RPB-1PM-A230

RPB-1PM-U24

NEW

- **Bistable - impulse relays type "ON-OFF", single-function with memory**
- Cadmium - free contacts 1 CO • AC and AC/DC input voltages
- Cover - modular, width 17,5 mm
- Direct mounting on 35 mm rail mount acc. to EN 60715
- Applications: in cooperation with control switches and buttons ❶; electric systems; switchgears of modular equipment
- Compliance with standard EN 61810
- Recognitions, certifications, directives: RoHS, EMC ❷ CE EAC

Output circuit - contact data

Number and type of contacts		1 CO	
Contact material		$AgSnO_2$	
Max. switching voltage		300 V AC / 300 V DC	
Rated load	AC1	16 A / 250 V AC	
	DC1	16 A / 24 V DC	
Max. inrush current		30 A	
Rated current		16 A	
Max. breaking capacity	AC1	4 000 VA	
Min. breaking capacity		1 W 10 V, 10 mA	
Contact resistance		≤ 100 mΩ	
Max. operating frequency	• at rated load AC1	600 cycles/hour	
	• no load	3 600 cycles/hour	

Input circuit - coil data

Rated voltage	50/60 Hz AC	230 V	terminals A1, A2
	AC: 50/60 Hz AC/DC	24 V	terminals (-/+)A1, (+/-)A2
Must release voltage		AC: ≥ 0,15 U_n	DC: ≥ 0,05 U_n
Operating range of supply voltage		0,85...1,15 U_n	see Tables 1, 2
Rated power consumption		≤ 0,5 W	230 V AC, 50/60 Hz
		≤ 0,8 W	24 V AC/DC, 50/60 Hz
Control contact S ❶	• load	ΣI < 5 mA	
	• min. voltage ❸	0,85 U_n	
	• min. time of pulse duration ❸	≥ 55 ms	

Insulation according to EN 60664-1

Insulation rated voltage		250 V AC	
Rated surge voltage		4 000 V 1,2 / 50 µs	
Overvoltage category		III	
Insulation pollution degree		2	
Flammability class		V-0	for modular cover, UL 94
Dielectric strength	• input - output	4 000 V AC	type of insulation: basic
	• contact clearance	1 000 V AC	type of clearance: micro-disconnection

General data

Operating / release time (typical values)		60 ms / 60 ms	
Electrical life	• resistive AC1	$0,5 \times 10^5$	contact 1 NO, 16 A, 250 V AC ❹
Mechanical life (cycles)		10^7	
Operation cycle		1:1	
Dimensions (L x W x H)		90 ❺ x 17,5 x 64,6 mm	
Weight		65 g	
Ambient temperature	• storage	-40...+70 °C	
(non-condensation and/or icing)	• operating	-20...+55 °C	
Cover protection category		IP 20	EN 60529
Relative humidity		up to 85%	
Shock / vibration resistance		15 g / 0,35 mm DA 10...55 Hz	

Function data

Functions	SET/RESET with memory (NORMAL)
LED indicator	green LED U ON - indication of supply voltage U yellow LED R ON/OFF - output relay status

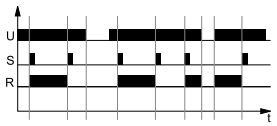
❶ Control contact S provides control of switching ON/OFF of receivers (lighting or other devices) from a few different points, with the use of connected in parallel momentary (doorbell) switches or lit-up buttons (ΣI < 5 mA). ❷ EMC tests (electromagnetic compatibility): EN 55011, EN 61000-4-2/3/4/5/6/11. ❸ Where the control signal is recognizable. ❹ Continuous voltage applied between A1, A2, activated with the control contact S. ❺ Length with 35 mm rail catches: 98,8 mm.

23.12.2020

Export Sales Department phone +48 68 47 90 832, 951 • e-mail: export@relpol.com.pl

Functions

SET/RESET with memory (NORMAL) - Switching ON and OFF with memory, controlled by pulses on the contact S.



When a pulse occurs on the control input S, the output relay R is activated (SET). This status lasts until another control pulse occurs - then, the output relay R is switched off (RESET).
Further pulses which will occur on the control input S will change the R contact status into an opposite one.
In case the U supply is interrupted and then switched on again, the R contact of the output relay will return to the status prior to switching the U supply off, and the relay will start operation according to the foregoing function.

