





- Miniature dimensions • General purpose relays
- **Version 1 NO AgSnO<sub>2</sub> for special loads:**  
**resistance to inrush current 120 A (20 ms)**
- Protection category IP 40 or IP 67
- For PCB and plug-in sockets
- DC coils - standard and sensitive
- Recognitions, certifications, directives: RoHS,    

## Contact data

Number and type of contacts	1 C/O, 1 NO, 1 NC	
Contact material	<b>AgSnO<sub>2</sub></b> , AgCdO, AgCdO/Au 0,2 μm	
Rated / max. switching voltage	AC	250 V / 440 V
Min. switching voltage	10 V AgSnO <sub>2</sub> , 10 V AgCdO, 10 V AgCdO/Au 0,2 μm	
Rated load (capacity)	AC1	16 A / 250 V AC
	AC15	6 A / 120 V      3 A / 240 V (A300)
	AC3	550 W (single-phase motor)
	DC1	16 A / 24 V DC (see Fig. 3)
	DC13	0,22 A / 120 V    0,1 A / 250 V (R300)
Min. switching current	10 mA AgSnO <sub>2</sub> , 5 mA AgCdO, 5 mA AgCdO/Au 0,2 μm	
Max. inrush current	30 A 1 NO, AgSnO <sub>2</sub>	
Rated current	16 A	
Max. breaking capacity	AC1	4 000 VA
Min. breaking capacity	1 W AgSnO <sub>2</sub> , 0,5 W AgCdO, 0,5 W AgCdO/Au 0,2 μm	
Contact resistance	≤ 100 mΩ	
Max. operating frequency	AC1	600 cycles/hour 72 000 cycles/hour
• at rated load		
• no load		

## Coil data

Rated voltage	DC	5 ... 110 V standard version    110 V sensitive version
Must release voltage	DC: ≥ 0,1 U <sub>n</sub>	
Operating range of supply voltage	see Table 1	
Rated power consumption	DC	0,6 W 5 ... 60 V      standard version 0,6 W 110 V sensitive version 0,9 W 110 V standard version

## Insulation according to PN-EN 60664-1

Insulation rated voltage	400 V AC	
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	≥ 8 mm	
• creepage	≥ 8 mm	

## General data

Operating / release time (typical values)	7 ms / 3 ms	
Electrical life		
• resistive AC1	> 10 <sup>5</sup>	16 A, 250 V AC
• at incandescent lamp load	> 10 <sup>5</sup>	1000 W, 230 V AC    1 NO, AgSnO <sub>2</sub>
	> 3 x 10 <sup>4</sup>	3000 W, 230 V AC    1 NO, AgSnO <sub>2</sub>
• at halogen lamp load	> 10 <sup>4</sup>	2500 W, 230 V AC    1 NO, AgSnO <sub>2</sub>
• cos φ	see Fig. 2	
• L/R=40 ms	> 10 <sup>5</sup>	0,12 A, 220 V DC
Mechanical life (cycles)	> 3 x 10 <sup>7</sup>	
Dimensions (L x W x H)	IP 40: 29,2 x 13,1 x 25,1 mm IP 67: 29,2 x 13,1 x 25,6 mm	
Weight	18 g	
Ambient temperature	• storage	-40...+85 °C
	• operating	-40...+70 °C
Cover protection category	IP 40 or IP 67	PN-EN 60529
Shock resistance	20 g	
Vibration resistance	10 g 10...150 Hz	
Solder bath temperature	max. 270 °C	
Soldering time	max. 5 s	

The data in bold type pertain to the standard versions of the relays.

❶ Special version available: relays in transparent cover - see "Ordering codes".

