



- Cadmium - free contacts
- Miniature size
- Automotive applications
- High inrush current
- for PCB mounting
- Following relays versions are available:  
**RA2** - standard design,  
**RAW2** - narrow pin layout design

## Contacts

Contact number & arrangement	1C/O, 1NO, 2NO		
Contact material	<b>AgSnO<sub>2</sub></b>		
Max. switching voltage	AC/DC	60 V / 60 V	
Min. switching voltage	1 V		
Min. switching current	10 mA		
Max. inrush current	1C/O: 110 A / 50 A (1NO/1NC) 1NO: 110 A      2NO: 2 x 110 A		
Rated current	1C/O: 20 A / 12 A (1NO/1NC) 1NO: 20 A      2NO: 2 x 12,5 A		
Max. breaking capacity	1C/O: 270 W / 162 W (1NO/1NC) 1NO: 270 W      2NO: 2 x 168 W		
Min. breaking capacity	1 W		
Resistance	≤ 3 mΩ		
Max. operating frequency	AC1	900 cycles/hour      2 s ON / 2 s OFF	
• at rated load		450 cycles/hour      2 s ON / 6 s OFF	
• at motor load		120 cycles/hour      2 s ON / 30 s OFF	
• at lamp load		36 000 cycles/hour	
• no load			

## Coil

Rated voltage	DC	5..48 V
Must operate voltage	≤ 0,6 U <sub>n</sub>	
Must release voltage	≥ 0,15 U <sub>n</sub>	
Operating range of supply voltage	see Table 1	
Rated power consumption	DC	1,44 W

## Insulation

Insulation rated voltage	60 V AC	
Dielectric strength	500 V AC	
• coil - contact	500 V AC	
• contact - contact	500 V AC	
Contact - coil distance	≥ 1 mm	
• clearance	≥ 1 mm	
• creepage	≥ 1 mm	

## General data

Operating time (typical value)	10 ms	
Release time (typical value)	3 ms	
Electrical life	DC1	1C/O: > 10 <sup>5</sup> 20/12 A (1NO/1NC), 13,5 V DC 1NO: > 10 <sup>5</sup> 20 A, 13,5 V DC 2NO: > 10 <sup>5</sup> 2 x 12,5 A, 13,5 V DC
Mechanical life (cycles)	> 10 <sup>7</sup>	
Dimensions (L x W x H)	IP 00: 18,6 x 13,0 x 18,5 mm IP 40: 20,5 x 15,3 x 19,7 mm	
Weight	12 g	
Ambient temperature	-40...+100 °C	
• storing	-40...+85 °C	
• operating		
Cover protection category	IP 40 or IP 00 (without housing)	
Solder bath temperature	max. 270 °C	
Soldering time	max. 5 s	

Standard contact material marked with bolt type.