Additional functions

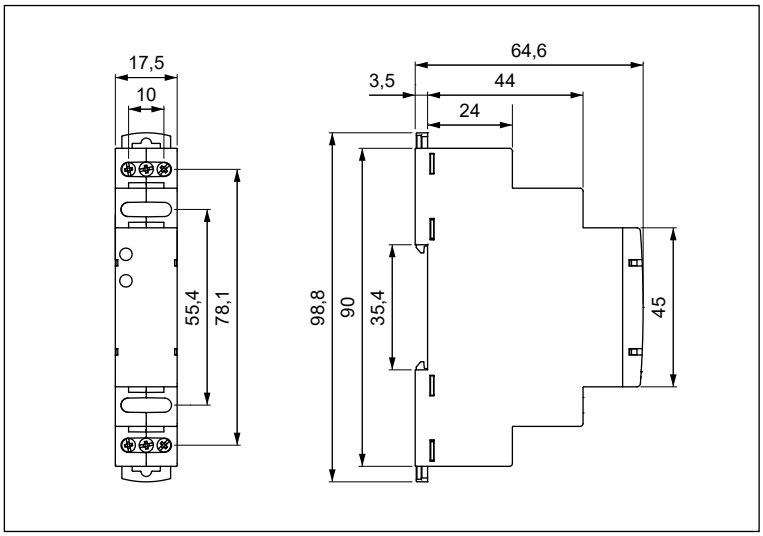
LEDs: green U, yellow R - are lit permanently.

Triggering: the relay is triggered by connecting the contact S to the A1 terminal, from connected in parallel control switches / buttons. For DC supply, the positive pole may be connected to the A1 or A2 terminal.

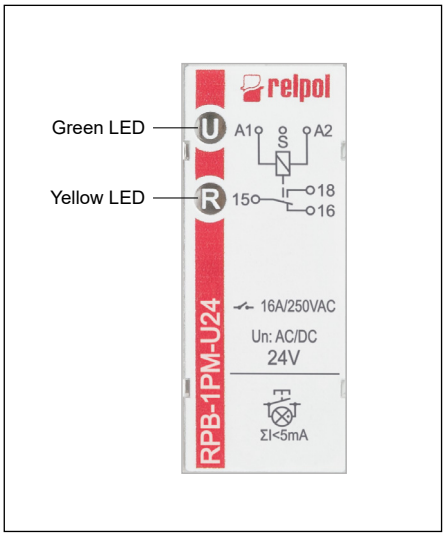
Supply:
- **RPB-1PM-A230**: the relay may be supplied with AC voltage 50/60 Hz of 195,5...264,5 V,
- **RPB-1PM-U24**: the relay may be supplied with DC voltage or AC voltage 50/60 Hz of 20,4...27,6 V.

