



**Zakład Mechaniki i Elektroniki  
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## DESCRIPTION

The bistable relay PBM-01 is used to control lighting or other devices by means of monomodular pushbuttons connected in a parallel way. Pushing any button causes switching on or switching off the devices connected to output terminals. Using this system gives the possibility of creating "intelligent" lighting control systems.

## FEATURES

- Bistable lighting control Input rated indicator – LED green,
- relay mode indicator – LED red,
- system releasing from the L or N cable,
- cooperation with monostable push-buttons equipped with illumination lamps,
- TEST function,
- double-wire controll installation,
- voltage relay output - one NO (normal closed) contact max 16 A capacity
- monomodular casing TH-35 DIN rail installation.

## TECHNICAL DATA

PBM-01	
Input (supply) terminals:	L, N
Input rated voltage:	230 V~
Input voltage tolerance:	-15 ÷ +10 %
Nominal frequency:	50 / 60 Hz
Rated power consumption:	24 mA
Supply voltage control indicator:	LED green
Release terminals:	IN, IN, IN
Release control current:	930 µA
Power/relay supply indicator:	LED red
Relay operating indicator:	TEST button
Output relay parameters:	1NO - 16 A / 250 V AC1 4000 VA
Number of terminal clamps:	8
Section of connecting cables:	0,2 ÷ 2,50 mm <sup>2</sup>
Ambient temperature range:	-20 ÷ +45 °C
Operating position:	freely
Mounting:	rail TH 35 (PN-EN 60715)
Protection degree:	IP20 (PN-EN 60529)
Protection level:	II
Overvoltage category:	II
Pollution degree:	2
Napięcie udarowe:	1 kV (PN-EN 61000-4-5)
Dimensions:	monomodular (17,5 mm) 90x17,5x66 mm
Weight:	78 g
Reference standards:	PN-EN 60669-1; PN-EN 60669-2-1 PN-EN 61000-4-2,3,4,5,6,11



## CAUTION

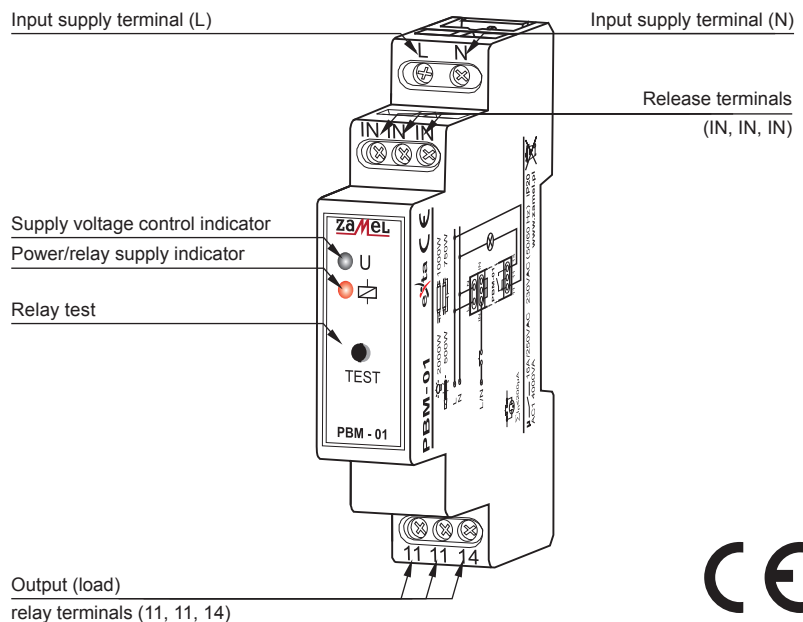
The device is designed for single-phase installation and must be installed in accordance with standards valid in a particular country. The device should be connected according to the details included in this operating manual. Installation, connection and control should be carried out by a qualified electrician staff, who act in accordance with the service manual and the device functions. Disassembling of the device is equal with a loss of guarantee and can cause electric shock. Before installation make sure the connection cables are not under voltage. The cruciform head screwdriver 3,5 mm should be used to instal the device. Improper transport, storage, and use of the device influence its wrong functioning.

It is not advisable to instal the device in the following cases: if any device part is missing or the device is damaged or deformed. In case of improper functioning of the device contact the producer.



