

**BISTABLE**

- DC coils. AC supply through rectifying diode
- Miniature size
- For PCB and sockets
- Accessories: sockets
- High switching capacity
- 1-coil bistable relays

## Contacts

Contact number & arrangement		2C/O, 2NO
Contact material		<b>AgCdO</b> , AgSnO <sub>2</sub>
Max. switching voltage	AC/DC	400 V / 250 V
Min. switching voltage		24 V AgCdO, 24 V AgSnO <sub>2</sub>
Rated load	AC1 DC1	10 A / 250 V AC 10 A / 24 V DC
Min. switching current		100 mA AgCdO, 100 mA AgSnO <sub>2</sub>
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 <sub>2</sub>
Resistance		≤ 100 mΩ
Max. operating frequency	AC1	3 600 cycles/hour 18 000 cycles/hour
• at rated load		
• no load		

## Coil

Rated voltage	AC DC	DC coil + diode D + resistor ❶ 3...220 V ❶
Operating range of supply voltage		see Table 1
Duration of supply voltage pulse		min. 10 ms; max. 350 s 20 °C, 190 s 40 °C 65 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 <sup>4</sup> > 8 x 10 <sup>4</sup>
Mechanical life (cycles)		> 5 x 10 <sup>7</sup>
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 RMB641 bistable relays supply - see page 69

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



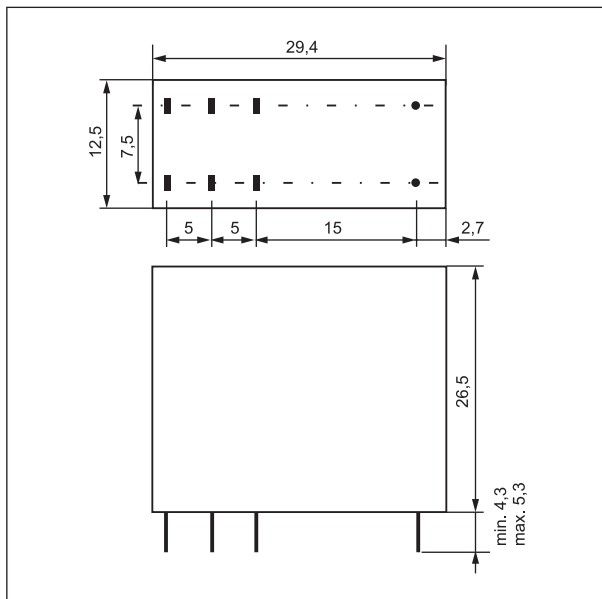
Coil data - AC/DC version version

Table 1

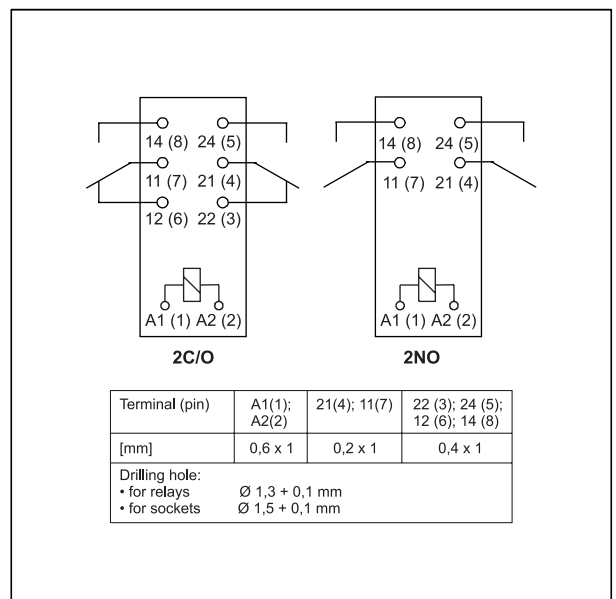
Coil code	Rated voltage V AC/DC	Coil resistance at 20 °C Ω	Tolerance of resistance ±%	Coil operating range at 20 °C V AC/DC		Rd (1W) ± 10% Ω
				min.	max.	
1003	3	11	10	2,93	5,15	47
1005	5	30	10	4,82	8,44	120
1009	9	55	10	6,62	11,50	220
1012	12	110	10	9,39	16,20	470
1018	18	280	10	13,40	25,80	1 200
1024	24	450	10	17,00	32,50	1 800
1048	48	1 750	15	34,60	66,00	8 200
1060	60	2 700	15	43,00	81,50	12 000
1080	80	4 300	15	53,30	105,00	18 000
1125	125	9 900	15	88,90	167,00	47 000
1220	220	23 500	15	140,0	260,00	82 000

**Supplying mode:** Magnetic circuit with high remanence allows the relays to remain in certain position independetly from coil energizing. The realys are not allowed to be supplied continuesly. Only pulse supply is allowed. Pulse duration is between 10 ms and the time shown in **Coil Data** (depending on ambient temperature) on page 68.

