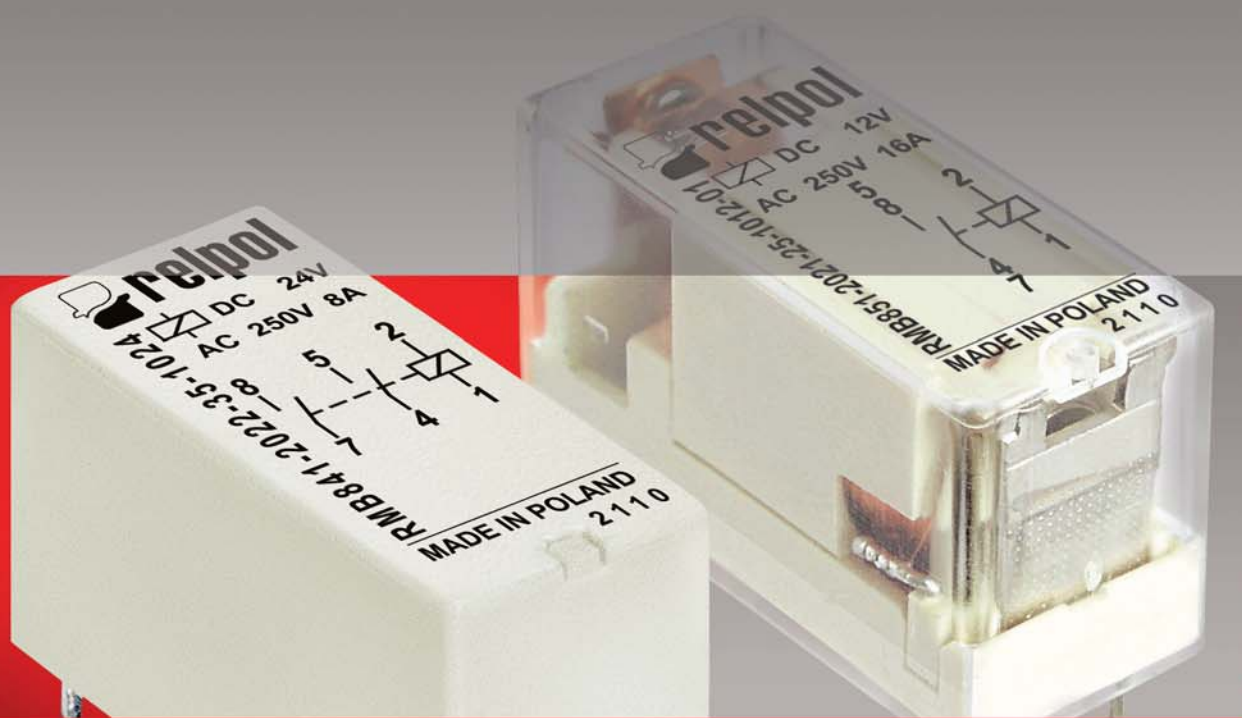


RMB841 RMB851

miniature relays,
bistable with one coil



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2012 - 2013

 **repol**® S.A.

RMB841, RMB851

miniature relays, bistable with one coil

Application range

- Battery-powered devices
- Other devices where the minimum power consumption is critical

Features

- Miniature relays, bistable with one coil ❶
- Cadmium - free contacts
- Height 15,7 mm
- 5000 V / 10 mm reinforced insulation
- For PCB and plug-in sockets
- Accessories: sockets
- DC coils
- Available special versions: with transparent cover ❷, the use of transparent covers in relays allows visual observation of their work and facilitates location of defects in electrical circuits
- Compliance with standards: PN-EN 60335-1, PN-EN 61810-1, UL508
- Recognitions, certifications, directives: RoHS

