





- Miniature dimensions
- General purpose relays
- **Resistance to inrush current 120 A (20 ms)**
- Protection category IP 40
- For PCB
- 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
Max. switching voltage	AC/DC	400 V / 300 V
Min. switching voltage		10 V AgSnO <sub>2</sub> , 10 V AgCdO, 10 V AgCdO/Au 0,2 μm
Rated load	AC1 DC1	16 A / 250 V AC 16 A / 24 V DC
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		
• at rated load	AC1	600 cycles/hour
• no load		72 000 cycles/hour

## 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

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

## General data

Operating time (typical value)		7 ms
Release time (typical value)		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)		29,5 x 13,1 x 25,5 mm
Weight		18 g
Ambient temperature		
• storage		-40...+85 °C
• operating		-40...+70 °C
Cover protection category		IP 40
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.

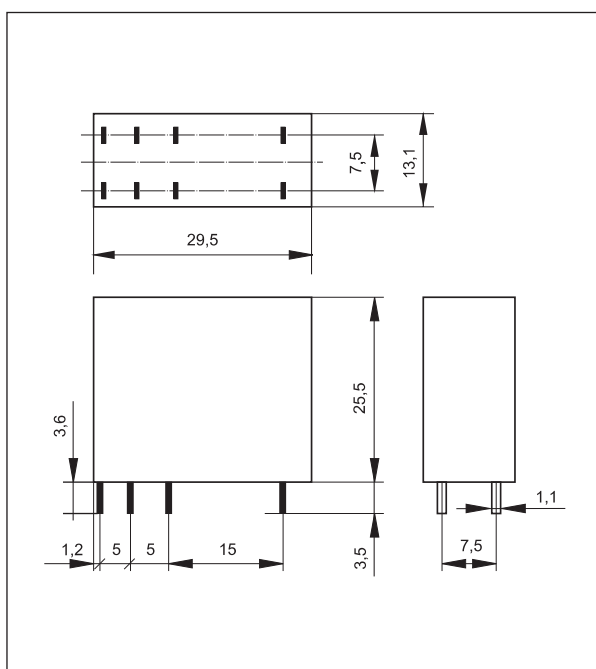
Coil data - DC voltage version

Table 1

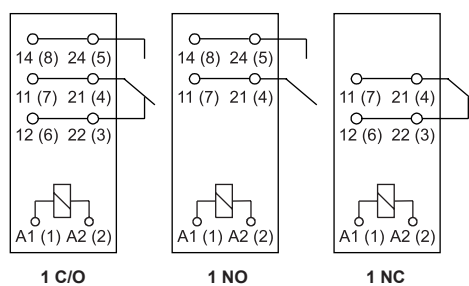
Coil code		Rated voltage V DC	Coil resistance ± 10% at 20 °C Ω	Coil operating range at 20 °C V DC	
Standard version	Sensitive version			min.	max.
1005	—	5	49	3,5	8,9
1006	—	6	68	4,2	10,6
1009	—	9	110	6,3	15,9
<b>1012</b>	—	<b>12</b>	<b>260</b>	<b>8,4</b>	<b>21,2</b>
1018	—	18	550	12,6	31,8
<b>1024</b>	—	<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	S110	110	13 000	77,0	140,0

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

### Dimensions



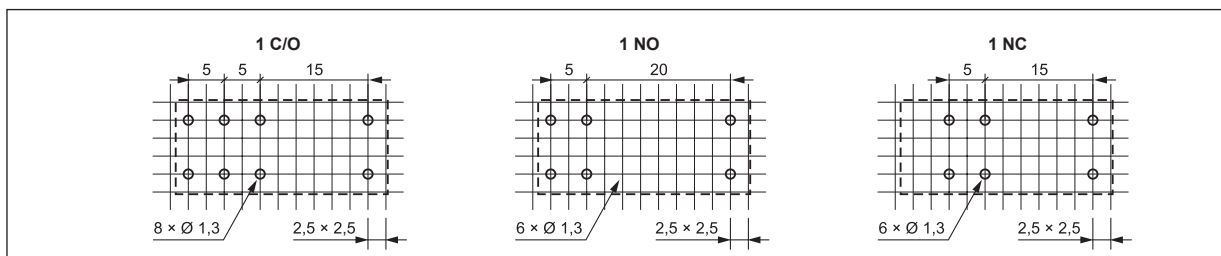
### Connections diagrams (pin side view)



Terminal (pin)	A1(1); A2(2)	21(4); 11(7)	22 (3); 24 (5); 12 (6); 14 (8)
[mm]	0,4 x 1,1	0,2 x 1,1	0,4 x 1,1
Drilling hole: * for relays	∅ 1,3 ± 0,1 mm		

RM83 terminals are doubled for each contact.  
Both terminals are to be used while connecting to load.

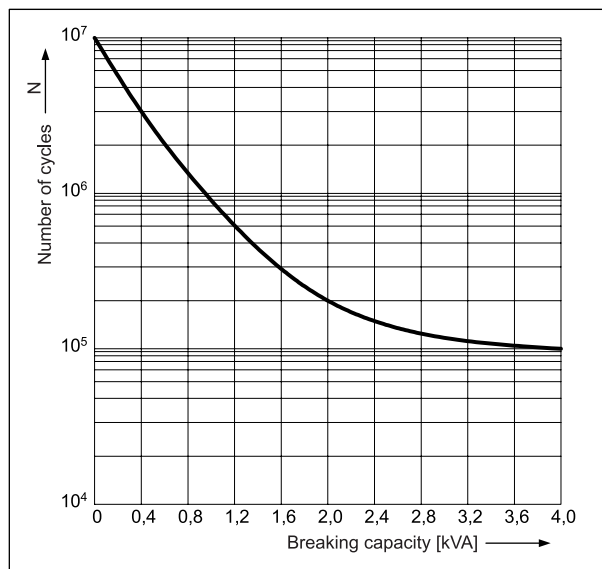
### Mounting openings raster (solder side view)



