



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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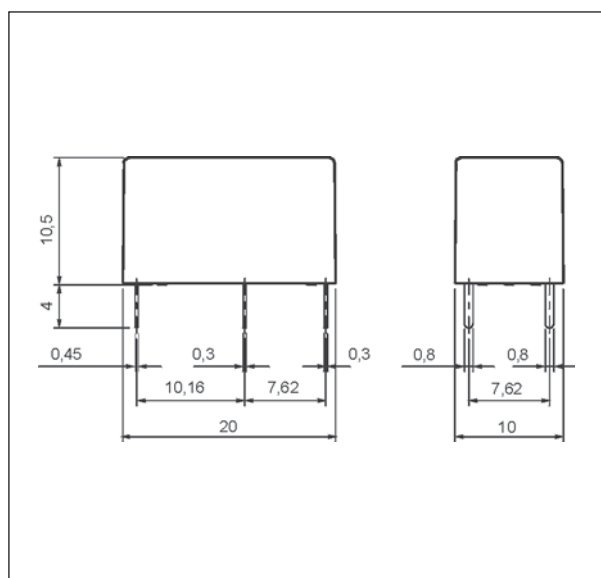
miniature relays

Coil data - DC voltage version

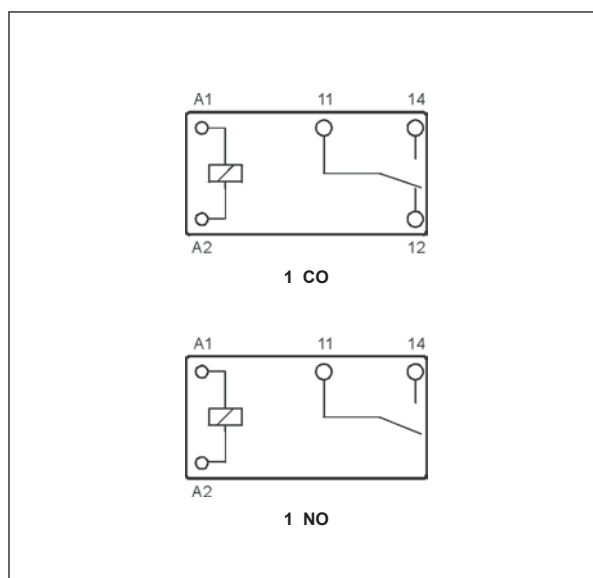
Table 1

| 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

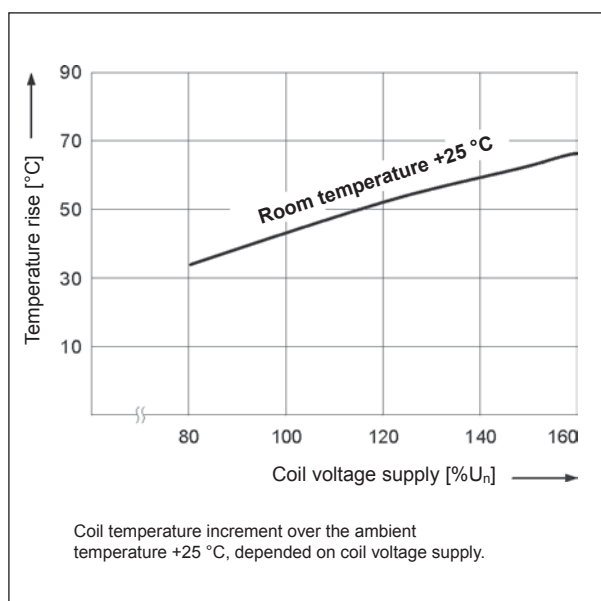


Connection diagrams (pin side view)



