

**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		1C/O, 1NO
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	16 A / 250 V AC
	DC1	16 A / 24 V DC
Min. switching current		100 mA AgCdO, 100 mA AgSnO ₂
Max. inrush current		20 A
Rated current		16 A
Max. breaking capacity	AC1	4 000 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 coil + diode D + resistor ❶
	DC	3...220 V ❶
Operating range of supply voltage		see Table 1
Duration of supply voltage pulse		min. 10 ms; max. 410 s 20 °C, 230 s 40 °C, 80 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
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	> 10 ⁵
	500 cycles/hour	> 1,5 x 10 ⁵
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 RMB631 bistable relays supply - see page 63

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



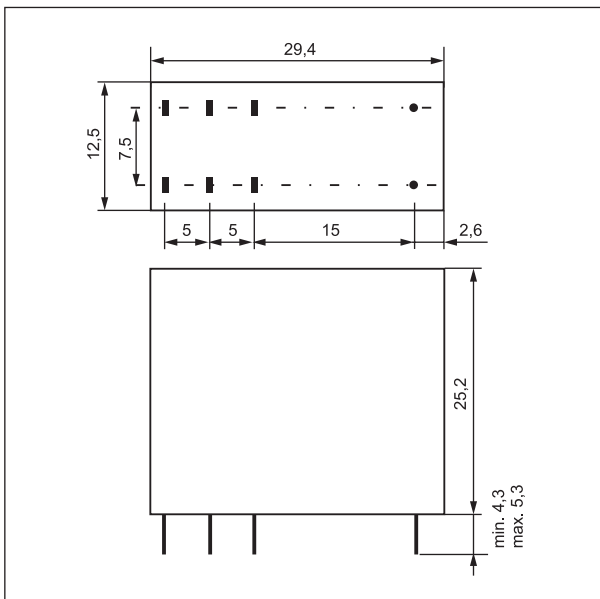
Coil data - AC/DC voltage version

Table 1

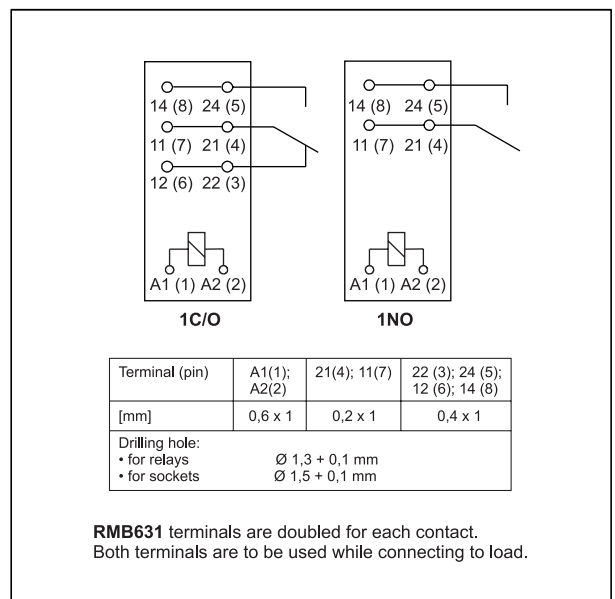
Coil code	Rated voltage V AC/DC	Coil resistance at 20 °C Ω	Tolerance of resistance ±%	Coil operating range at 20 °C V AC/DC		Rd (1W) ± 10% Ω
				min.	max.	
1003	3	11	10	2,76	4,70	47
1005	5	30	10	4,62	7,93	120
1009	9	55	10	6,32	10,90	220
1012	12	110	10	9,09	15,50	470
1018	18	280	10	12,90	24,30	1 200
1024	24	450	10	16,40	30,90	1 800
1048	48	1 750	15	33,40	63,00	8 200
1060	60	2 700	15	41,60	78,50	12 000
1080	80	4 300	15	53,10	100,00	18 000
1125	125	9 900	15	85,40	161,00	47 000
1220	220	23 500	15	131,00	242,00	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 62.

