



**Zakład Mechaniki i Elektroniki  
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## DESCRIPTION

The twilight switch WZM-02 is used to control lighting devices and other energy receivers depending on luminous flux density. The system switches on the lighting at dusk and switches off at dawn. The device is equipped with two illuminuous flux density ranges where the switching on threshold can be adjusted by the user. The system has the continuous output (load) switch on function (ON), connected to output (load) relay terminals, and the automatic function (AUTO). External luminous flux density sensor SOH with a cable of 50 m maximum length enables the sensor to be put in a suitable place.

## FEATURES

- It allows to switch on or switch off lighting devices according to the preset ambient light level,
- input rated indicator,
- relay indicator,
- illuminuous flux density range choice,
- adjustment of the switch on threshold,
- automatic work mode (AUTO) or continuous work mode (ON),
- **system requires outer light intensity sensor (e.g. SOH-01, SOH-03, SOH-05),**
- resistant to momentary changes of luminous flux density.



The device is designed for one-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 install 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.

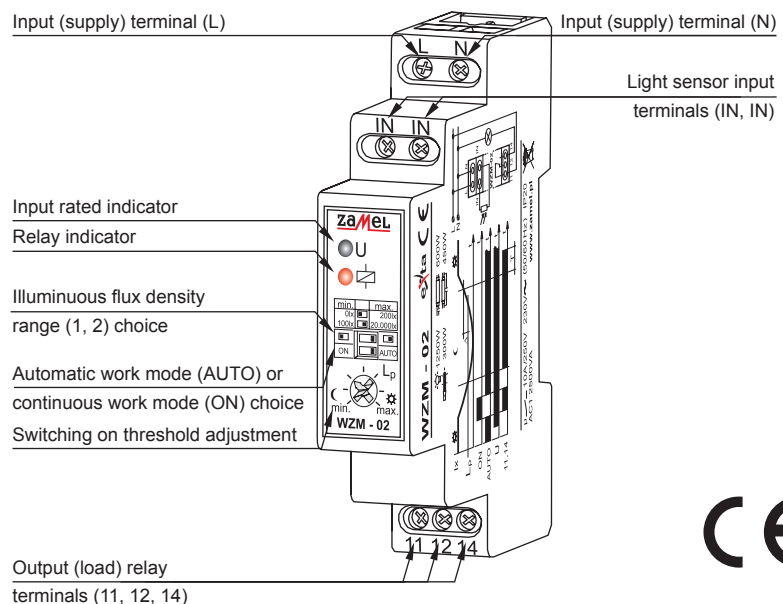


The symbol stands for selective collection of electrical and electronic devices. Placing used devices with other waste is not allowed

## TECHNICAL PARAMETERS

WZM-02	
Input (supply) terminals:	L, N
Input rated voltage:	230 V AC
Input voltage tolerance:	-15 ÷ +10 %
Nominal frequency:	50 / 60 Hz
Rated power consumption:	35 mA
Input rated indicator:	LED green
Zaciski sondy oświetlenia:	IN, IN
Maksymalna długość przewodu sondy:	50 m (MTY 2x 0,5 mm <sup>2</sup> )
Zakres nastaw progów załączenia:	two ranges: 1) 0 ÷ 200 lx; 2) 100 ÷ 20.000 lx
Relay indicator:	LED red
Output relay parameters:	1NO/NC - 10 A / 250 V AC1 2500 VA
Number of terminal clamps:	7
Section of connecting cables:	from 0,2 to 2,50 mm <sup>2</sup>
Ambient temperature range:	from -20 to +45 °C
Operating position:	free
Mounting:	TH 35 rail (PN-EN 60715)
Protection degree:	IP20 (PN-EN 60529)
Protection class:	II
Overvoltage category:	II
Pollution degree:	2
Rated impulse withstand voltage:	1 kV (PN-EN 61000-4-5)
Dimensions (height / width / depth):	monomodular (17,5 mm) 90x17,5x66 mm
Weight:	0,076 kg
Reference standards:	PN-EN 60669-1, PN-EN 60669-2-1 PN-EN 61000-4-2,3,4,5,6,11