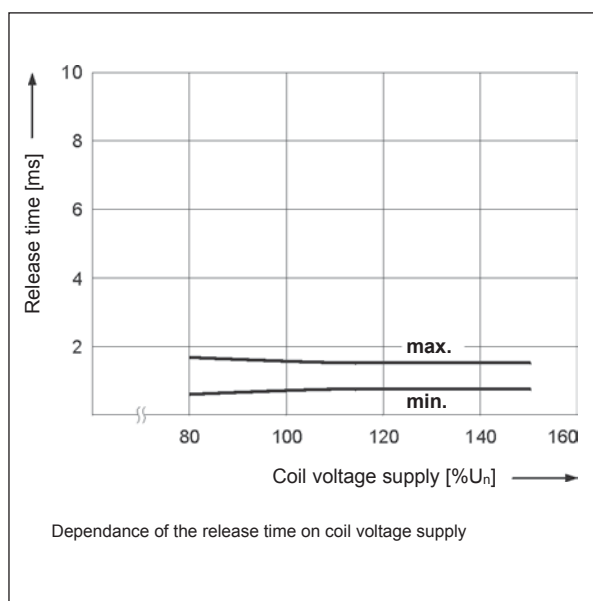
Coil temperature rise

Fig. 1



Release time

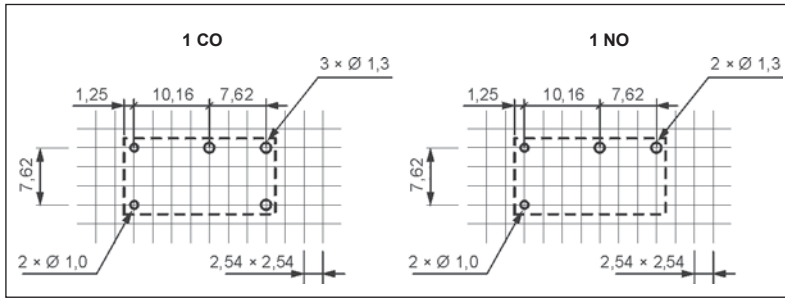
Fig. 2



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miniature relays

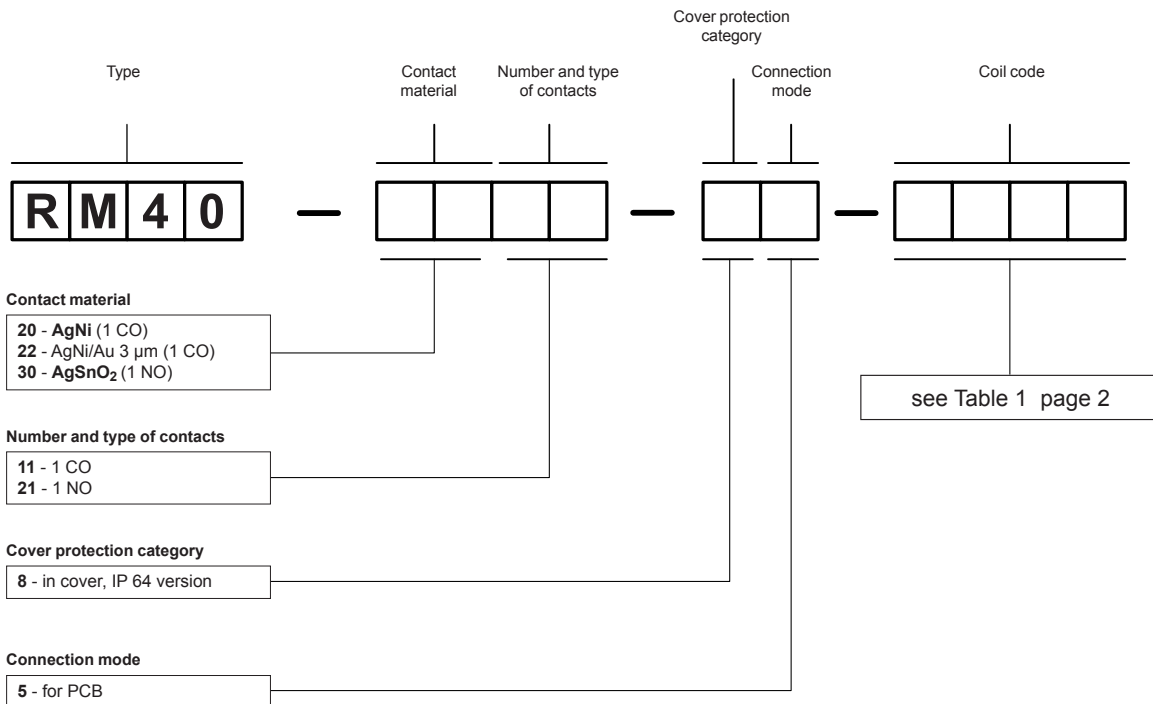
Pinout (solder side view)



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