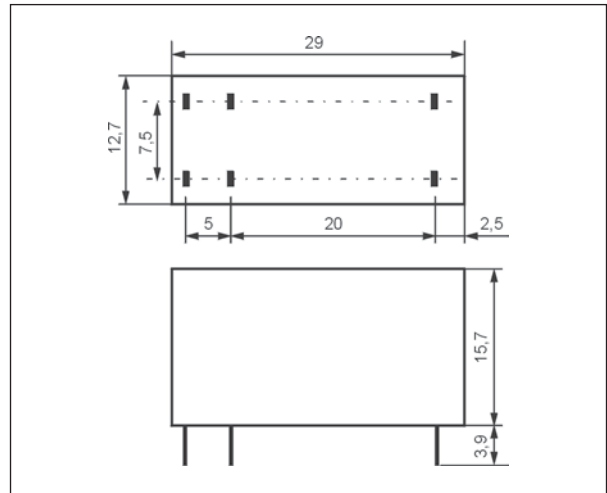
Mounting

Relays **RMB841** ❸, **RMB851** ❹ ❺ are designed for:

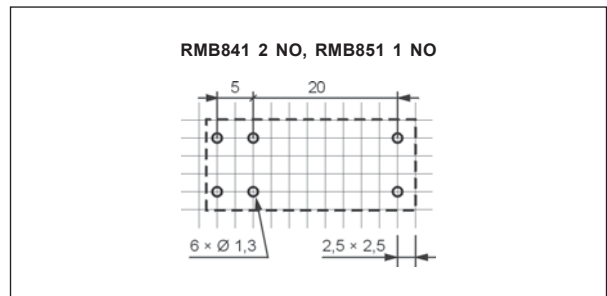
- direct PCB mounting
- screw terminals plug-in sockets **GZT80** ❹ ❺ and **GZM80** ❹ ❺ with clip **GZT80-0040** or **GZM80-0041**; plug-in sockets **GZS80** ❹ ❺ with clip **GZS-0040** or **GZM80-0041**, 35 mm rail mount acc. to PN-EN 60715 or on panel mounting with one M3 screw
- plug-in sockets for PCB mounting **EC50** with clip **MP16-2**, MH16-2; plug-in sockets **PW80** with clip **MH16-2**; plug-in sockets **GD50** with clip **MP16-2**, GD-0016, MH16-2

- ❶ Relays must be energizing only in pulse mode. Min. time of pulse duration 15 ms.
- ❷ For special version - relays in transparent cover: only available with IP 40 and RTII, operating temperature -20...+70 °C - see "Ordering codes"
- ❸ For special version - relays in transparent cover: keep the distance between the mounting relays min. 5 mm.
- ❹ For RMB851: Loads above 12 A (GZT80, GZM80) or 10 A (GZS80) require bridging pairs of terminals: 11 with 21, 14 with 24. Loads up to 12 A (GZT80, GZM80) or 10 A (GZS80) do not require bridging of common terminals.
- ❺ Plug-in sockets **GZT80**, **GZM80** and **GZS80** may be linked with interconnection strip type **ZGGZ80**.

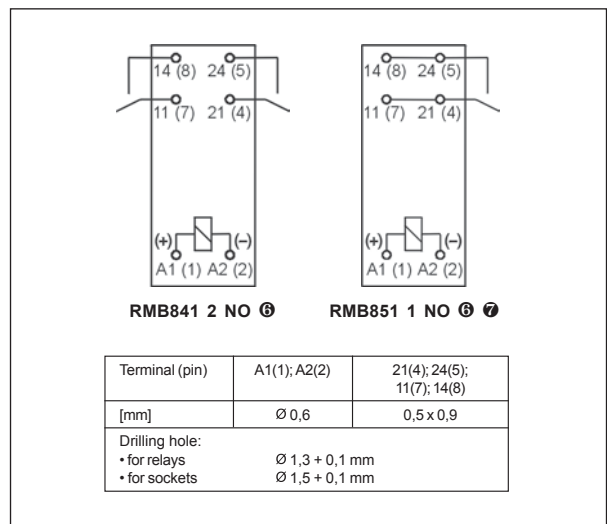
Dimensions



Pinout (solder side view)



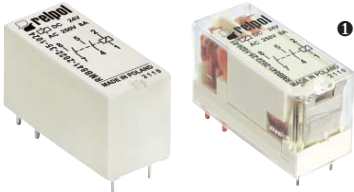
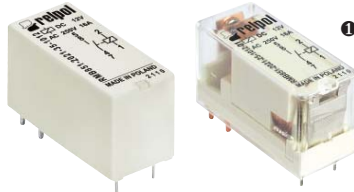







Connection diagrams (pin side view)



- ❸ Contact position not defined at delivery. The polarization shown in the figures is required for on-position of the contacts.
- ❹ RMB851 terminals are doubled for each contact. Both terminals are to be used while connecting to load.

