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RM50
miniature relays



- Small dimensions
- Switching current up to 10 A / 15 A
- The plastics applied provide for the operation of the relays at high temperature and in chemical environment
- Sealed, for soldering
- Applications: for household equipment, office machines, audio equipment, coffee machines, control devices, etc.
- Recognitions, certifications, directives: RoHS,

Contact data

Number and type of contacts		1 CO, 1 NO
Contact material		**$AgSnO_2$**
Rated / max. switching voltage	AC	240 V / 277 V
Min. switching voltage		5 V
Rated load	AC1	10 A / 240 V AC
	DC1	15 A / 24 V DC
Min. switching current		15 mA
Rated current		12 A
Max. breaking capacity	AC1	3 000 VA
Min. breaking capacity		0,75 W
Contact resistance		≤ 100 mΩ

Coil data

Rated voltage	DC	3 ... 48 V
Must release voltage		DC: ≥ 0,05 U_n
Operating range of supply voltage		see Table 1
Rated power consumption	DC	0,36 W 3 ... 24 V 0,45 W 48 V

Insulation according to PN-EN 60664-1

Dielectric strength		
• between coil and contacts		1 000 V AC type of insulation: basic
• contact clearance		500 V AC type of clearance: micro-disconnection
Contact - coil distance		
• clearance		≥ 1,9 mm
• creepage		≥ 1,9 mm

General data

Operating / release time (typical values)		10 ms / 5 ms
Electrical life (number of cycles)		
• resistive AC1	1 200 cycles/hour	> 10^5 7 A, 250 V AC
• resistive AC1	1 200 cycles/hour	> 3 x 10^4 12 A, 250 V AC
• resistive DC1	1 200 cycles/hour	> 5 x 10^4 15 A, 24 V DC
Mechanical life	18 000 cycles/hour	> 10^7
Dimensions (L x W x H)		19 x 15,4 x 15,5 mm
Weight		11 g
Ambient temperature	• operating	-30...+55 °C
Cover protection category		IP 64 PN-EN 60529
Shock resistance		10 g
Vibration resistance		1,5 mm DA (constant amplitude) 10...55 Hz
Solder bath temperature		max. 235 °C
Soldering time		max. 3,5 s

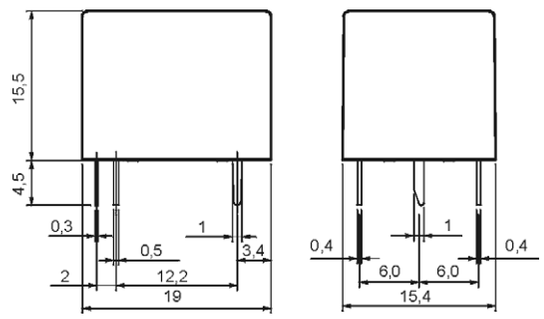
The data in bold type pertain to the standard versions of the relays.

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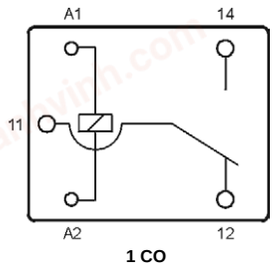
Coil data - DC voltage version — Table 1

Coil code	Rated voltage V DC	Coil resistance at 20 °C Ω	Acceptable resistance	Coil operating range V DC	
				min. (at 20 °C)	max. (at 20 °C)
1003	3	25	± 10%	2,25	3,9
1005	5	70	± 10%	3,75	6,5
1006	6	100	± 10%	4,50	7,8
1009	9	225	± 10%	6,75	11,7
1012	12	400	± 10%	9,00	15,6
1018	18	900	± 10%	13,50	23,4
1024	24	1 600	± 10%	18,00	31,2
1048	48	6 400	± 10%	38,40	62,4

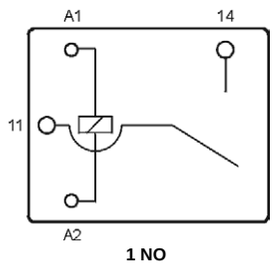
Dimensions



Connection diagrams (pin side view)

