

RMP85

miniature relays

130

MINIATURE

version AC



version DC



- Cadmium - free contacts • Height 25,5 mm
- 5000 V / 8 mm reinforced insulation
- For plug-in sockets
- Accessories: sockets and modules
- AC and DC coils
- WT (mechanical indicator + lockable front test button)
 - standard features of relays
- Recognitions, certifications, directives: RoHS, **CE**

Contact data

Number and type of contacts		1 CO
Contact material		AgNi
Rated / max. switching voltage	AC	250 V / 440 V
Min. switching voltage		12 V 10 mA
Rated load	AC1	16 A / 250 V AC
Min. switching current		10 mA 12 V
Max. inrush current		32 A 20 ms
Rated current		16 A
Max. breaking capacity	AC1	4 000 VA
Min. breaking capacity		0,12 W 10 mA / 12 V
Contact resistance		≤ 100 mΩ 1 A / 6 V DC
Max. operating frequency		
• at rated load	AC1	360 cycles/hour
• no load		18 000 cycles/hour

Coil data

Rated voltage	50 Hz AC	24, 115, 230 V
	DC	12, 24, 48, 110 V
Must release voltage		AC: ≥ 0,15 U _n DC: ≥ 0,1 U _n
Operating range of supply voltage		see Tables 1, 2
Rated power consumption	AC	0,75 VA ①
	DC	0,4 ... 0,48 W ①

Insulation according to EN 60664-1

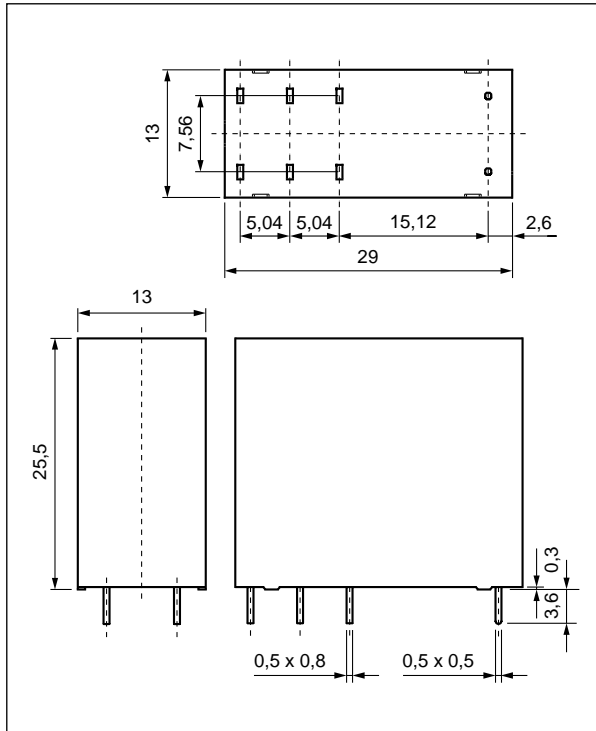
Insulation rated voltage		440 V AC
Rated surge voltage		4 000 V 1,2 / 50 μs
Overvoltage category		III
Insulation pollution degree		3
Insulation resistance		1 000 MΩ 500 V DC
Dielectric strength		
• between coil and contacts		5 000 V AC type of insulation: reinforced
• contact clearance		1 000 V AC type of clearance: micro-disconnection
Contact - coil distance		
• clearance		≥ 8 mm
• creepage		≥ 8 mm

General data

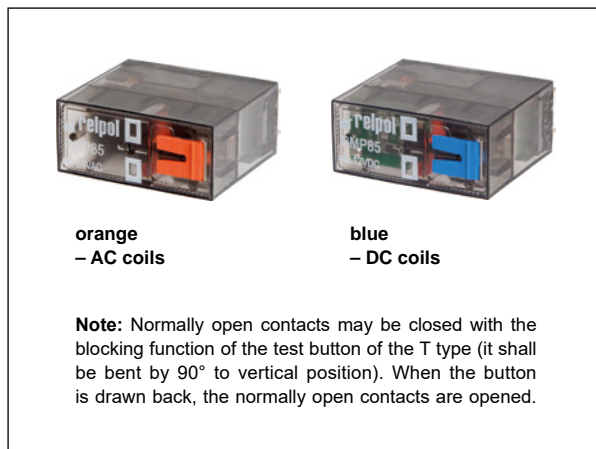
Operating / release time (typical values)		15 ms / 8 ms
Electrical life	• resistive AC1	> 3 x 10 ⁴ AC coils, 16 A, 250 V AC, ON for 5 s / OFF for 5 s
(number of cycles)		> 10 ⁴ DC coils, 16 A, 250 V AC, ON for 5 s / OFF for 5 s
		> 3 x 10 ⁴ 16 A, 250 V AC, 70 °C, ON for 1 s / OFF for 9 s
Mechanical life (cycles)		> 10 ⁶ AC coils
		> 5 x 10 ⁶ DC coils
Dimensions (L x W x H)		29 x 13 x 25,5 mm
Weight		16 g
Ambient temperature	• storage	-40...+70 °C
(non-condensation and/or icing)	• operating	-40...+70 °C ② ③
Cover protection category		IP 40 EN 60529
Environmental protection		RTII EN 61810-7
Relative humidity		5...85%
Shock resistance		10 g
Vibration resistance	(NO/NC)	10 g / 5 g length direction: 10 g / 2 g ④ 10...150 Hz
Solder bath temperature		max. 270 °C
Soldering time		max. 5 s

The data in bold type relate to the standard versions of the relays. **①** The data don't include the power of electronic indicating circuit when the relay picks-up. **②** Operating temperature for relays mounted in sockets on 35 mm rail mount: -40...+55 °C. **③** The distance between the relays mounted side by side: min. 5 mm for versions AC; min. 1,5 mm for versions DC.

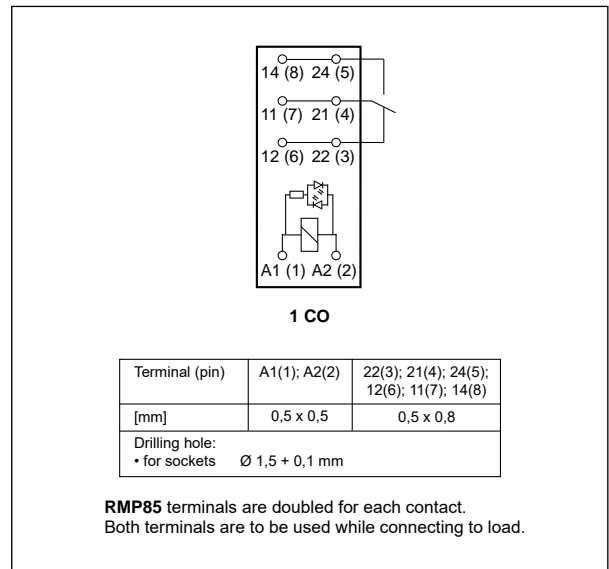
Dimensions



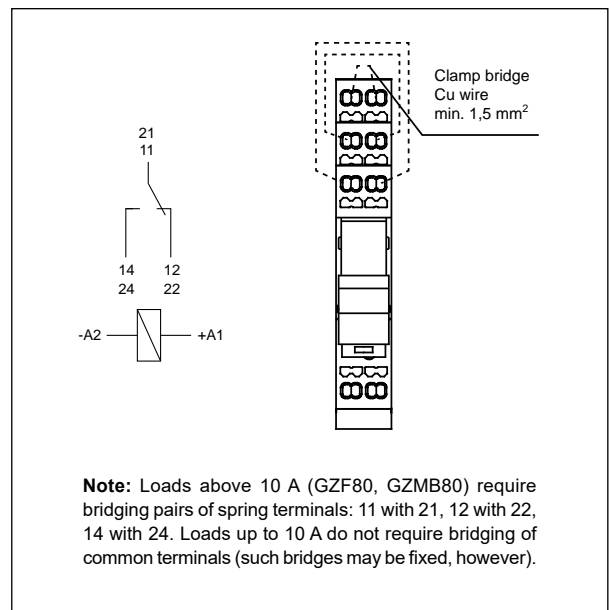
Test buttons type T



Connection diagram (pin side view)

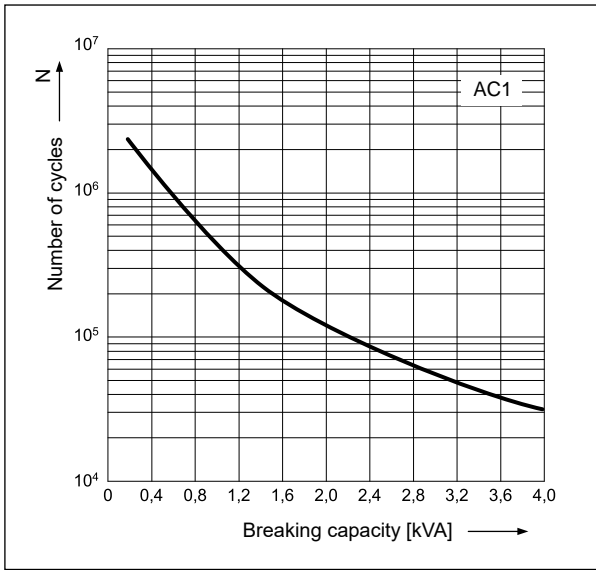


Connection of GZ.80 sockets



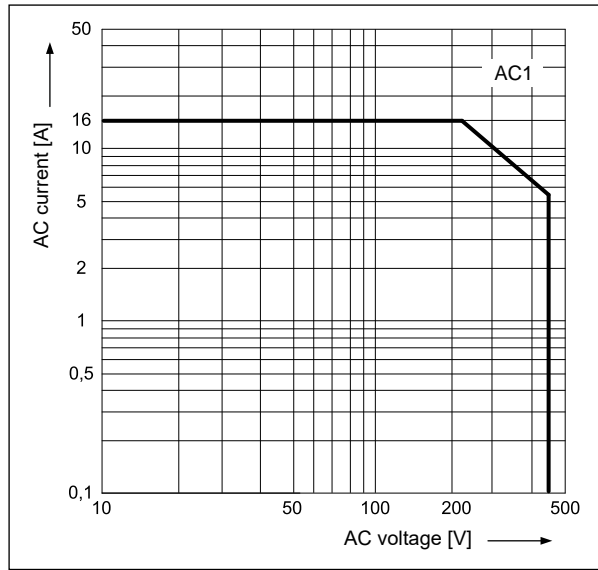
Electrical life at AC resistive load.
Switching frequency: 360 cycles/hour

Fig. 1



Max. AC 50 Hz resistive load breaking capacity

Fig. 2



Mounting, sockets and accessories for relays

Relays **RMP85** ④ are designed for mounting in plug-in sockets.

Sockets for RMP85	Accessories			Additional features
	Retainer / retractor clips	Spring wire clips	Description plates	
Screw terminals sockets, 35 mm rail mount (acc. to EN 60715) or on panel mounting (one M3 screw)				
GZF80 ④	–	GZ80-1001	–	–
Spring terminals sockets, 35 mm rail mount (acc. to EN 60715)				
GZMB80 ④ ⑤	GZMB80-0025	GZM80-0025	TR	modules ⑥
Sockets for PCB				
EC 50	–	MH25-2	–	–
GD50	–	MH25-2	–	–

④ The distance between the relays mounted side by side: min. 5 mm for versions AC; min. 1,5 mm for versions DC. ④ Sockets GZ.80: load connection - see page 131. ⑤ Sockets GZMB80: wire connection - see page 361. ⑥ Signalling / protecting modules type M... - see page 376.

GZF80, GZMB80, EC 50, GD50

Plug-in sockets for relays RMP84, RMP85 - see pages 361-362



Coil data - DC voltage version

Table 1

Coil code	Rated voltage V DC	Coil resistance at 23 °C Ω	Acceptable resistance	Coil operating range V DC ⑦	
				min. (0...+70 °C)	max. (0...+70 °C)
1012	12	360	± 10%	8,4	18,0
1024	24	1 440	± 10%	16,8	36,0
1048	48	5 760	± 15%	33,6	72,0
1110	110	25 200	± 15%	77,0	165,0

The data in bold type relate to the standard versions of the relays. ⑦ The max. allowable voltage is coil overdrive voltage, it is the instantaneous max. voltage which the relay coil could endure in very short time. Relays with 48 V DC and 110 V DC coils shall be absolutely protected against any possibility of operation at voltages higher than the rated voltage.

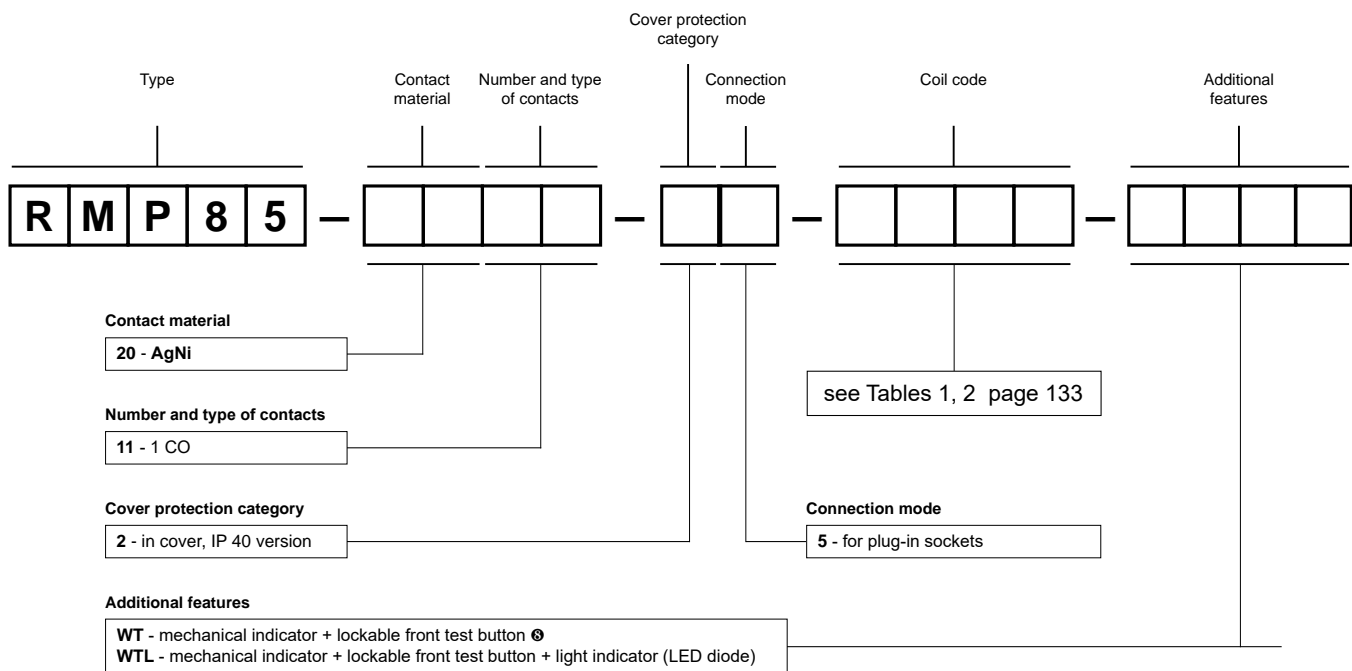
Coil data - AC 50 Hz voltage version

Table 2

Coil code	Rated voltage V AC	Coil resistance at 23 °C Ω	Acceptable resistance	Coil operating range V AC 50 Hz	
				min. (0...+70 °C)	max. (0...+70 °C)
5024	24	350	± 10%	18,0	26,4
5115	115	8 100	± 15%	86,3	126,5
5230	230	32 500	± 15%	172,5	253,0

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

Ordering codes



③ WT - standard features of relays. Test buttons type T - see page 131.

Examples of ordering code:

RMP85-2011-25-1024-WT

relay **RMP85**, for plug-in sockets, one changeover contact, contact material AgNi, coil voltage 24 V DC, with mechanical indicator and lockable front test button, in cover IP 40

RMP85-2011-25-5230-WTL

relay **RMP85**, for plug-in sockets, one changeover contact, contact material AgNi, coil voltage 230 V AC 50 Hz, with mechanical indicator and lockable front test button and light indicator (LED diode), in cover IP 40