U - supply voltage; **R** - output state of the relay; **t** - time axis

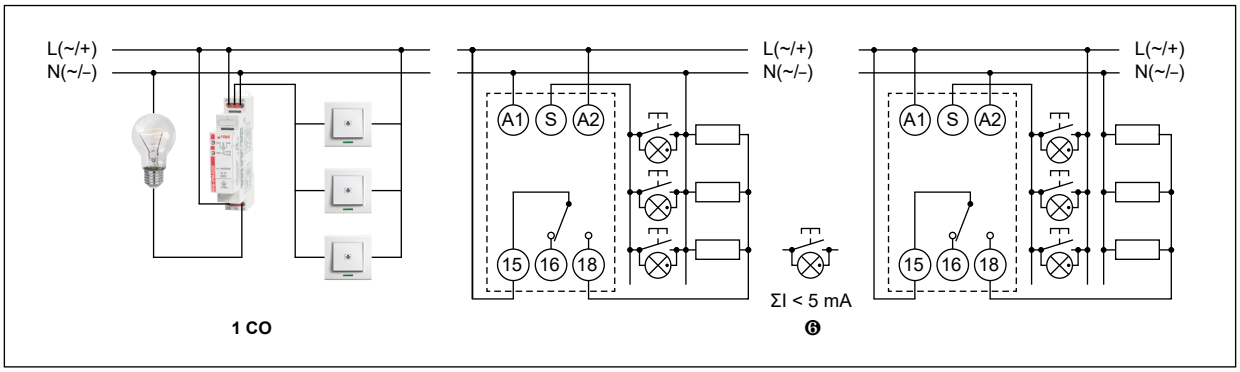
Dimensions



Front panel description



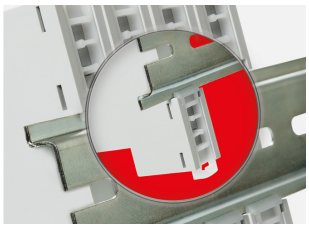
Connection diagrams



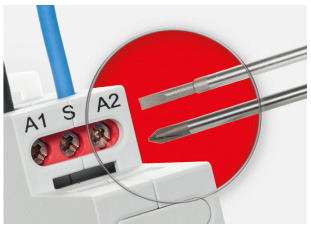
Note: the indicated polarization of the supply refers only to the relays RPB-1PM-U24.
⑥ If too many lit-up buttons are connected, the lighting circuits can be switched on spontaneously or the lights can be switched on permanently.

Mounting

Relays **RPB-1PM-...** are designed for direct mounting on 35 mm rail mount acc. to EN 60715. Operational position - any. **Connections:** max. cross section of the cables: 1 x 2,5 mm² (1 x 14 AWG), stripping length: 6,5 mm, max. tightening moment for the terminal: 0,5 Nm.



Two catches: easy mounting on 35 mm rail, firm hold (top and bottom).



Mounting wires in clamps: universal screw (cross-recessed or slotted head).

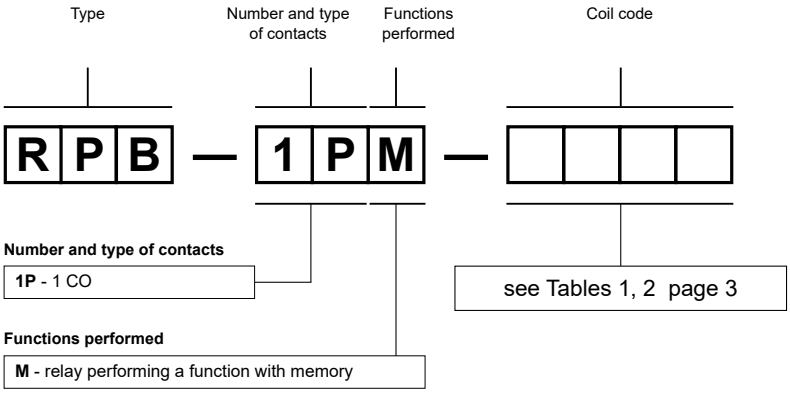
Coil data - AC 50/60 Hz voltage version — Table 1

Coil code	Rated voltage V AC	Coil operating range V AC	
		min. (at 20 °C)	max. (at 55 °C)
A230	230	195,5	264,5

Coil data - AC/DC 50/60 Hz voltage version — Table 2

Coil code	Rated voltage V AC/DC	Coil operating range V AC/DC	
		min. (at 20 °C)	max. (at 55 °C)
U24	24	20,4	27,6

Ordering codes



Examples of ordering codes:

RPB-1PM-A230 bistable - impulse relay **RPB-1PM-...**, single-function (relay perform function SET/RESET with memory (NORMAL)), cover - modular, width 17,5 mm, one changeover contact, contact material $AgSnO_2$, coil voltage 230 V AC 50/60 Hz

RPB-1PM-U24 bistable - impulse relay **RPB-1PM-...**, single-function (relay perform function SET/RESET with memory (NORMAL)), cover - modular, width 17,5 mm, one changeover contact, contact material $AgSnO_2$, coil voltage 24 V AC/DC AC: 50/60 Hz

PRECAUTIONS:

1. Ensure that the parameters of the product described in its specification provide a safety margin for the appropriate operation of the device or system and never use the product in circumstances which exceed the parameters of the product. **2.** Never touch any live parts of the device. **3.** Ensure that the product has been connected correctly. An incorrect connection may cause malfunction, excessive heating or risk of fire. **4.** In case of any risk of any serious material loss or death or injuries of humans or animals, the devices or systems shall be designed so to equip them with double safety system to guarantee their reliable operation.