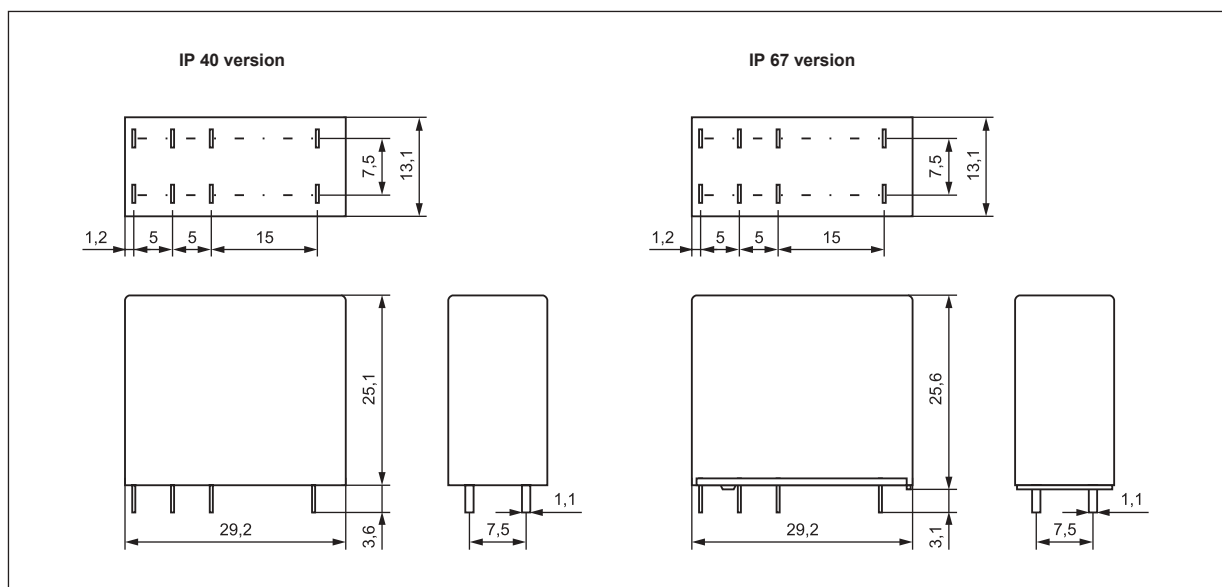
Coil data - DC voltage version

Table 1

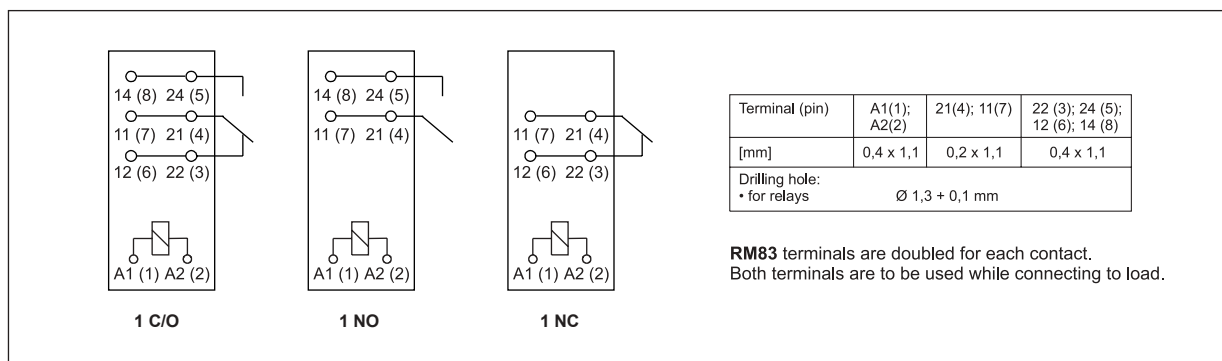
Coil code		Rated voltage V DC	Coil resistance ± 10% at 20 °C Ω	Coil operating range at 20 °C V DC	
standard version	sensitive version			min.	max.
1005	–	5	49	3,5	8,9
1006	–	6	68	4,2	10,6
1009	–	9	110	6,3	15,9
<b>1012</b>	–	<b>12</b>	<b>260</b>	<b>8,4</b>	<b>21,2</b>
1018	–	18	550	12,6	31,8
<b>1024</b>	–	<b>24</b>	<b>1 100</b>	<b>16,8</b>	<b>42,5</b>
1036	–	36	2 100	25,2	63,7
1048	–	48	4 400	33,6	85,0
1060	–	60	7 000	42,0	106,2
1110	–	110	13 000	77,0	140,0
–	S110	110	20 500	77,0	188,0

The data in bold type pertain to the standard versions of the relays.