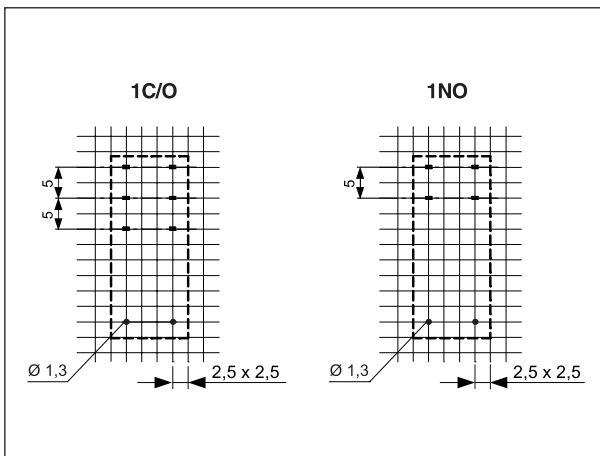
Dimensions



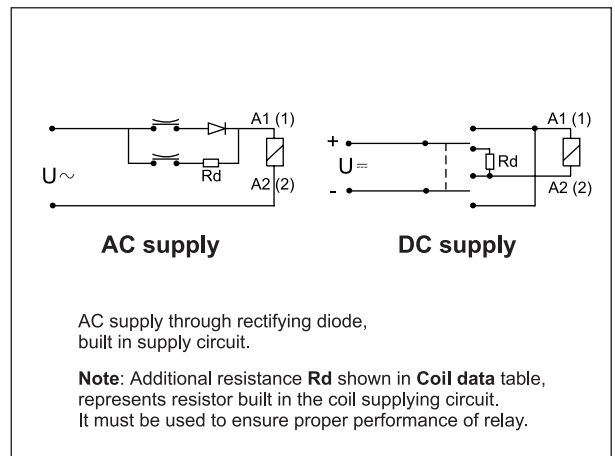
Connections diagram (pin side view)



Mounting holes layout (view from soldering side)

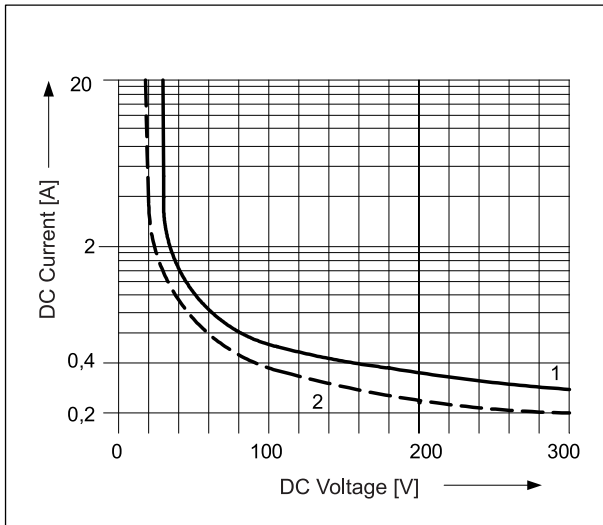


1-coil circuit



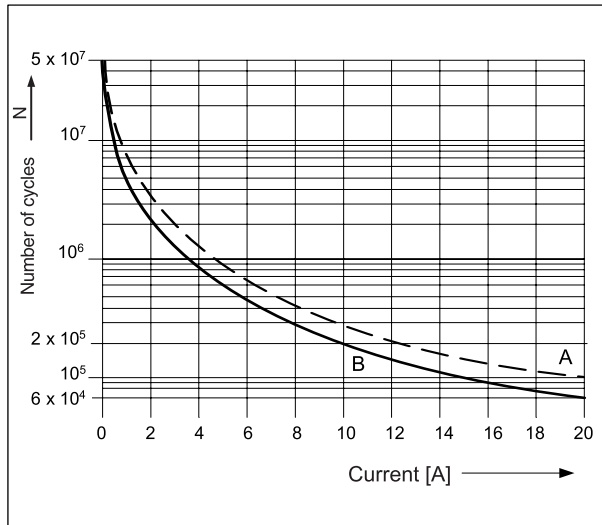
Max. DC breaking capacity
A - resistive load
B - inductive load ($L/R \leq 40$ ms)

Fig. 1



Electrical life
at 250 V AC, 1000 cycles/hour
Temperature: A = 40 °C, B = 70 °C

Fig. 2



Mounting

Relays **RMB631** 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

