



**Zakład Mechaniki i Elektroniki
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DESCRIPTION

PBM-04/U bi-stable relay is used to control lighting or any other device with the help of unipolar parallel connected switches. Another push of any switch causes actuation or disengagement of devices connected to output terminals (change in relay status). The device enables to use typical unipolar switches connected to IN inlet and switches with illumination connected to IN' inlets (tripping only from L line for 230V voltage). Structure of the relay enables to record the current status in case of loss of supply voltage. **Zero power consumption stands as an important feature of the device.**

FEATURES

- Bi-stable (biconditional) lighting control,
- universal scope of 12 ÷ 230 V AC/DC supply voltage,
- **zero power consumption**,
- memory of relay status,
- cooperation with numerous unipolar switches, also the ones with illumination,
- two wire control installation,
- relay output – one short circuiting contact with maximal capacity of 10 A.



This device must be installed in one-phase supply network, according to legally binding regulations and standards. Installation must be carried out according to this instruction manual. Procedures such as: installation, connection and adjustment of the device should be carried out by qualified electricians who are familiarised with this instruction manual and device functions. If the casing is dismantled, the warranty expires and there is the danger of an electric shock. Before installation, make sure that voltage is not present on the conductors. Use cross screwdriver with diameter of 3.5 mm, for installation. Transport, storage and use of this device influence its correct operation. Installation of this device is not recommended in the following situations: lack of parts, damage or deformations of the device. In the case of incorrect functioning of the device, please contact the manufacturer.

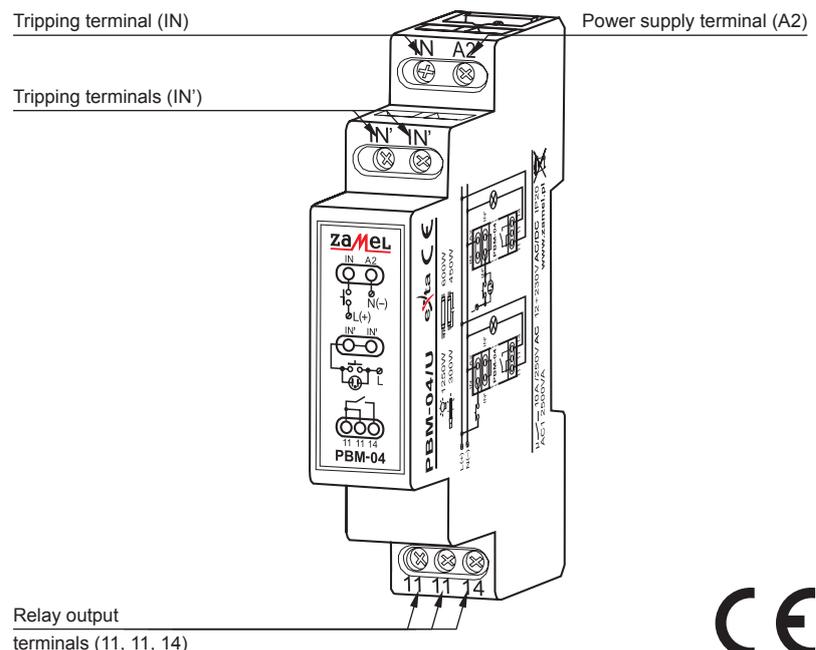


The symbol showing a selective collection of electric and electronic equipment. Used up equipment must not be placed together with another kind of waste.

TECHNICAL DATA

PBM-04/U	
Tripping terminal:	IN
Tripping terminals for illuminated switches:	IN', IN'
Tripping rated voltage:	12 ÷ 230 V AC/DC
Supply voltage tolerance:	-15 ÷ +10 %
Rated frequency:	50 / 60 Hz
Rated power consumption:	0 mA
Rated triggering power consumption:	11 mA
Relay contact parameters:	1NO - 10 A / 250 V AC1 2500 VA
Number of terminals:	7
Section of wire conductors:	0,2 ÷ 2,50 mm ²
Operating temperature:	-20 ÷ +45 °C
Operating position:	optional
Fixing of the casing:	TH35 rail (in accordance with PN-EN 60715)
Protection degree of casing:	IP20 (PN-EN 60529)
Protection class:	II
Overvoltage category:	II
Degree of pollution:	2
Surge voltage:	1 kV (PN-EN 61000-4-5)
Dimensions:	single module (17,5 mm) 90x17,5x66 mm
Weight:	0,065 kg
Compliance with the following standards:	PN-EN 60669-1 PN-EN 60669-2-1 PN-EN 61000-4-2,3,4,5,6,11

APPEARANCE

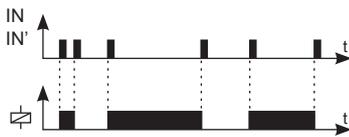


MOUNTING, FUNCTIONING

1. Disconnect supply circuit by means of fuse, overcurrent protection device or switch disconnecter connected to appropriate circuit.
2. Check the voltage free status on supply connectors using an appropriate tester.
3. Install **PBM-04/U** device in switching station on TH-35 transfer busbar
4. Connect leads to the connecting terminals according to the electrical diagram.
5. Switch on the supply circuit.