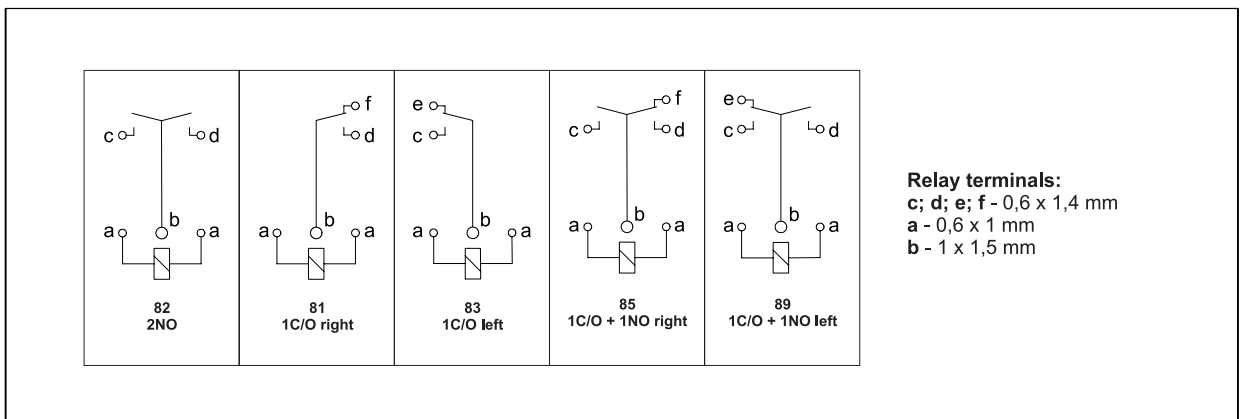
Coil data - DC voltage version

Table 1

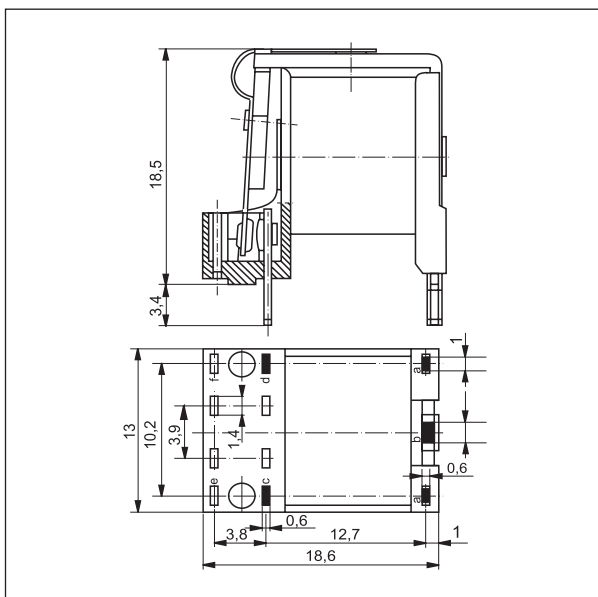
Coil code	Rated voltage V DC	Coil resistance ±10% at 20 °C Ω	Coil operating range at 85 °C V DC	
			min.	max.
1005	5	18	4,0	6,6
1006	6	24	4,8	8,0
1009	9	55	7,2	12,0
<b>1012</b>	<b>12</b>	<b>100</b>	<b>9,6</b>	<b>16,0</b>
1015	15	152	12,0	20,0
1018	18	230	14,4	23,9
1024	24	390	19,2	31,9
1048	48	1 590	38,4	63,8

Standard coil rated voltages marked with bold type.

Connections diagram (pin side view)

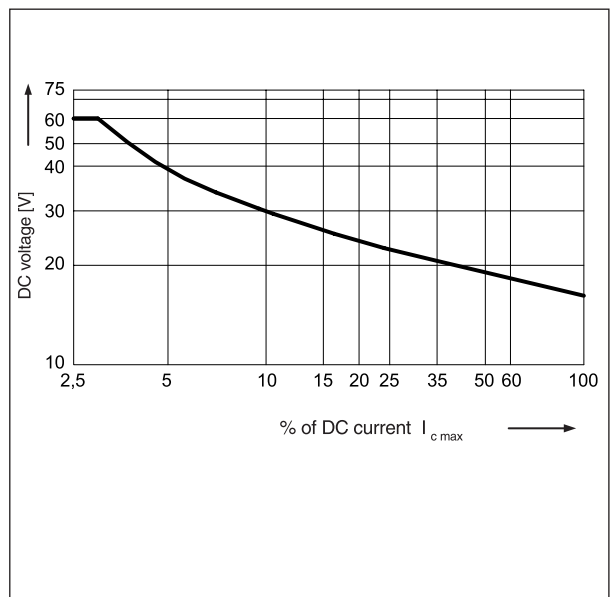


Dimensions



Max. DC resistive load breaking capacity

Fig. 1



**Mounting**

Relays RA2 are designed for direct PCB mounting.

**Ordering codes**