## APPEARANCE

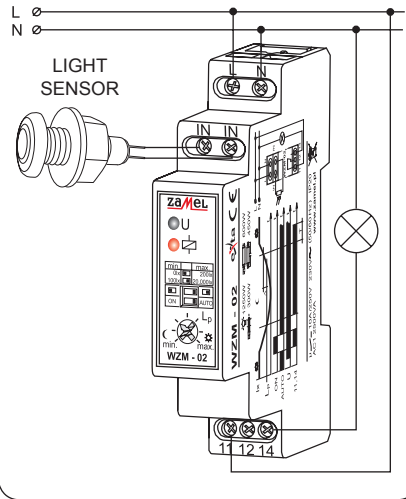


## MOUNTING, FUNCTIONING

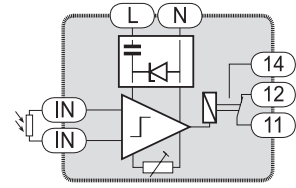
1. Disconnect the power supply from the mains by the phase fuse, the circuit-breaker or the switch-disconnector that are joined to the proper circuit,
2. **Check if there is no voltage on connection cables by means of a special measure equipment,**
3. Install WZM-02 device in the switchboard on TH-35 DIN rail
4. Connect the cables with the terminals according to installing diagram,
5. Switch on the power supply from the mains,
6. Choose illuminous flux density range by means of the upper switch,
7. Choose AUTO mode (switch "automatic work" mode). ON mode allows continuous switch
8. Set the potentiometer of the threshold of switching the lighting to a minimum.
9. If the lighting outside reaches the level at which the lighting installation is to switch on – turn delicately the potentiometer in the direction of a maximum, until it switches on.
10. Leave the potentiometer in a set position.

The system works properly after switching on the power supply from the mains. Turning the potentiometer in the direction of „C“ causes the lighting device to switch on at lower lighting level, in the direction of „☀“ causes the device to switch on at higher lighting level. In case the inner sensor's luminous flux density falls below the preset threshold the system switches on the output relay and its lighting devices. The relay is switched on until the luminous flux density is over the preset threshold. Using the luminous flux density hysteresis ( $\Delta$ ) and relay switching off time delay (T) makes the system resistant to momentary and accidental sensor lighting.

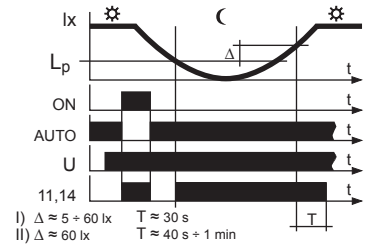
## CONNECTING



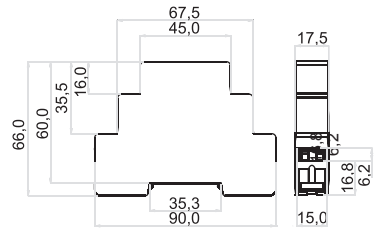
## INNER DIAGRAM



## TIME COURSE



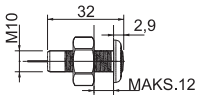
## DIMENSIONS



## RELAY CAPACITY



## LIGHT SENSOR FAMILY

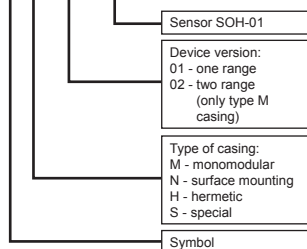


Sensor:	Length:
SOH - 01	1 m
SOH - 03	3 m
SOH - 05	5 m

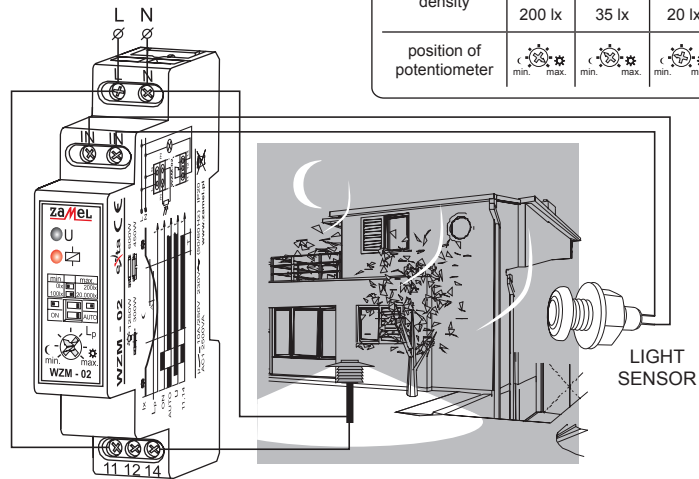
## PRODUCT FAMILY

The twilight switch WZM-02 belongs to the twilight switches WZx family.

WZx - xx (/ S1)



## EXAMPLE OF INSTALLATION



### Typical application:

The twilight switch operates the light control functions (e.g. garden lighting). The light sensor should be installed in a place which is not directly illuminated by lights that are operated by this twilight switch.

## GUARANTEE 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.