### Dimensions

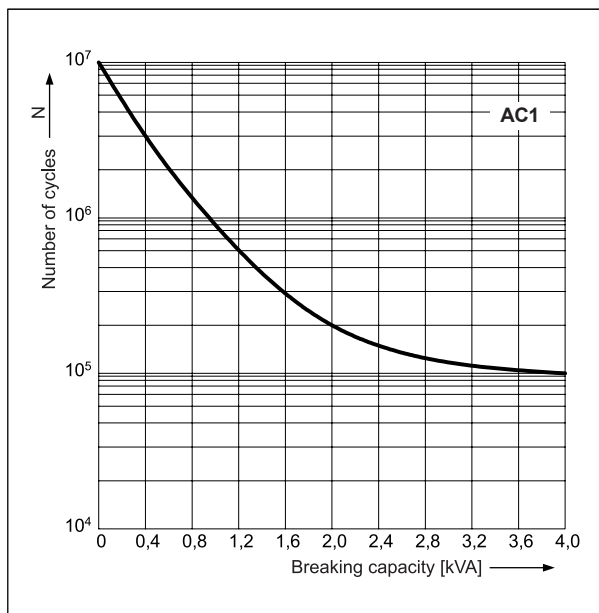


### Connection diagrams (pin side view)



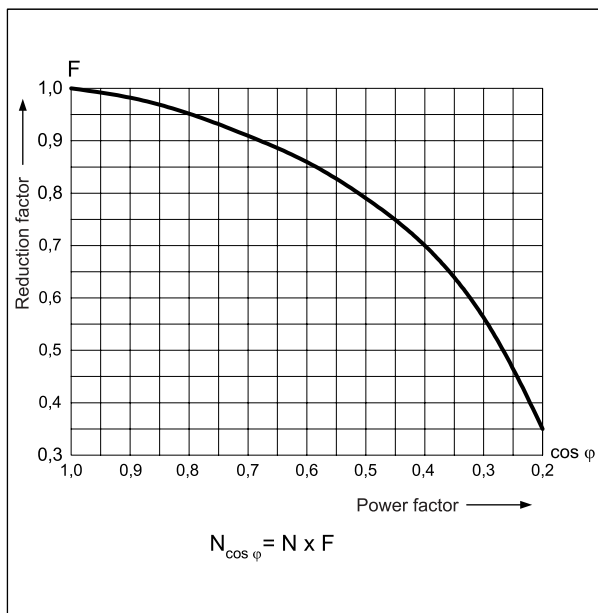
**Electrical life at AC resistive load.**  
Switching frequency: 600 cycles/hour

Fig. 1



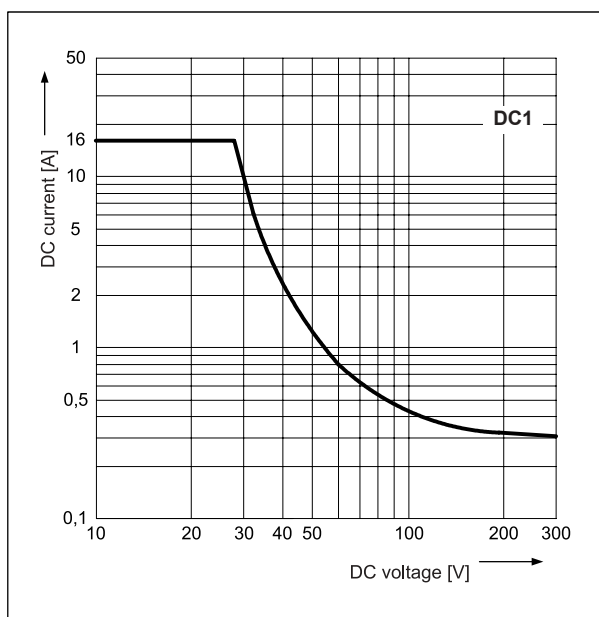
**Electrical life reduction factor at AC inductive load**

