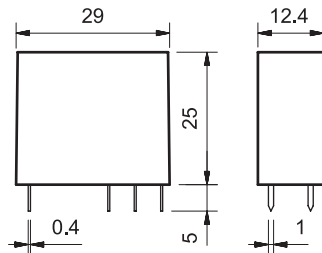


PCB Relay with forcibly guided contacts according to EN 50205 type B 2 CO contacts*

- High physical separation between adjacent contacts
- Cadmium Free contact materials
- 8 mm, 6 kV (1.2/50 μ s) isolation, coil-contacts
- Flux proof: RT II



* According to EN 50205 only 1 NO and 1 NC (11-14 and 21-22 or 11-12 and 21-24) shall be used as forcibly guided contacts.

For UL RATINGS SEE:

"General technical information" page V

Contact specification

Contact configuration	
Rated current/Maximum peak current	A
Rated voltage/ Maximum switching voltage	V AC
Rated load AC1	VA
Rated load AC15 (230 V AC)	VA
Single phase motor rating (230 V AC)	kW
Breaking capacity DC1: 30/110/220 V	A
Minimum switching load	mW (V/mA)
Standard contact material	

Coil specification

Nominal voltage (U_N)	V AC (50/60 Hz)
	V DC
Rated power AC/DC	VA (50 Hz)/W
Operating range	AC (50 Hz)
	DC
Holding voltage	AC/DC
Must drop-out voltage	AC/DC

Technical data

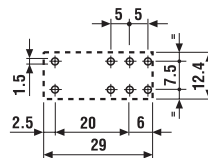
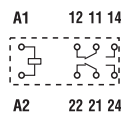
Mechanical life AC/DC	cycles
Electrical life at rated load AC1	cycles
Operate/release time	ms
Insulation between coil and contacts (1.2/50 μ s)	kV
Dielectric strength between open contacts	V AC
Ambient temperature range	°C
Environmental protection	

Approvals (according to type)

50.12...1000



- For medium duty switching, suggested for DC loads
- 2 Pole 8 A
- 5 mm pinning
- PCB mounting

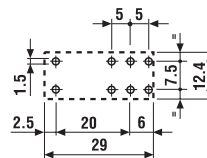
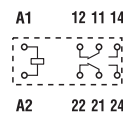


Copper side view

50.12...5000



- For safety applications
- Gold plate contacts for low level switching capability
- 5 mm pinning
- PCB mounting



Copper side view

2 CO (DPDT)

8/15

250/400

2000

500

0.37

8/0.65/0.2

500 (10/10)

AgNi

2 CO (DPDT)

8/15

250/400

2000

500

0.37

8/0.65/0.2

50 (5/5)

AgNi + Au

5 - 6 - 12 - 24 - 48 - 60 - 110 - 125

—/0.7

—

(0.75...1.2) U_N

—/0.4 U_N

—/0.1 U_N

(0.75...1.2) U_N

—/0.4 U_N

—/0.1 U_N

—/10 · 10⁶

100 · 10³

10/4

6 (8 mm)

1500

—40...+70

RT II

—/10 · 10⁶

100 · 10³

10/4

6 (8 mm)

1500

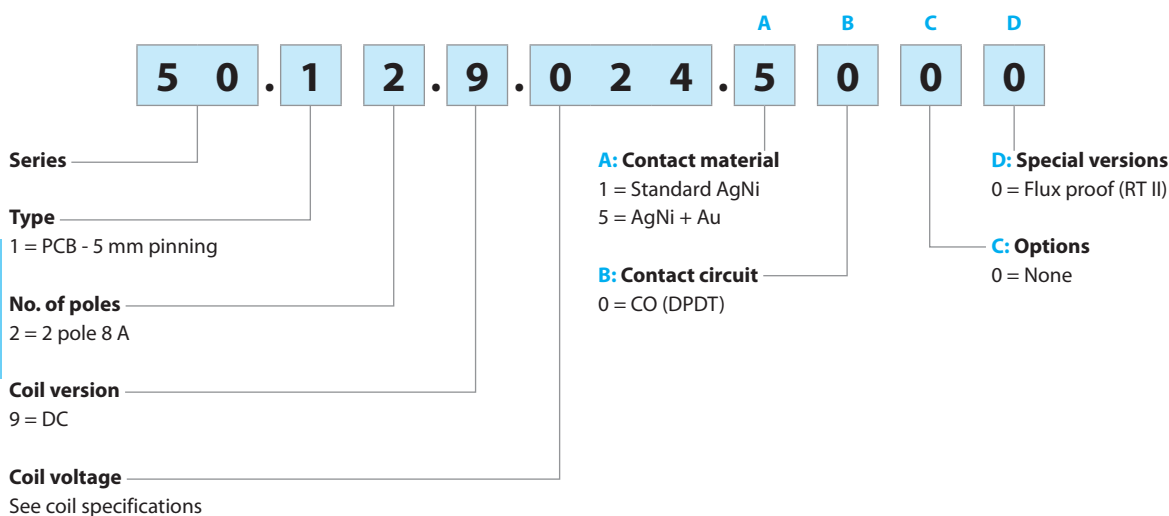
—40...+70

RT II



Ordering information

Example: 50 series forcibly guided contacts, 2 CO (DPDT) 8 A contacts, 24 V DC coil.