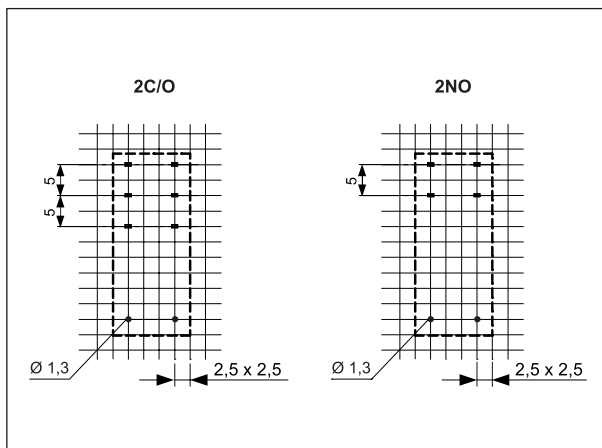
Dimensions



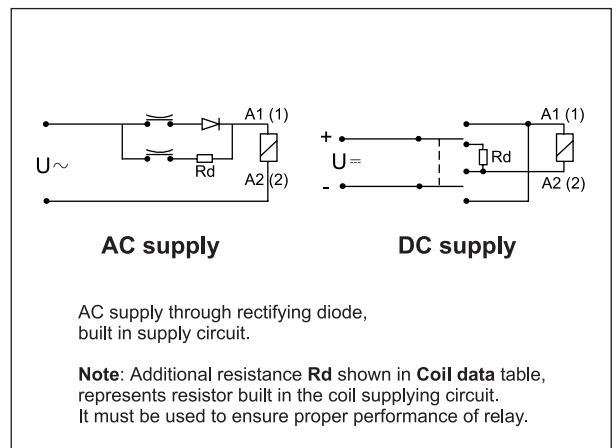
Connections diagram (pin side view)



Mounting holes layout  
(view from soldering side)

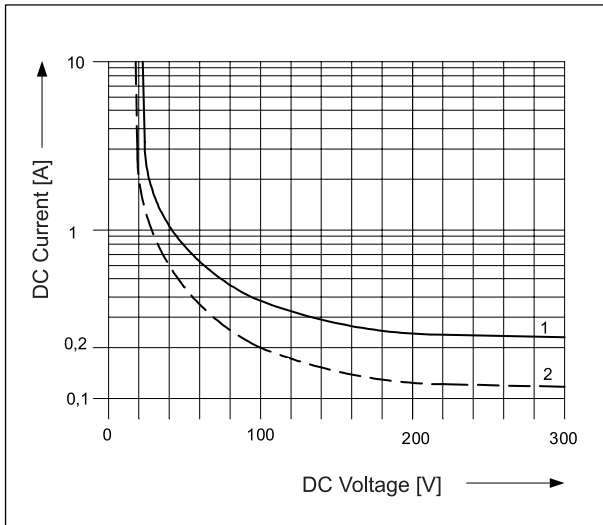


1-coil circuit



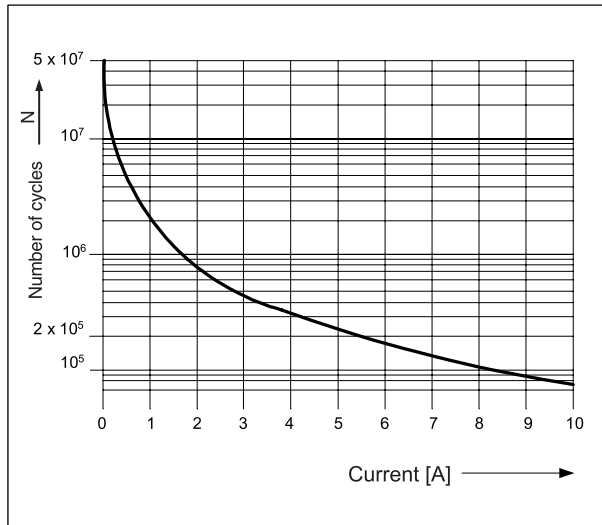
**Max. DC breaking capacity**  
**A - resistive load**  
**B - inductive load ( $L/R \leq 40$  ms)**

Fig. 1



**Electrical life**  
**at 250 V AC, 1000 cycles/hour**

Fig. 2



**Mounting**

Relays **RMB641** are designed for: • direct PCB mounting • screw terminals sockets **GZ80** with clip **MS25**, 35 mm DIN rail mount, EN 50022 or on panel mounting • terminals sockets for PCB mounting **PW80** and **GW80** with clip **RM81 0001**.

**Ordering codes**

