

**BISTABLE**

- DC coils. AC supply through rectifying diode
- Miniature size
- for PCB mounting
- High switching capacity
- 2-coil bistable relays

Contacts

| | | |
|------------------------------|------------|---|
| Contact number & arrangement | | 2C/O, 2NO |
| Contact material | | AgCdO , AgSnO ₂ |
| Max. switching voltage | AC/DC | 400 V / 250 V |
| Min. switching voltage | | 24 V AgCdO, 24 V AgSnO ₂ |
| Rated load | AC1 DC1 | 10 A / 250 V AC 10 A / 24 V DC |
| Min. switching current | | 100 mA AgCdO, 100 mA AgSnO ₂ |
| Max. inrush current | | 14 A |
| Rated current | | 10 A |
| Max. breaking capacity | AC1 | 2 500 VA |
| Min. breaking capacity | | 2,4 W AgCdO, 2,4 W AgSnO ₂ |
| Resistance | | ≤ 100 mΩ |
| Max. operating frequency | | |
| • at rated load | AC1 | 3 600 cycles/hour |
| • no load | | 18 000 cycles/hour |

Coil

| | | |
|-----------------------------------|----------|--|
| Rated voltage | AC DC | DC coil + diode D ❶ 3...36 V ❶ |
| Operating range of supply voltage | | see Table 1 |
| Duration of supply voltage pulse | | min. 10 ms; max. 230 s 20 °C, 120 s 40 °C 40 s 70 °C |

Insulation

| | | |
|--------------------------|--|------------|
| Insulation category | | C250 |
| Insulation rated voltage | | 400 V AC |
| Dielectric strength | | |
| • coil - contact | | 5 000 V AC |
| • contact - contact | | 1 000 V AC |
| • pole - pole | | 4 000 V AC |
| Contact - coil distance | | |
| • clearance | | ≥ 8 mm |
| • creepage | | ≥ 8 mm |

General data

| | | |
|--------------------------------|--------------------------------------|--|
| Operating time (typical value) | | 10 ms |
| Release time (typical value) | | 5 ms |
| Electrical life | | |
| • resistive AC1 | 1 000 cycles/hour 500 cycles/hour | > 7,5 x 10 ⁴ > 8 x 10 ⁴ |
| Mechanical life (cycles) | | > 5 x 10 ⁷ |
| Dimensions (L x W x H) | | 29,4 x 12,5 x 25,2 mm for IP 67 H=26,5 mm |
| Weight | | 15...18 g |
| Ambient temperature | | |
| • storing | | -40...+80 °C |
| • operating | | -40...+70 °C |
| Cover protection category | | IP 40 or IP 67 |
| Shock resistance | | 10 g |
| Vibration resistance | | 2,5 mm 5...45 Hz 10 g 45...200 Hz |
| Solder bath temperature | | max. 270 °C |
| Soldering time | | max. 5 s |

Standard contact material marked with bolt type.

❶ RMB642 bistable relays supply - see page 72

Note: At IP 67 version it is recommended that the vent pin is removed after soldering and washing process.