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
50.12	DC	1 - 5	0	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 (8 mm)
Overvoltage category		III
Rated impulse voltage	kV (1.2/50 µs)	6
Dielectric strength	V AC	4000

Insulation between adjacent contacts

Type of insulation		Basic
Overvoltage category		III
Rated impulse voltage	kV (1.2/50 µs)	4
Dielectric strength	V AC	3000

Insulation between open contacts

Type of disconnection		Micro-disconnection
Dielectric strength	V AC/kV (1.2/50 µs)	1500/2.5

Conducted disturbance immunity

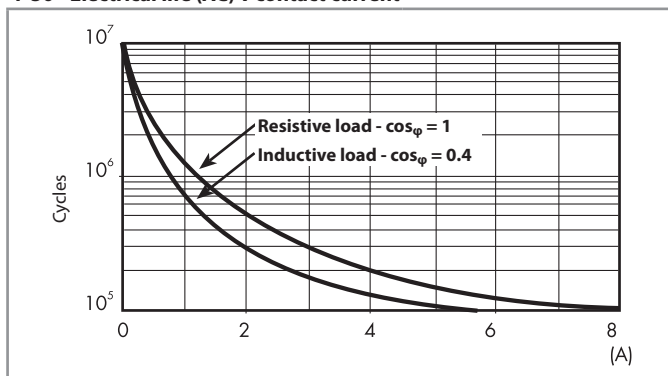
Burst (5...50)ns, 5 kHz, on A1 - A2 according to EN 61000-4-4		level 4 (4 kV)
Surge (1.2/50 µs) on A1 - A2 (differential mode) according to EN 61000-4-5		level 3 (2 kV)

Other data

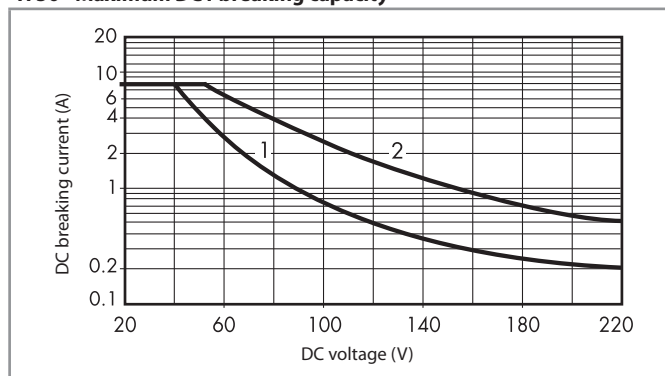
Bounce time: NO/NC	ms	2/10
Vibration resistance (10...200)Hz: NO/NC	g	20/6
Shock resistance NO/NC	g	20/5
Power lost to the environment	without contact current	W 0.7
	with rated current	W 1.2
Recommended distance between relays mounted on PCB	mm	≥ 5

Contact specification

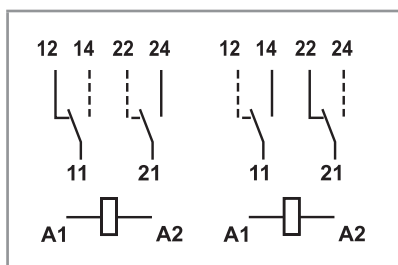
F 50 - Electrical life (AC) v contact current



H 50 - 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.



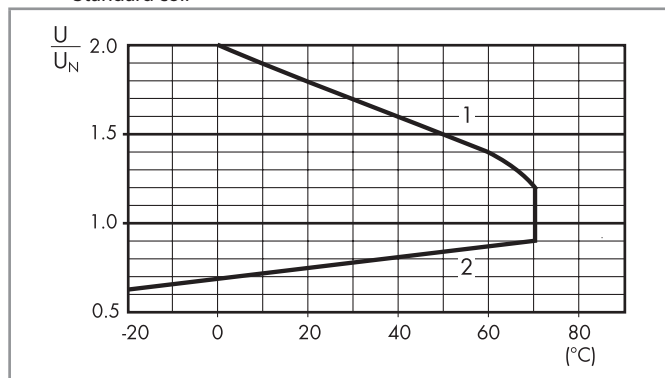
Alternative selection of NO and NC contacts to provide Forcibly guided (mechanically linked) contacts, in accordance with EN 50205 (type B).

Coil specifications

DC coil data

Nominal voltage U_N	Coil code	Operating range		Resistance	Rated coil consumption
V		U_{min}	U_{max}	R	I at U_N
		V	V	Ω	mA
5	9.005	3.8	6	35	143
6	9.006	4.5	7.2	50	120
12	9.012	9	14.4	205	58.5
24	9.024	18	28.8	820	29.3
48	9.048	36	57.6	3280	14.4
60	9.060	45	72	5140	11.7
110	9.110	82.5	131	17250	6.4
125	9.125	93.7	150	22300	5.6

R 50 - DC coil operating range v ambient temperature
Standard coil



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

