

RM40

miniature relays



- Very small dimensions
- High switching capacity up to 5 A or 8 A
- Cover with enhanced sealing protects the relay in course of soldering and cleaning
- Applications: for household equipment, office machines, control devices, alarm systems, in industrial control, industrial controllers
- Recognitions, certifications, directives: RoHS,  

Contact data

Number and type of contacts		1 CO	1 NO
Contact material		1 CO: AgNi , AgNi/Au 3 µm	1 NO: AgSnO₂
Rated / max. switching voltage	AC	1 CO: 250 V / 380 V	1 NO: 250 V / 440 V
Min. switching voltage		5 V AgNi, 1 V AgNi/Au 3 µm	5 V AgSnO ₂
Rated load	AC1 DC1	1 CO: 5 A / 250 V AC 1 CO: 5 A / 30 V DC	1 NO: 8 A / 250 V AC 1 NO: 8 A / 30 V DC
Min. switching current		10 mA AgNi, 1 mA AgNi/Au 3 µm	10 mA AgSnO ₂
Rated current		1 CO: 5 A	1 NO: 8 A
Max. breaking capacity	AC1	1 CO: 1 250 VA	1 NO: 2 000 VA
Min. breaking capacity		50 mW AgNi, 1 mW AgNi/Au 3 µm	50 mW AgSnO ₂
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	0,20 W

Insulation according to PN-EN 60664-1

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
Contact - coil distance		
• clearance	≥ 5 mm	
• creepage	≥ 5 mm	

General data

Operating / release time (typical values)		8 ms / 4 ms
Electrical life (number of cycles)		
• resistive AC1 360 cycles/hour	> 10 ⁵	1 CO: 5 A, 250 V AC 1 NO: 8 A, 250 V AC
• resistive DC1 1 800 cycles/hour	> 10 ⁵	1 CO: 5 A, 30 V DC 1 NO: 8 A, 30 V DC
Mechanical life 18 000 cycles/hour	> 10 ⁷	
Dimensions (L x W x H)		20 x 10 x 10,5 mm
Weight		6 g
Ambient temperature • operating		-40...+85 °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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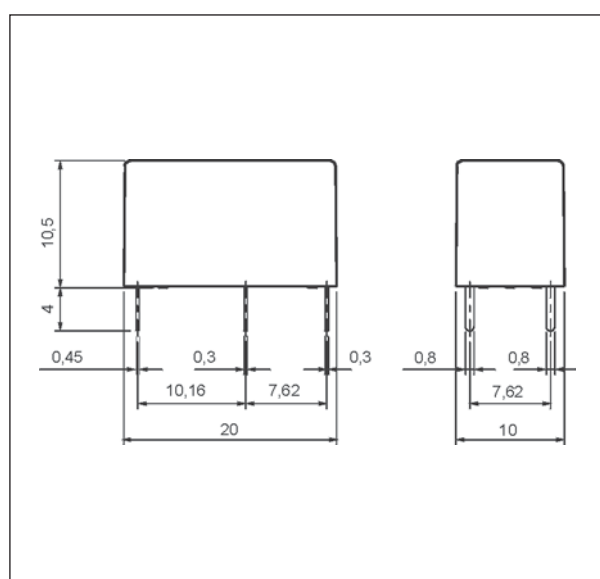
miniature relays

Coil data - DC voltage version

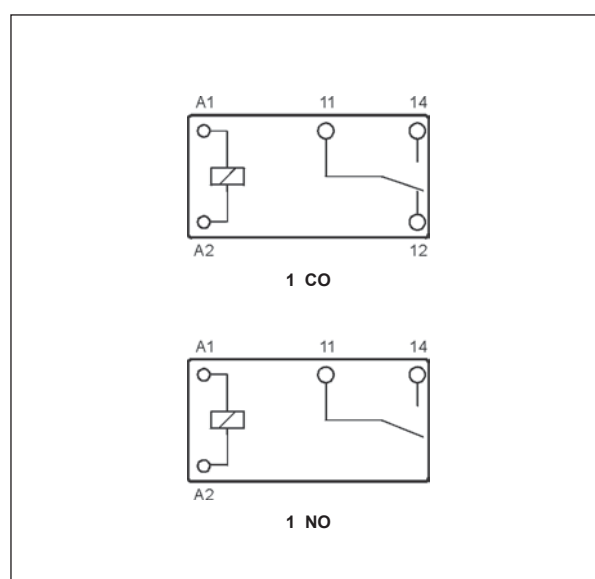
Table 1

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	45	$\pm 10\%$	2,25	4,5
1005	5	125	$\pm 10\%$	3,75	7,5
1006	6	180	$\pm 10\%$	4,50	9,0
1009	9	405	$\pm 10\%$	6,75	13,5
1012	12	720	$\pm 10\%$	9,00	18,0
1024	24	2 880	$\pm 10\%$	18,00	36,0
1048	48	11 520	$\pm 10\%$	36,00	72,0

Dimensions

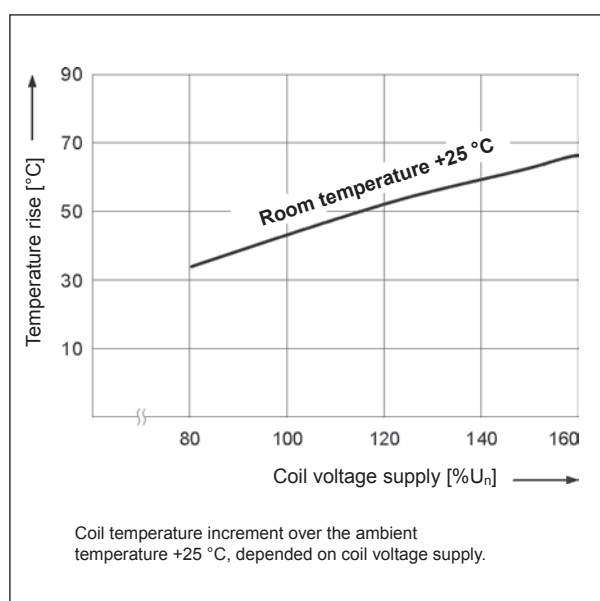


Connection diagrams (pin side view)