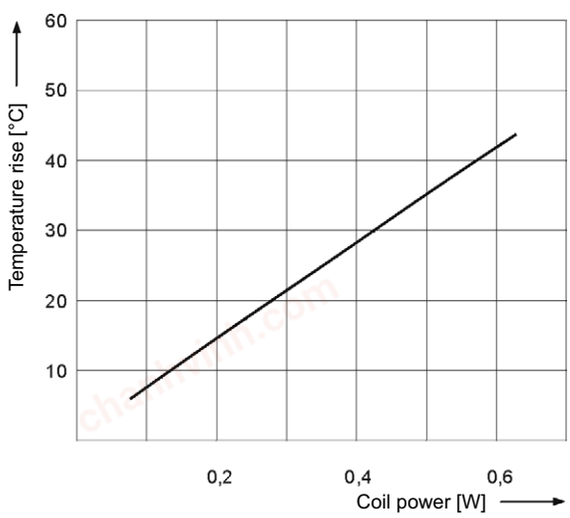


1 CO

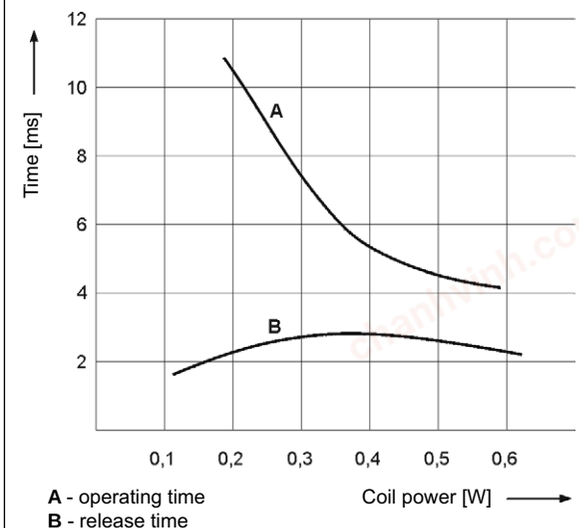


1 NO

Coil temperature rise — Fig. 1



Operating / release time — Fig. 2



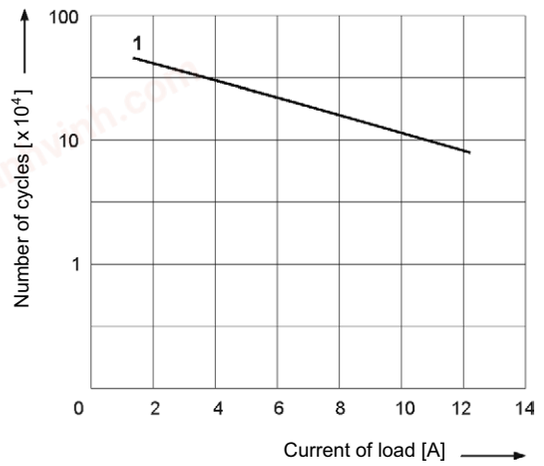
A - operating time
B - release time

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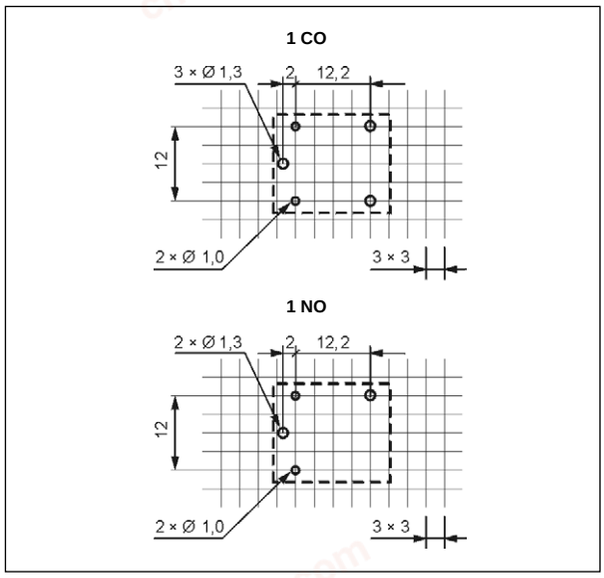
Electrical life

Fig. 3



1 - resistive load 120 V AC / 24 V DC

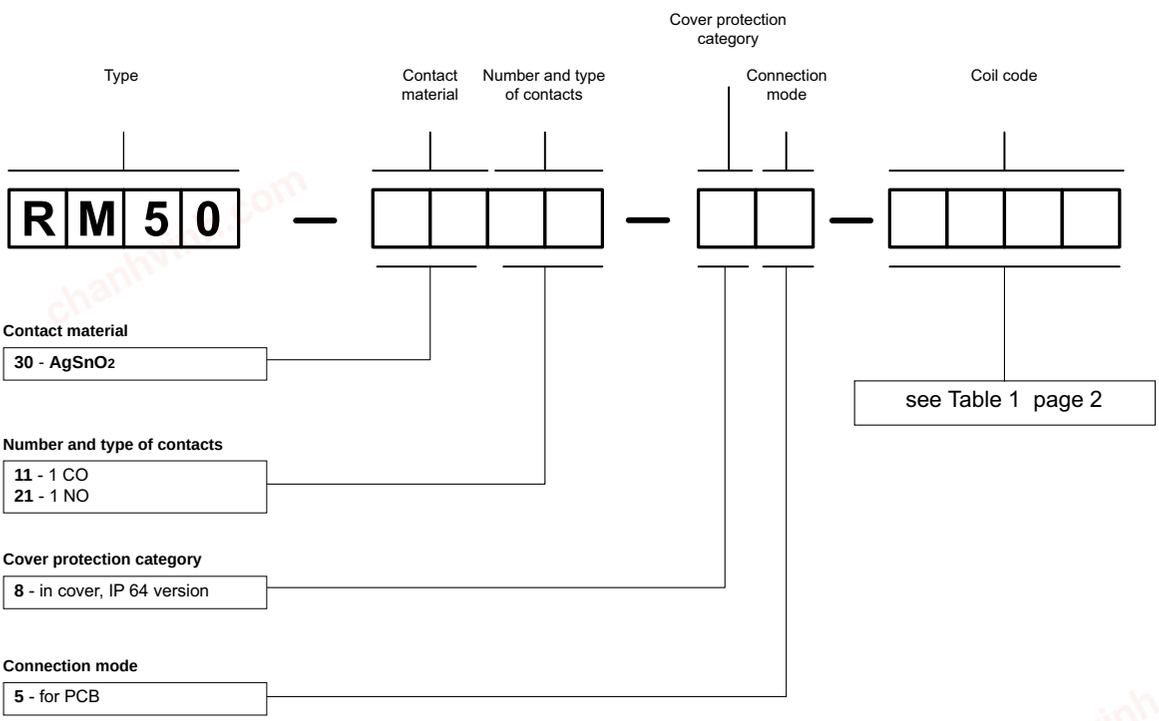
Pinout (solder side view)



Mounting

Relays **RM50** are designed for direct PCB mounting.

Ordering codes



Contact material

30 - $AgSnO_2$

Number and type of contacts

11 - 1 CO
21 - 1 NO

Cover protection category

8 - in cover, IP 64 version

Connection mode

5 - for PCB

Example of ordering code:

RM50-3011-85-1012 relay **RM50**, for PCB, one changeover contact, contact material $AgSnO_2$, coil voltage 12 V DC, in cover IP 64

PRECAUTIONS:

1. Ensure that the parameters of the product described in its specification provide a safety margin for the appropriate operation of the device or system and never use the product in circumstances which exceed the parameters of the product. **2.** Never touch any live parts of the device. **3.** Ensure that the product has been connected correctly. An incorrect connection may cause malfunction, excessive heating or risk of fire. **4.** In case of any risk of any serious material loss or death or injuries of humans or animals, the devices or systems shall be designed so to equip them with double safety system to guarantee their reliable operation.