Fig. 2



**Max. DC resistive load breaking capacity**

Fig. 3

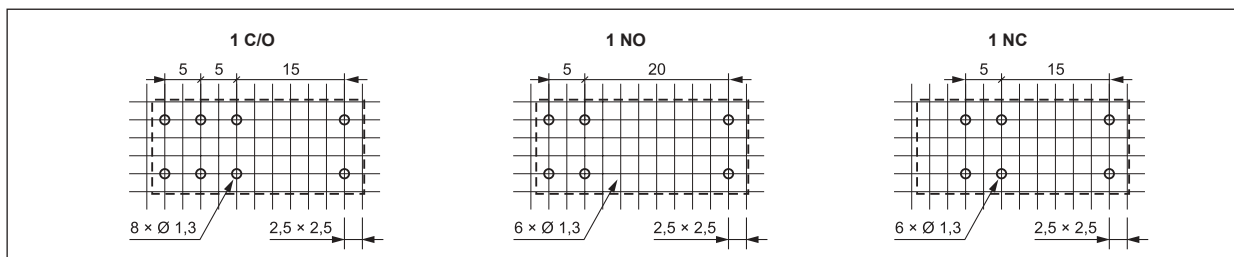


### Mounting

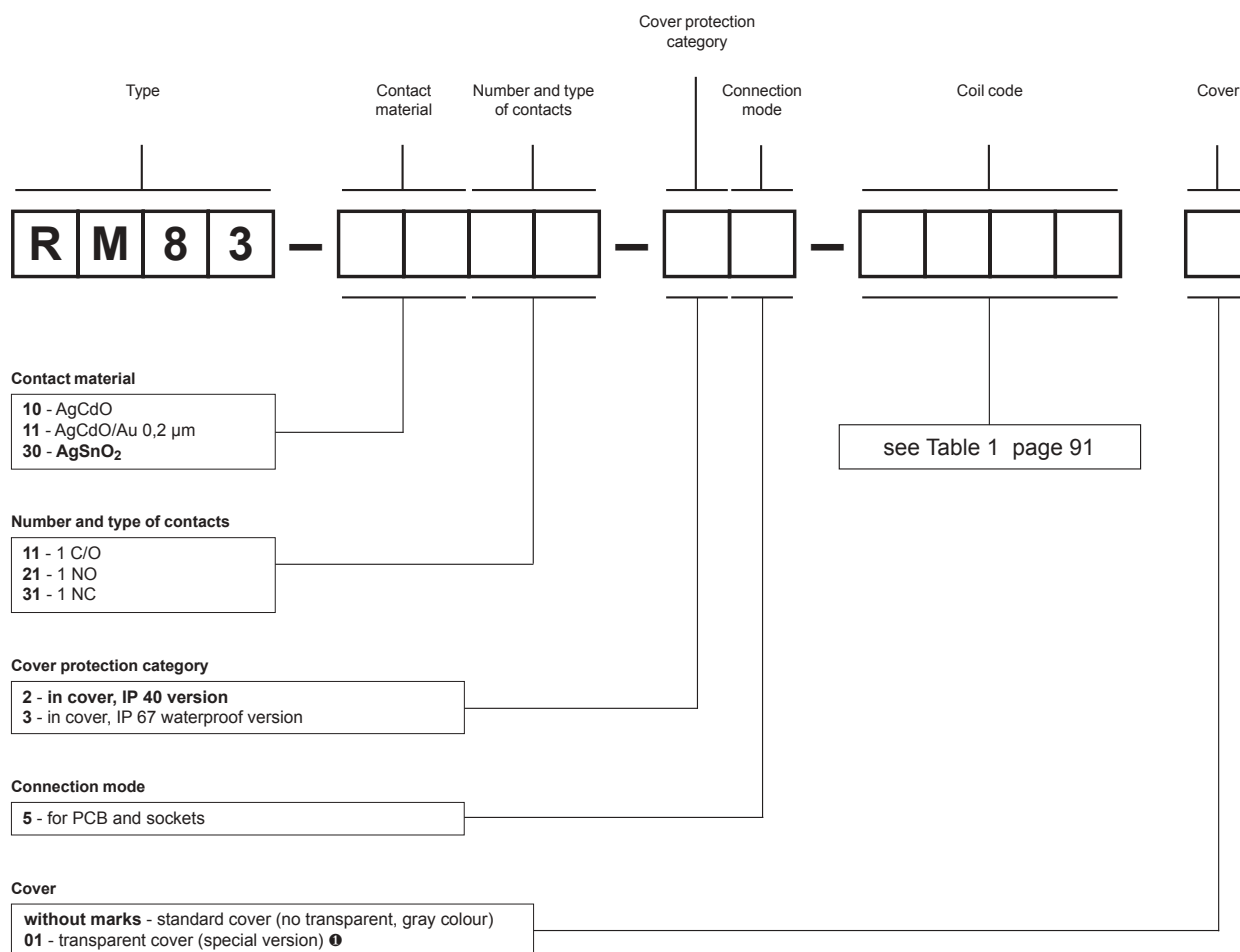
Relays **RM83** are designed for:

- direct PCB mounting
- plug-in sockets for PCB mounting **EC50** with clip **MP25-2**, MH25-2, GD-0025, RM81-0001; plug-in sockets **PW80** with clip **MH25-2**, GD-0025, RM81-0001; plug-in sockets **GD50** with clip **MP25-2**, GD-0025, MH25-2, RM81-0001.

### Pinout (solder side view)



### Ordering codes



Examples of ordering code:

- RM83-3011-25-1024** relay **RM83**, contact material AgSnO<sub>2</sub>, with one changeover contact, in standard cover (no transparent, gray colour) IP 40, for PCB and sockets, voltage version 24 V DC
- RM83-3011-25-S110** relay **RM83**, contact material AgSnO<sub>2</sub>, with one changeover contact, in standard cover (no transparent, gray colour) IP 40, for PCB and sockets, sensitive voltage version 110 V DC
- RM83-3021-35-1012-01** relay **RM83**, contact material AgSnO<sub>2</sub>, with one normally open contact, in transparent cover (special version) ● IP 67, for PCB and sockets, voltage version 12 V DC