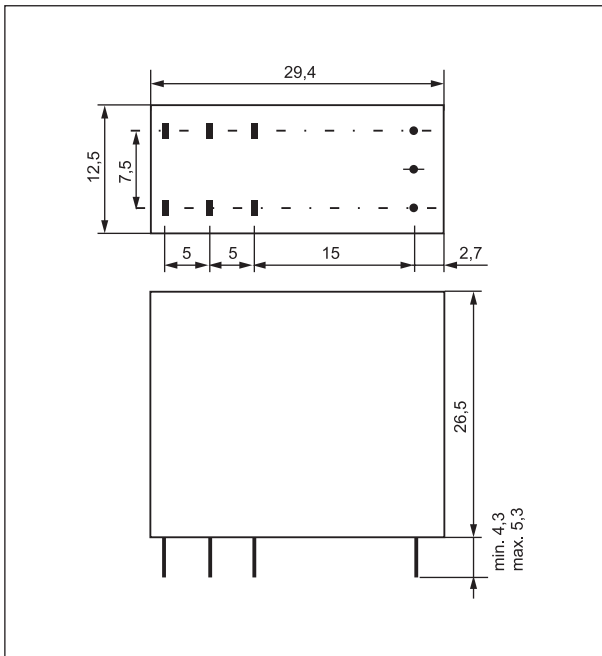
Coil data - AC/DC voltage version

Table 1

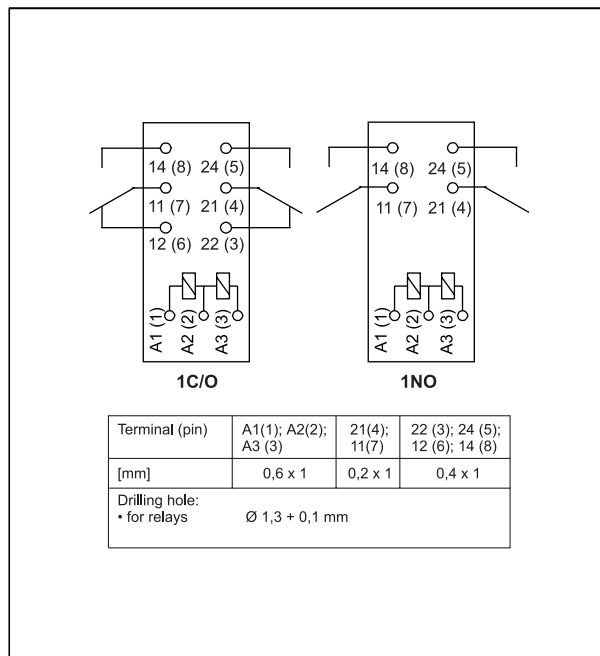
| Coil code | Rated voltage V AC/DC | Coil 1-2 resistance at 20 °C Ω | Coil 1-2 tolerance of resistance ±% | Coil 2-3 resistance at 20 °C Ω | Coil 2-3 tolerance of resistance ±% | Coil operating range at 20 °C V AC/DC | |
|-----------|--------------------------|---|--|---|--|--|-------|
| | | | | | | min. | max. |
| 1003 | 3 | 8,0 | 10 | 31,5 | 10 | 2,89 | 5,40 |
| 1006 | 6 | 23,5 | 10 | 115,0 | 15 | 4,85 | 9,35 |
| 1009 | 9 | 42,5 | 10 | 195,0 | 15 | 6,70 | 12,50 |
| 1012 | 12 | 89,0 | 10 | 435,0 | 15 | 8,82 | 18,00 |
| 1024 | 24 | 225,0 | 10 | 1 100,0 | 15 | 14,00 | 28,50 |
| 1036 | 36 | 605,0 | 15 | 2 620,0 | 15 | 22,50 | 45,50 |

Supplying mode: Magnetic circuit with high remanence allows the relays to remain in certain position independently from coil energizing. The relays are not allowed to be supplied continuously. Only pulse supply is allowed. Pulse duration is between 10 ms and the time shown in **Coil Data** (depending on ambient temperature) on page 71.

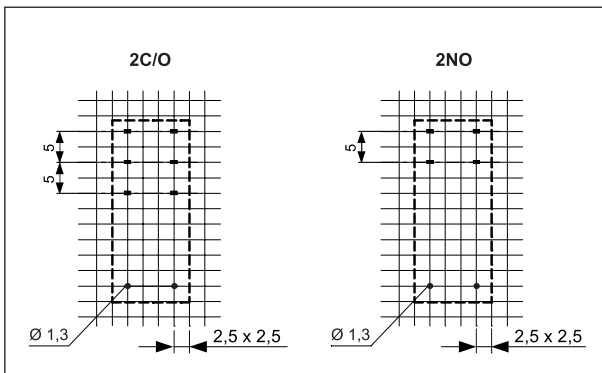
Dimensions



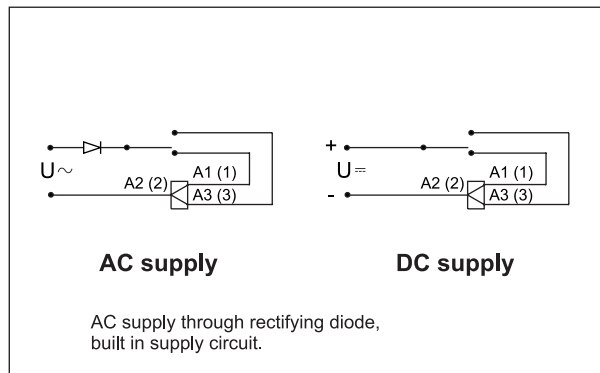
Connections diagram (pin side view)



Mounting holes layout
(view from soldering side)

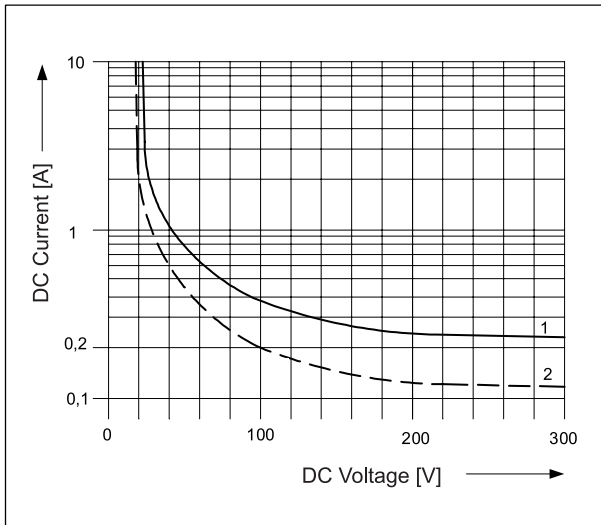


2-coil circuit



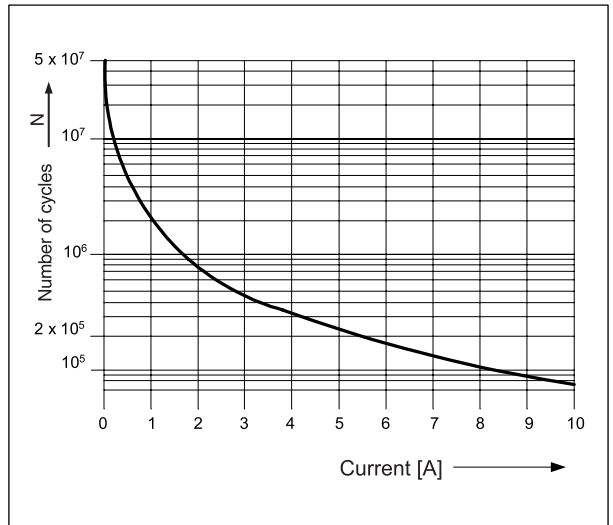
Max. DC breaking capacity
A - resistive load
B - inductive load ($L/R \leq 40$ ms)

Fig. 1



Electrical life at 250 V AC, 1000 cycles/hour

Fig. 2



Mounting

Relays **RMB642** are mounted only on PCBs.

Ordering codes