The device is ready to operate after proper connection. Proper operation of the relay may be verified by pushing the release switch several times – the device should engage and disengage the load connected to its output terminals. IN' control inputs are inlets aimed to be compatible with illuminated switches supplied with 230 V AC voltage. IN input is a universal control input for switches supplied with 12÷230 V AC/DC voltage.

TIME COURSES



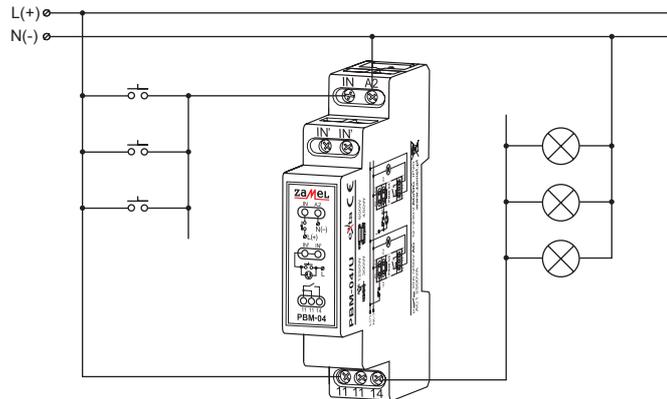
FAMILY OF PRODUCTS

PBM-04/U bi-stable relay belongs to PBM bi-stable relays

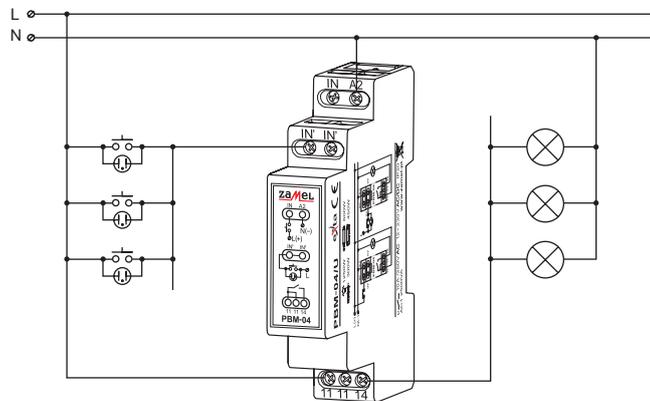
PBX - xx (/x)	Supply version: 24V - 24V AC/DC available for PBM-01, PBM-02, PBM-03, 12-24V- 12÷24V AC/DC available for PBM-05
	U - universal supply voltage 12÷230V AC/DC
Version of the device:	01 - basic
	02 - extended with SET and RESET functions, as well as status memory
	03 - with time limit function
	04 - volt-free with status memory
	05 - volt-free with SET and RESET functions, as well as status memory
Type of casing:	
M - module	
P - cable box	
Symbol of the device	

CONNECTION

Compatibility with unipolar switches without backlight
(voltage: 12 ÷ 230 V AC/DC)



Compatibility with unipolar switches with backlight
(only for 230 V AC voltage)

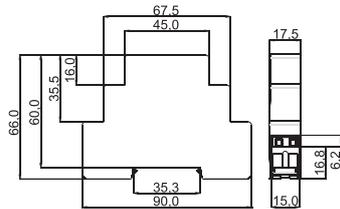


WARRANTY CARD

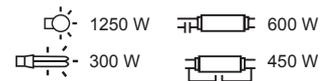
There is 24 months guarantee on the product

Salesman stamp and signature, date of sale

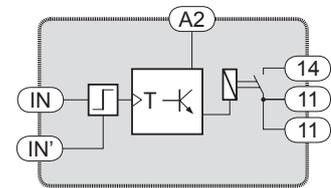
DIMENSIONS



CAPACITY



INTERNAL SCHEME



1. ZMIE ZAMEL SP. J. assures 24 months guarantee for the product.
2. The manufacturer's guarantee does not cover any of the following actions:
 - a) mechanical damage during transport, loading / unloading or under other circumstances,
 - b) damage caused by incorrect product mounting or misuse,
 - c) damage caused by unauthorised modifications made by the PURCHASER or any third parties to the product or any other devices needed for the product functioning,
 - d) damage caused by Act of God or any other incidents independent of the manufacturer.
3. The PURCHASER shall lay any claims in writing to the dealer or ZMIE ZAMEL SP. J.
4. ZMIE ZAMEL SP. J. is liable for processing any claim according to current Polish legislation.
5. ZMIE ZAMEL SP. J. shall process the claim at its own discretion: product repair, replacement or money return.
6. The manufacturer's guarantee is valid in the Republic of Poland.
7. The PURCHASER's statutory rights in any applicable legislation whether against the retailer arising from the purchase contract or otherwise are not affected by this warranty.