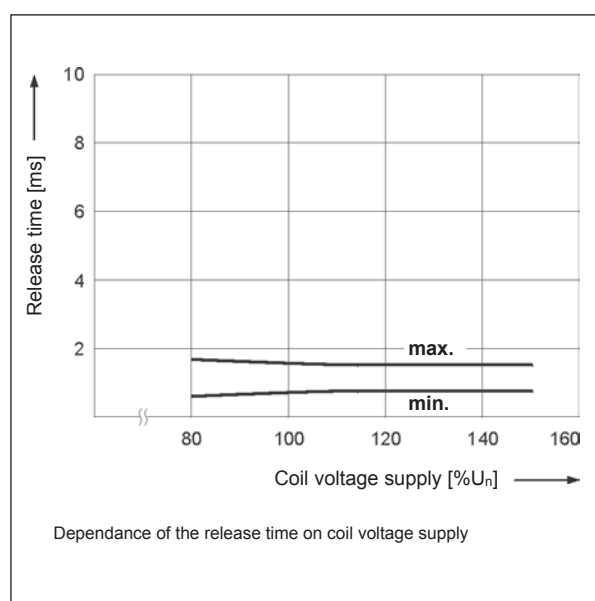
Coil temperature rise

Fig. 1



Release time

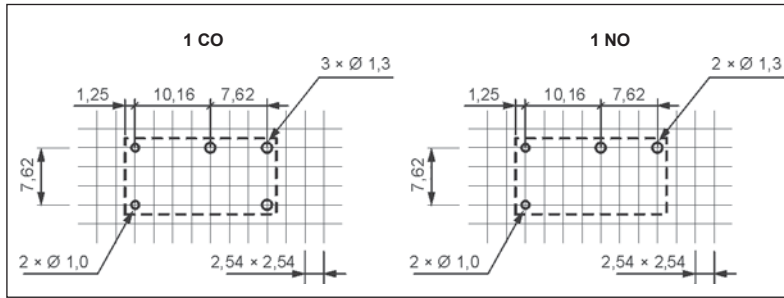
Fig. 2



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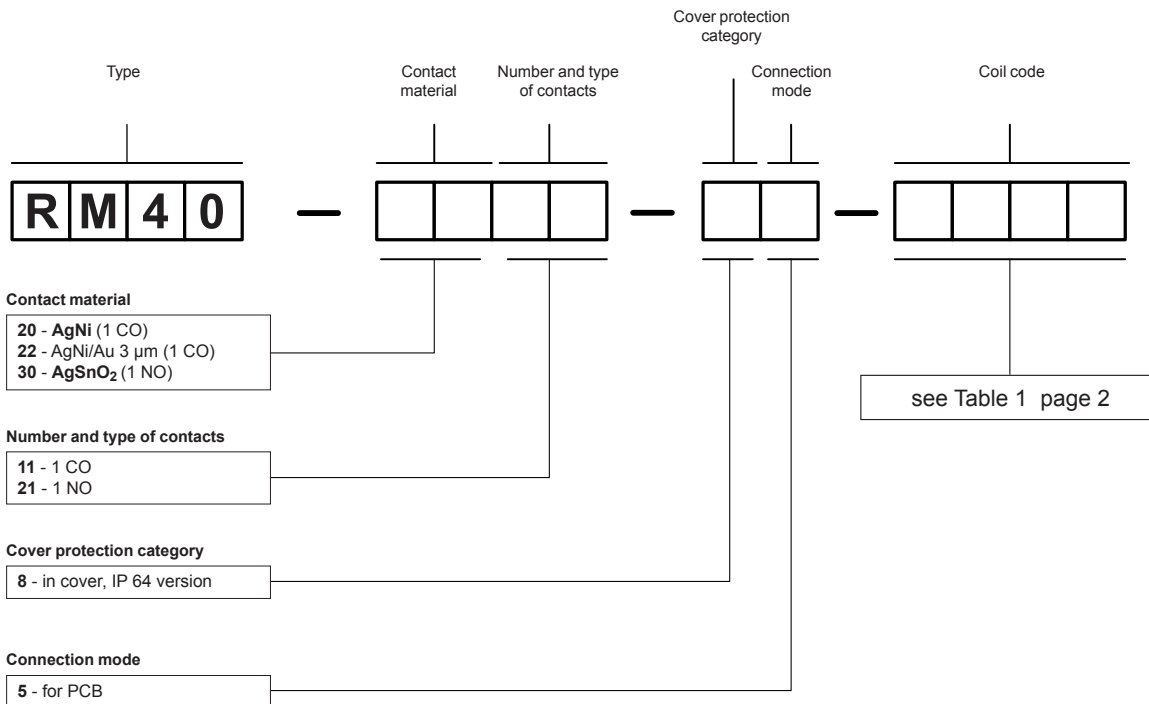
Pinout (solder side view)



Mounting

Relays **RM40** are designed for direct PCB mounting.

Ordering codes



Examples of ordering code:

RM40-2011-85-1003

relay **RM40**, for PCB, one changeover contact, contact material AgNi, for PCB, coil voltage 3 V DC, in cover IP 64

RM40-3021-85-1024

relay **RM40**, for PCB, one normally open contact, contact material AgSnO₂, coil voltage 24 V DC, in cover IP 64