The symbol means selective collecting of electrical and electronic equipment. It is forbidden to put the used equipment together with other waste

## APPEARANCE

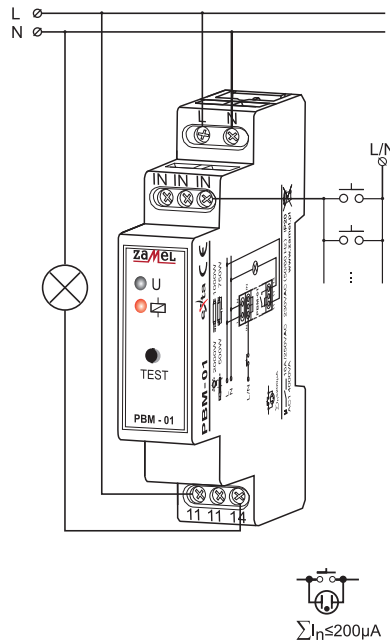


## MOUNTING, FUNCTIONING

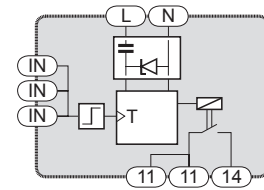
1. Disconnect the power supply from the mains by the phase fuse, the circuit-breaker or the switch-disconnector that are joined to the proper circuit,
2. Check if there is no voltage on connection cables by means of a special measure equipment,
3. Install PBM-01 device in the switch-board on TH-35 DIN rail,
4. Connect the cables with the terminals according to installing diagram,
5. Switch on the power supply from the mains,
6. Push the TEST button several times to check the relay operation correctness.

The device is ready to work after switching on power supply. The relay operation correctness can be checked by pushing the TEST button placed on the front panel. The system should switch on and off the load connected to its output terminals. Mono modular pushbuttons can be connected in a parallel way which enables the lighting control from different places. Lighted pushbuttons version is possible.

## CONNECTION



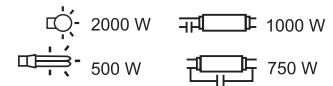
## INNER DIAGRAM



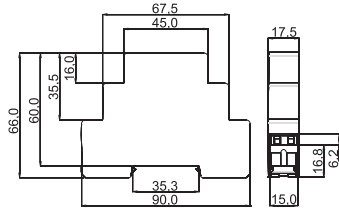
## TIME COURSE



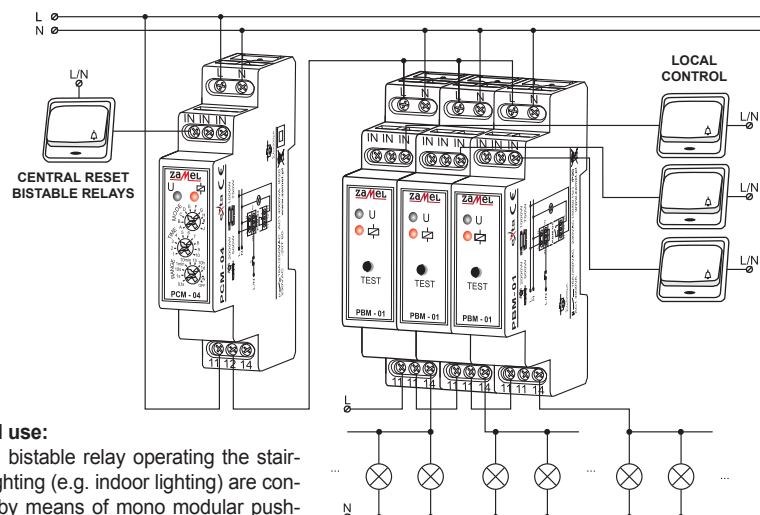
## RELAY CAPACITY



## DIMENSIONS



## APPLICATION



### Typical use:

The bistable relay operating the staircase lighting (e.g. indoor lighting) are controlled by means of mono modular push-buttons that can be connected in a parallel way. The buttons can be placed in different places which gives the possibility of creating universal lighting systems control. The bistable relay cooperates with time relay PCM-04 (with set-ups: MODE=F, TIME=3, RANGE=2) and the same gives additional function of the central bistable relay switch off (reset) by momentary power cut.

### Signal separator coordination SEM-01:

In the bistable control systems signal separators can be used to divide control signals into particular relay groups.

## PRODUCT FAMILY

The time relay PBM-01 belongs to PBM time relay product family.

### 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 supplying voltage 12-230V AC/DC

Device version:  
01 - basic  
02 - extended: SET, RESET functions and state storage  
03 - with time limit function  
04 - zero current consumption with time limit function  
05 - zero current consumption, SET, RESET functions and time limit function

Casing type:  
M - modular version (TH 35 DIN rail)  
P - flush junction box Ø60 version

Device type

## WARRANTY CARD

There is 24 months guarantee on the product

Salesman stamp and signature, date of sale

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.