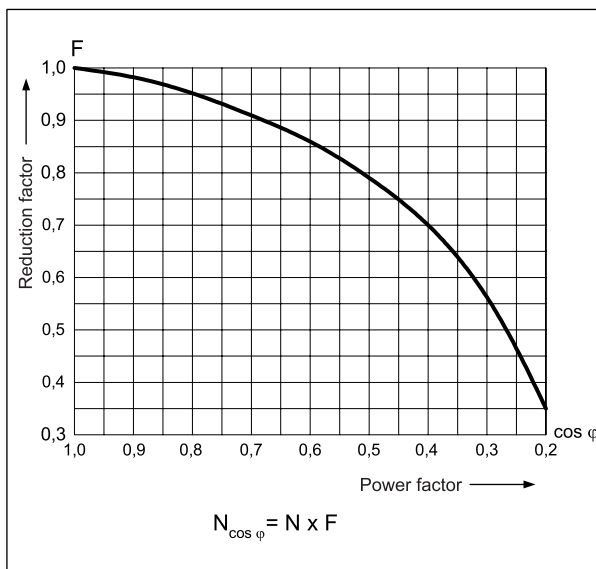
### Mounting

Relays RM83 are designed for direct PCB mounting.

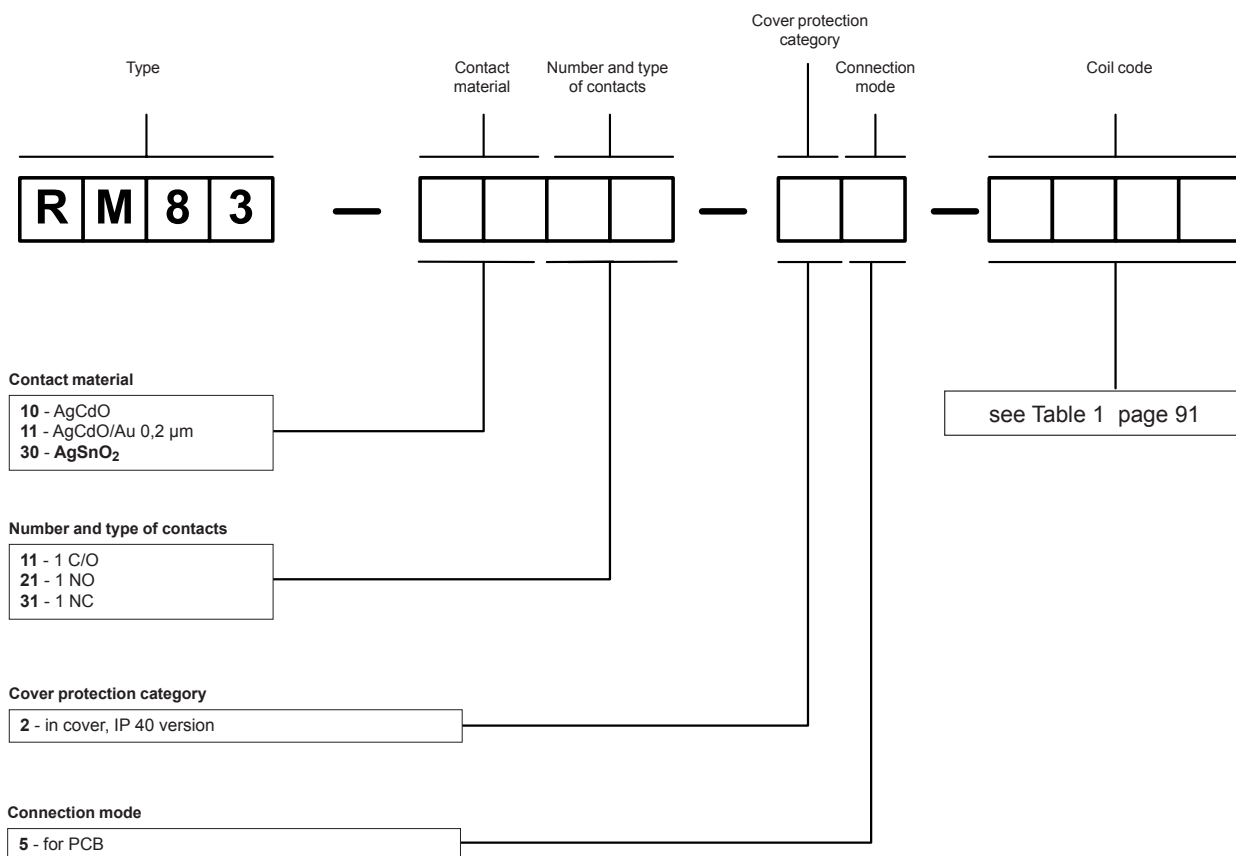
**Electrical life at AC resistive load.**  
**Maximum switching frequency at rated load** Fig. 1



**Electrical life reduction factor at AC inductive load** Fig. 2



### Ordering codes



Examples of ordering codes:

**RM83-3011-25-1024** relay **RM83**, contact material AgSnO<sub>2</sub>, with one changeover contact, in cover IP 40, for PCB, voltage version 24 V DC

**RM83-3011-25-S110** relay **RM83**, contact material AgSnO<sub>2</sub>, with one changeover contact, in cover IP 40, for PCB, voltage sensitive version 110 V DC