RMB841, RMB851

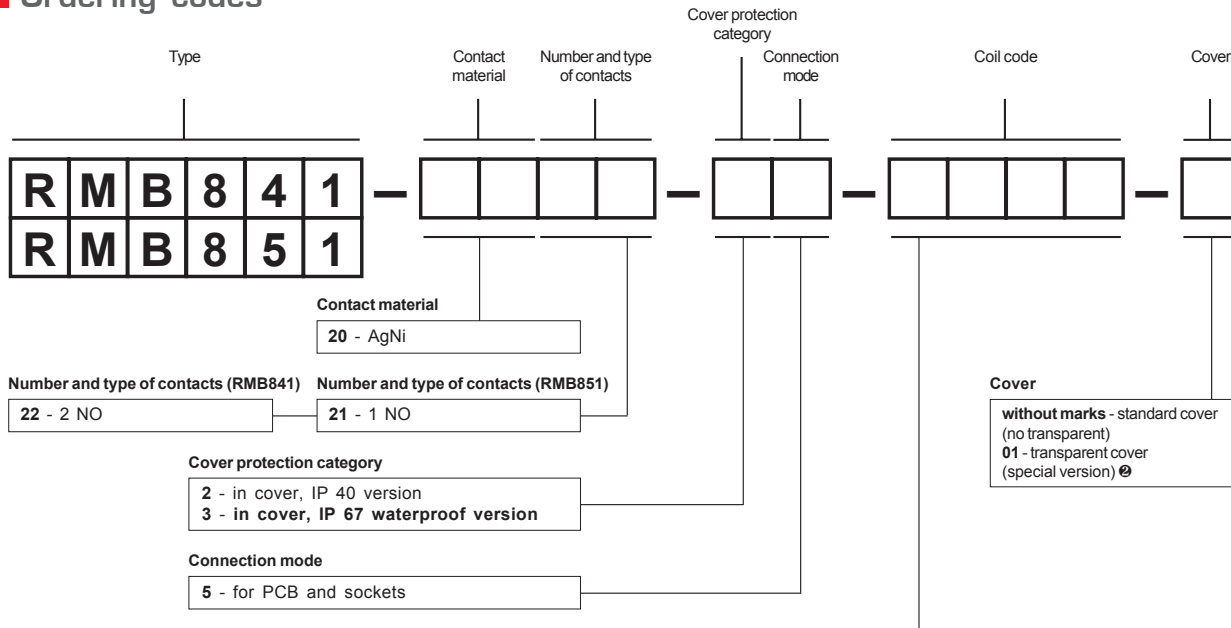
miniature relays, bistable with one coil

