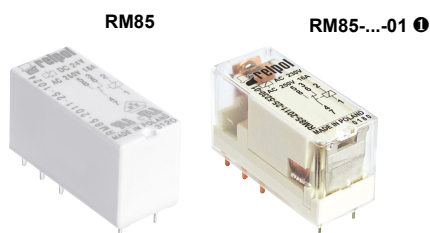


# RM85

## miniature relays



- Cadmium - free contacts • Height 15,7 mm
- 5000 V / 10 mm reinforced insulation
- For PCB and plug-in sockets
- Accessories: sockets and modules • AC and DC coils
- Available special versions: with transparent cover ❶;  
with the increased dielectric strength of the contact clearance ❷
- Compliance with standard PN-EN 60335-1
- Recognitions, certifications, directives: RoHS,

### Contact data

|                                |                                                                                                                                                                               |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number and type of contacts    | 1 CO, 1 NO ❷                                                                                                                                                                  |
| Contact material               | <b>AgNi</b> , AgNi/Au hard gold plating, AgSnO <sub>2</sub>                                                                                                                   |
| Rated / max. switching voltage | AC 250 V / 440 V                                                                                                                                                              |
| Min. switching voltage         | 5 V AgNi, 5 V AgNi/Au hard gold plating, 10 V AgSnO <sub>2</sub>                                                                                                              |
| Rated load (capacity)          | AC1 16 A / 250 V AC<br>AC15 3 A / 120 V 1,5 A / 240 V (B300)<br>AC3 750 W (single-phase motor)<br>DC1 16 A / 24 V DC (see Fig. 3)<br>DC13 0,22 A / 120 V 0,1 A / 250 V (R300) |
| Min. switching current         | 5 mA AgNi, 2 mA AgNi/Au hard gold plating, 10 mA AgSnO <sub>2</sub>                                                                                                           |
| Max. inrush current            | 30 A AgSnO <sub>2</sub>                                                                                                                                                       |
| Rated current                  | 16 A                                                                                                                                                                          |
| Max. breaking capacity         | AC1 4 000 VA                                                                                                                                                                  |
| Min. breaking capacity         | 0,3 W AgNi, 0,05 W AgNi/Au hard gold plating, 1 W AgSnO <sub>2</sub>                                                                                                          |
| Contact resistance             | ≤ 100 mΩ                                                                                                                                                                      |
| Max. operating frequency       |                                                                                                                                                                               |
| • at rated load                | AC1 600 cycles/hour                                                                                                                                                           |
| • no load                      | 72 000 cycles/hour                                                                                                                                                            |

### Coil data

|                                   |                                                    |
|-----------------------------------|----------------------------------------------------|
| Rated voltage                     | 50/60 Hz AC 12 ... 240 V<br>DC 3 ... 110 V         |
| Must release voltage              | AC: ≥ 0,15 U <sub>n</sub> DC: ≥ 0,1 U <sub>n</sub> |
| Operating range of supply voltage | see Tables 1, 2 and Fig. 4, 5                      |
| Rated power consumption           | AC 0,75 VA<br>DC 0,4 ... 0,48 W                    |

### Insulation according to PN-EN 60664-1

|                             |                                                                                                                                                                                                                    |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Insulation rated voltage    | 400 V AC                                                                                                                                                                                                           |
| Rated surge voltage         | 4 000 V 1,2 / 50 μs                                                                                                                                                                                                |
| Overvoltage category        | III                                                                                                                                                                                                                |
| Insulation pollution degree | 3                                                                                                                                                                                                                  |
| Dielectric strength         | • between coil and contacts 5 000 V AC type of insulation: reinforced<br>• contact clearance 1 000 V AC type of clearance: micro-disconnection<br>2 000 V AC contact 1 NO, type of clearance: full-disconnection ❷ |
| Contact - coil distance     | • clearance ≥ 10 mm                                                                                                                                                                                                |
| • creepage                  | ≥ 10 mm                                                                                                                                                                                                            |

### General data

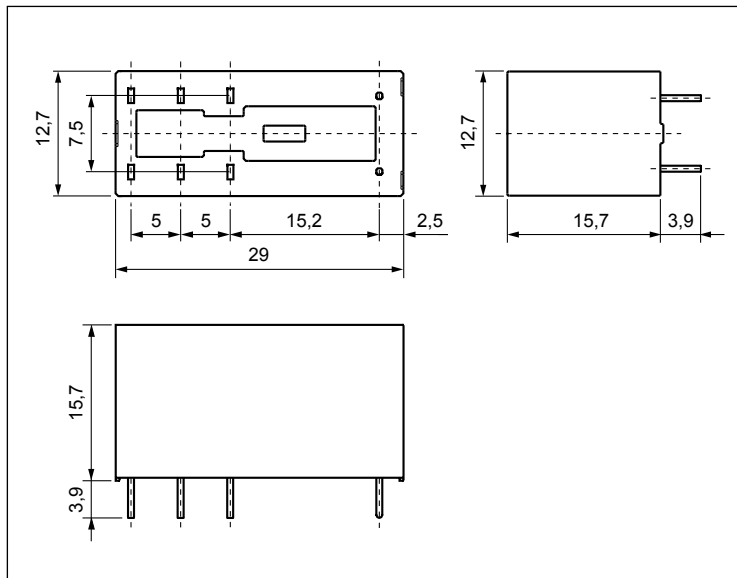
|                                           |                                                                                                       |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Operating / release time (typical values) | 7 ms / 3 ms                                                                                           |
| Electrical life (number of cycles)        |                                                                                                       |
| • resistive AC1                           | > 0,7 x 10 <sup>5</sup> 16 A, 250 V AC<br>> 10 <sup>4</sup> 20 A, 250 V AC, 85 °C (RM85-3021-25-1...) |
| • cosφ                                    | see Fig. 2                                                                                            |
| • DC L/R=40 ms                            | > 10 <sup>5</sup> 0,15 A, 220 V DC                                                                    |
| Mechanical life (cycles)                  | > 3 x 10 <sup>7</sup>                                                                                 |
| Dimensions (L x W x H) / Weight           | 29 x 12,7 x 15,7 mm / 14 g                                                                            |
| Ambient temperature                       | • storage -40...+85 °C<br>• operating AC: -40...+70 °C DC: -40...+85 °C -20...+70 °C ❶                |
| Cover protection category                 | IP 40 ❶ or IP 67 PN-EN 60529                                                                          |
| Environmental protection                  | RTII ❶ or RTIII PN-EN 116000-3                                                                        |
| Shock resistance                          | 30 g                                                                                                  |
| Vibration resistance                      | 10 g 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. ❶ Relate to the special versions - relays with transparent cover, only available with IP 40 and RTII, operating temperature -20...+70 °C. See "Ordering codes". ❷ Relate to the special versions - relays with one normally open contact 1 NO, with increased contact gap - dielectric strength 2000 V AC, only available with DC coils. See "Ordering codes".

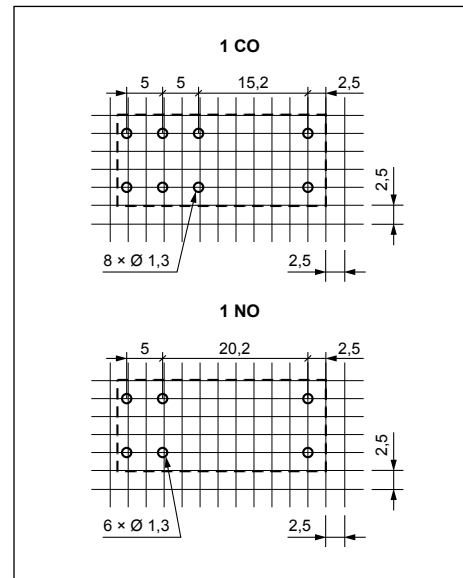
# RM85

## miniature relays

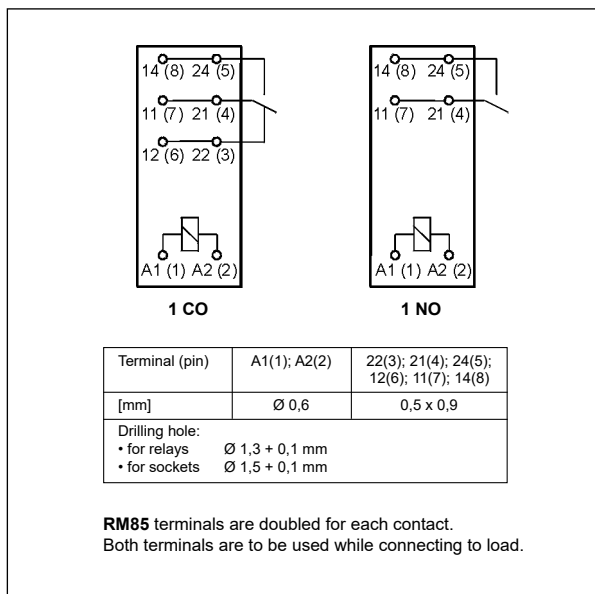
### Dimensions



### Pinout (solder side view)



### Connection diagrams (pin side view)



### Connection of GZ... sockets

