

**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.



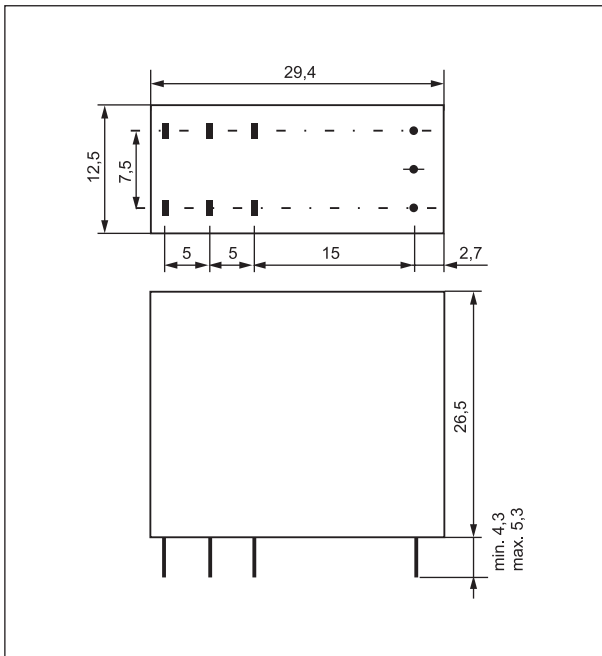
Coil data - AC/DC voltage version

Table 1

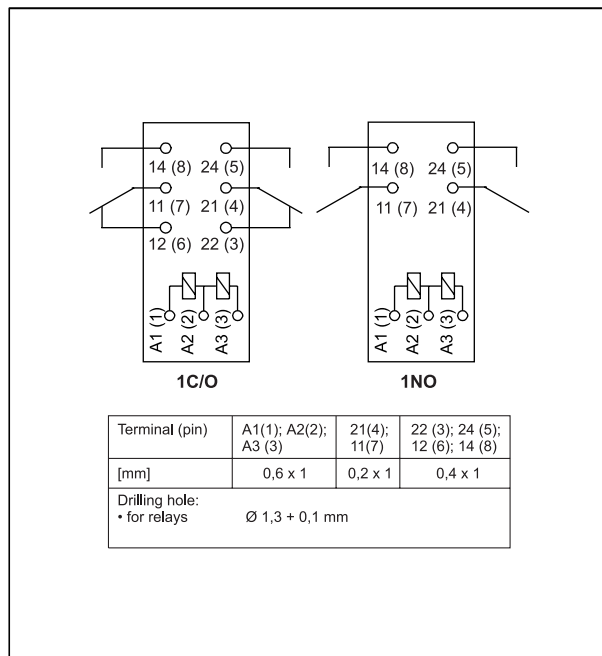
Coil code	Rated voltage V AC/DC	Coil 1-2 resistance at 20 °C Ω	Coil 1-2 tolerance of resistance ±%	Coil 2-3 resistance at 20 °C Ω	Coil 2-3 tolerance of resistance ±%	Coil operating range at 20 °C V AC/DC	
						min.	max.
1003	3	8,0	10	31,5	10	2,89	5,40
1006	6	23,5	10	115,0	15	4,85	9,35
1009	9	42,5	10	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.

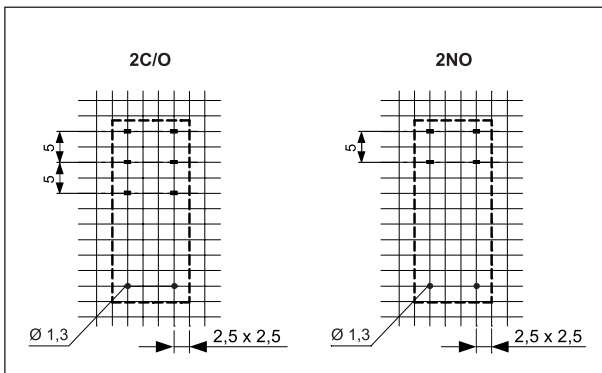
Dimensions



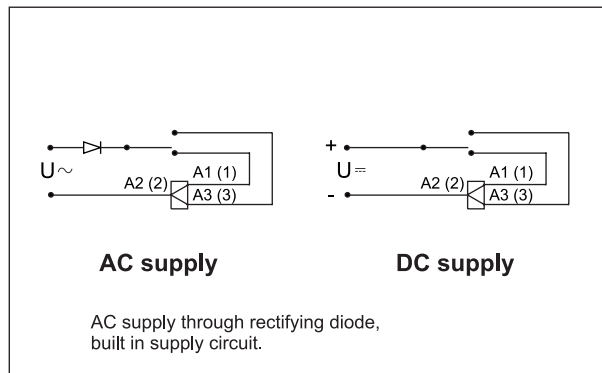
Connections diagram (pin side view)



Mounting holes layout
(view from soldering side)

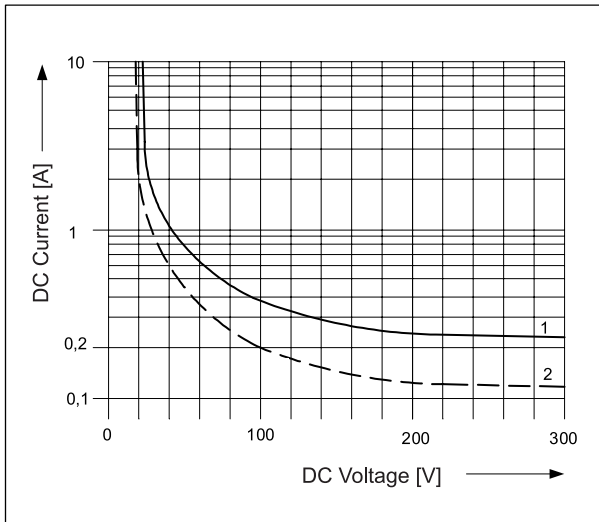


2-coil circuit



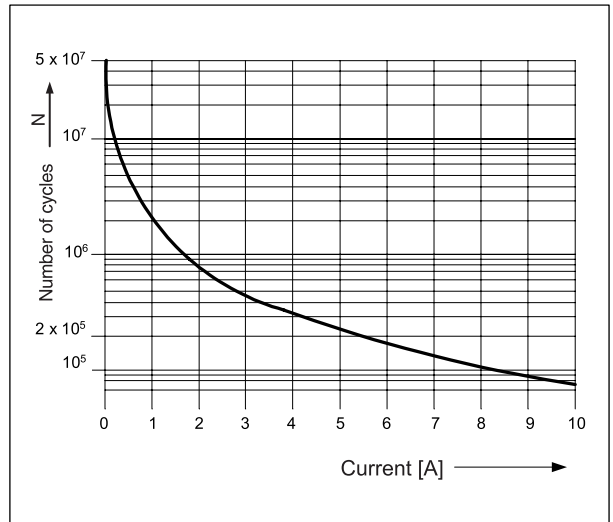
Max. DC breaking capacity
A - resistive load
B - inductive load ($L/R \leq 40$ ms)

Fig. 1



Electrical life at 250 V AC, 1000 cycles/hour

Fig. 2



Mounting

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

Ordering codes