| Type of relay | RMB841 | RMB851 |
|--|---|---|
| |  |  |
| NEW product  | | |
| Contact data | | |
| Number and type of contacts | 2 NO (normally open) | 1 NO (normally open) |
| Contact material | AgNi | AgNi |
| Rated / max. switching voltage | AC 250 V / 400 V | 250 V / 400 V |
| Max. switching voltage | DC 250 V | 250 V |
| Min. switching voltage | 5 V | 5 V |
| Rated load (capacity) | AC1 8 A / 250 V AC DC1 8 A / 24 V DC | 16 A / 250 V AC 16 A / 24 V DC |
| Min. switching current | 5 mA | 5 mA |
| Max. inrush current | 15 A | 30 A |
| Rated current | 8 A | 16 A |
| Max. breaking capacity | AC1 2 000 VA | 4 000 VA |
| Min. breaking capacity | 0,3 W | 0,3 W |
| Contact resistance | $\leq 100 \text{ m}\Omega$ | $\leq 100 \text{ m}\Omega$ |
| Max. operating frequency | • at rated load AC1: 600 cycles/hour • no load 72 000 cycles/hour | AC1: 600 cycles/hour 72 000 cycles/hour |
| Coil data | | |
| Rated voltage | DC 3 ... 24 V see Table "Coil data" | 3 ... 24 V see Table "Coil data" |
| Minimum voltages of | • pick-up / reset position 0,75 U_n / 0,5 U_n see Table "Coil data" | 0,75 U_n / 0,5 U_n see Table "Coil data" |
| Supply voltage pulse duration time | min. 15 ms / max. 1 min. | min. 15 ms / max. 1 min. |
| Rated power consumption | DC 0,9 W | 0,9 W |
| Insulation according to PN-EN 60664-1 | | |
| Insulation rated voltage | 400 V AC | 400 V AC |
| Rated surge voltage | 4 000 V 1,2 / 50 μs | 4 000 V 1,2 / 50 μs |
| Overvoltage category | III | III |
| Insulation pollution degree | 3 | 3 |
| Dielectric strength | 5 000 V AC type of insulation: reinforced 1 000 V AC type of clearance: micro-disconnection | 5 000 V AC type of insulation: reinforced 1 000 V AC type of clearance: micro-disconnection |
| • between coil and contacts | | |
| • contact clearance | | |
| • pole - pole | 2 500 V AC type of insulation: basic | – |
| Contact - coil distance | • clearance $\geq 10 \text{ mm}$ • creepage $\geq 10 \text{ mm}$ | $\geq 10 \text{ mm}$ $\geq 10 \text{ mm}$ |
| General data | | |
| Operating / release time (typical values) | 3 ms / 2 ms | 3 ms / 2 ms |
| Electrical life (number of cycles) | • resistive AC1 3 x 10 ⁴ 8 A, 250 V AC • DC L/R=40 ms 10 ⁵ 0,15 A, 220 V DC | 3 x 10 ⁴ 16 A, 250 V AC 10 ⁵ 0,15 A, 220 V DC |
| Mechanical life (cycles) | 2 x 10 ⁶ | 5 x 10 ⁶ |
| Dimensions (L x W x H) | 29 x 12,7 x 15,7 mm | 29 x 12,7 x 15,7 mm |
| Weight | 14 g | 14 g |
| Ambient temperature | • storage -40...+85 °C • operating -20...+85 °C -20...+70 °C  | -40...+85 °C -20...+85 °C -20...+70 °C  |
| Cover protection category | IP 40  or IP 67 PN-EN 60529 | IP 40  or IP 67 PN-EN 60529 |
| Environmental protection | RTII  or RTIII PN-EN 116000-3 | RTII  or RTIII PN-EN 116000-3 |
| Shock resistance | • for contact state 11 g / 18 g open / closed contact | 11 g / 18 g open / closed contact |
| Vibration resistance | 10...150 Hz | |
| • for contact state | 10 g / 5 g open / closed contact | 10 g / 5 g open / closed contact |
| Solder bath temperature | max. 270 °C | max. 270 °C |
| Soldering time | max. 5 s | max. 5 s |

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Ordering codes



Coil data - DC voltage version

| Coil code | Rated voltage VDC | Coil resistance at 20 °C Ω | Acceptable resistance | Minimum pick-up voltage V DC (at 20 °C) | Reset ② - minimum voltage V DC (at 20 °C) |
|-------------|-------------------|----------------------------|-----------------------|---|---|
| 1003 | 3 | 10 | ± 10% | 2,25 | 1,5 |
| 1005 | 5 | 28 | ± 10% | 3,75 | 2,5 |
| 1006 | 6 | 40 | ± 10% | 4,5 | 3,0 |
| 1012 | 12 | 160 | ± 10% | 9,0 | 6,0 |
| 1024 | 24 | 640 | ± 10% | 18,0 | 12,0 |

The data in bold type pertain to the standard versions of the relays.
 ② Minimum voltage value required to reset the relay - open the contact.

Examples of ordering code:

RMB841-2022-35-1024

bistable relay with one coil **RMB841**, for PCB and sockets, two normally open contacts, contact material AgNi, coil voltage 24 V DC, in standard cover (no transparent) IP 67

RMB851-2021-25-1012-01

bistable relay with one coil **RMB851**, for PCB and sockets, one normally open contact, contact material AgNi, coil voltage 12 V DC, in transparent cover (special version) IP 40



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