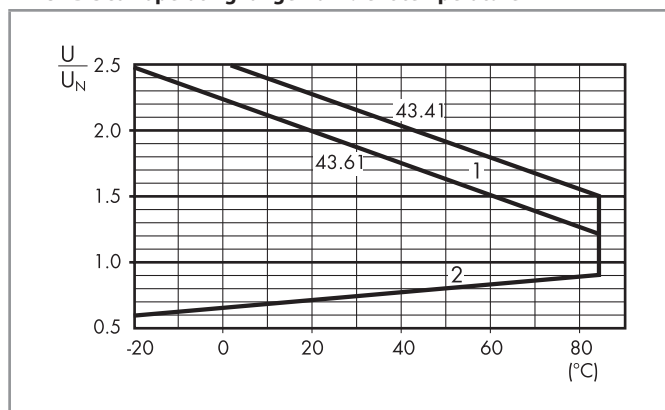
- When switching a resistive load (DC1) having voltage and current values under the curve, an electrical life of $\geq 100 \cdot 10^3$ for 43.41 and $\geq 50 \cdot 10^3$ for 43.61 can be expected.
- In the case of DC13 loads, the connection of a diode in parallel with the load will permit a similar electrical life as for a DC1 load.
Note: the release time for the load will be increased.

Coil specifications

DC coil data - 0.25 W sensitive (type 43.41)

Nominal voltage U_N	Coil code	Operating range		Resistance	Rated coil consumption
V		U_{min}	U_{max}	R	I at U_N
V		V	V	Ω	mA
3	7.003	2.2	4.5	36	83.5
6	7.006	4.2	9	150	40
9	7.009	6.5	13.5	324	27.7
12	7.012	8.4	18	580	20.7
18	7.018	13	27	1300	13.8
24	7.024	16.8	36	2200	10.9
36	7.036	25.2	54	5200	6.9
48	7.048	33.6	72	9200	5.2

R 43 - DC coil operating range v ambient temperature



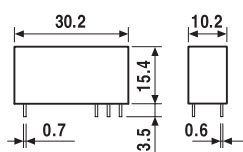
- 1 - Max. permitted coil voltage.
- 2 - Min. pick-up voltage with coil at ambient temperature.

DC coil data - 0.4 W standard (type 43.61)

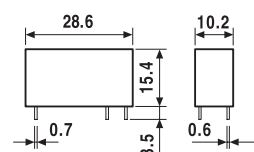
Nominal voltage U_N	Coil code	Operating range		Resistance	Rated coil consumption
V		U_{min}	U_{max}	R	I at U_N
V		V	V	Ω	mA
12	9.012	8.4	14.4	360	33.3
24	9.024	16.8	28.8	1400	17.1
48	9.048	33.6	57.6	5760	8.3

Outline drawings

Type 43.41



Types 43.41-0300/43.61-0300





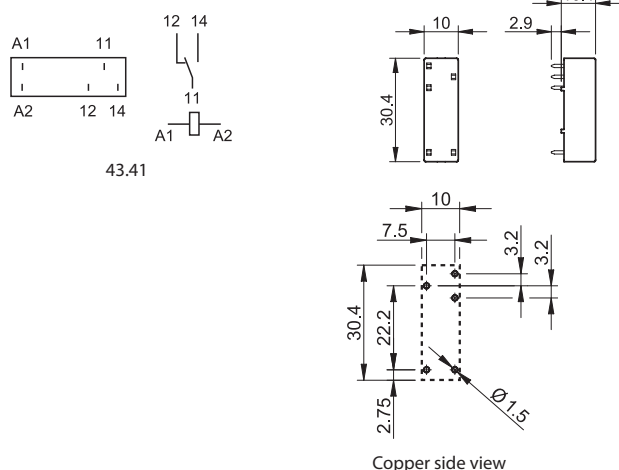
A

95.23

Approvals
(according to type):



PCB socket (for changeover contacts only)		95.23 (blue)	95.23.0 (black)
For relay type		43.41	43.41
Accessories			
Metal retaining clip (supplied with socket - packaging code SNA)			095.43
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	



Packaging codes

How to code and identify retaining clip and packaging options for sockets.

Example:

