



RM45N

miniature relays



- DC coils - of up to 24 V DC, low coil power 0,20 W (sensitive coil) or 0,45 W (standard coil)
- For PCB • Very small dimensions, light weight
- High load up to 10 A / 125 V AC ❶
- Applications: for household electrical appliance, automation systems, electrical equipment, instrument and meter, telecommunication devices, remote control facilities, light controllers, etc.
- Recognitions, certifications, directives: RoHS,  

Contact data

Number and type of contacts		1 CO, 1 NO
Contact material		AgSnO₂
Rated / max. switching voltage	AC	250 V / 277 V
Min. switching voltage		5 V
Rated load	AC1	1 CO: 5 A / 5 A (NO/NC) / 250 V AC 1 CO: 10 A / 125 V AC ❶
	DC1	1 CO: 5 A / 5 A (NO/NC) / 28 V DC 1 NO: 5 A / 250 V AC 1 NO: 10 A / 125 V AC 1 NO: 5 A / 28 V DC
Motor load	acc. to UL 508	1/4 HP 250 V AC, single-phase motor
Rated current		5 A
Max. breaking capacity	AC1	1 250 VA
Contact resistance		≤ 100 mΩ

Coil data

Rated voltage	DC	5, 9, 12, 24 V
Must release voltage		DC: ≥ 0,05 U _n
Operating range of supply voltage		see Tables 1, 2
Rated power consumption	DC	0,20 W sensitive coil ❶ 0,45 W standard coil

Insulation according to EN 60664-1

Insulation resistance		100 MΩ 500 V DC, 60 s
Dielectric strength	• between coil and contacts	4 000 V AC type of insulation: reinforced
	• contact clearance	1 000 V AC type of clearance: micro-disconnection

General data

Operating / release time (typical values)		8 ms / 5 ms
Electrical life (number of cycles)	• resistive AC1 1 800 cycles/hour	10 ⁵ 1 CO: 5 A / 5 A (NO/NC), 250 V AC 1 NO: 5 A, 250 V AC
	• resistive DC1 1 800 cycles/hour	10 ⁵ 1 CO: 5 A / 5 A (NO/NC), 28 V DC 1 NO: 5 A, 28 V DC
Mechanical life 18 000 cycles/hour		10 ⁷
Dimensions (L x W x H)		20,5 x 10,6 x 15,6 mm
Weight		7 g
Ambient temperature (non-condensation and/or icing)	• operating	-40...+70 °C
Cover protection category		IP 67 EN 60529
Environmental protection		RTIII EN 61810-7
Shock resistance		10 g
Vibration resistance		1,5 mm DA (constant amplitude) 10...55 Hz
Solder bath temperature		max. 260 °C
Soldering time		max. 5 s

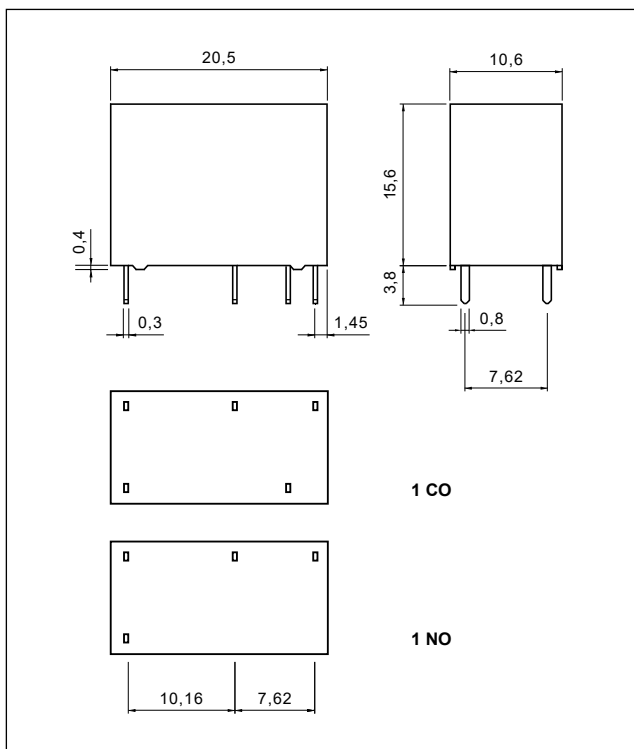
The data in bold type relate to the standard versions of the relays.

❶ Only for contacts 1 NO

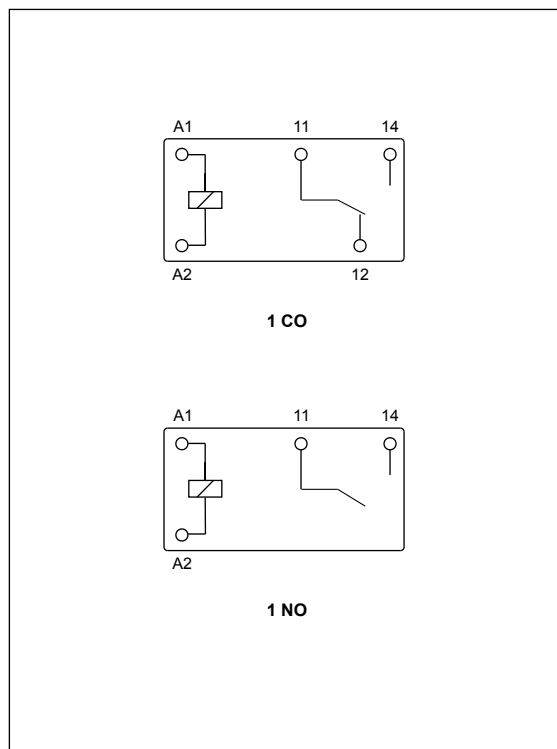
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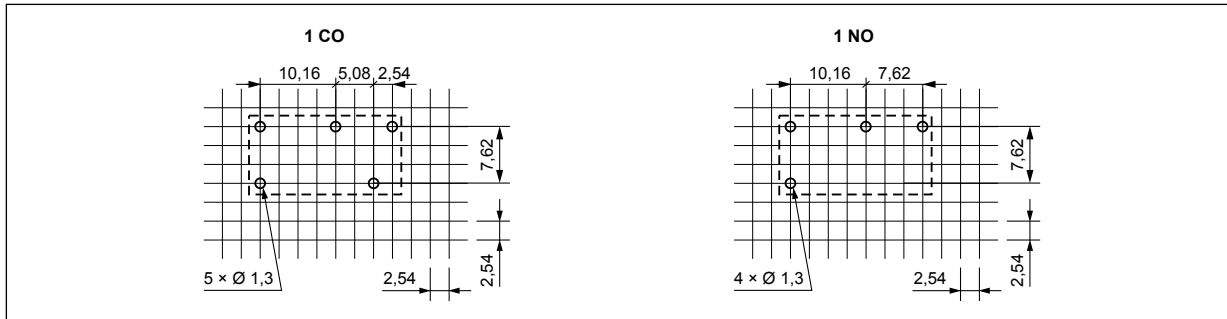
Dimensions



Connection diagrams (pin side view)



Pinout (solder side view)



Mounting

Relays **RM45N** are designed for direct PCB mounting.

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.

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Coil data - DC voltage version, sensitive

Table 1

Coil code ❶	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)
S005	5	125	± 10%	3,75	5,5
S009	9	405	± 10%	6,75	9,9
S012	12	720	± 10%	9,00	13,2
S024	24	2 880	± 10%	18,00	26,4

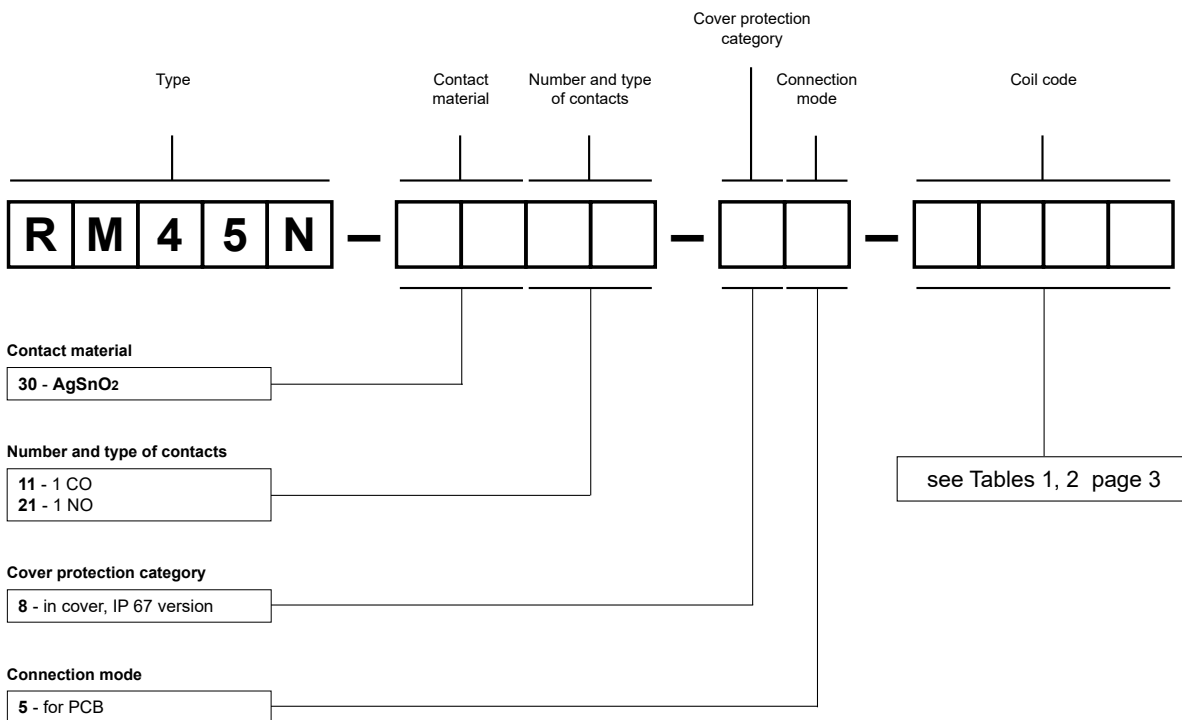
❶ Only for contacts 1 NO

Coil data - DC voltage version, standard

Table 2

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)
1005	5	56	± 10%	3,75	5,5
1009	9	180	± 10%	6,75	9,9
1012	12	320	± 10%	9,00	13,2
1024	24	1 280	± 10%	18,00	26,4

Ordering codes



Examples of ordering codes:

RM45N-3021-85-S012

relay **RM45N**, for PCB, one normally open contact, contact material AgSnO₂, sensitive coil voltage 12 V DC, in cover IP 67

RM45N-3011-85-1024

relay **RM45N**, for PCB, one changeover contact, contact material AgSnO₂, standard coil voltage 24 V DC, in cover IP 67