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## DESCRIPTION

The twilight switch WZM-01/SOS is used to control lighting devices or other energy receivers depending on illuminous flux density. The system switches on the lighting at dusk and switches off at dawn. The switching on threshold can be smoothly adjusted by the user. The system is resistant to momentary changes of illuminous flux density, which guarantees reliability. External illuminous flux density sensor SOS-01 (in a set) transmits the signal to the twilight switch WZM-01. Sensor connecting cable of 50m maximum length enables the sensor to be put in a suitable place

## FEATURES

- Receivers control depending on illuminous flux density
- Input rated indicator
- Relay indicator
- Smooth switch on threshold regulation
- Wide switch on threshold adjustment range (from 0 to 200 lx)
- **Outer illuminous flux density sensor SOS-01 - in a set**
- Resistant to momentary changes of illuminous flux density
- Switch threshold hysteresis
- Relay output – one switch contact of maximum relay capacity 16A



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 instruction manual. Installation, connection and control should be carried out by a qualified electrician staff, who act in accordance with the instruction 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's part is missing or the device is damaged or deformed. In case of improper functioning of the device contact the producer.



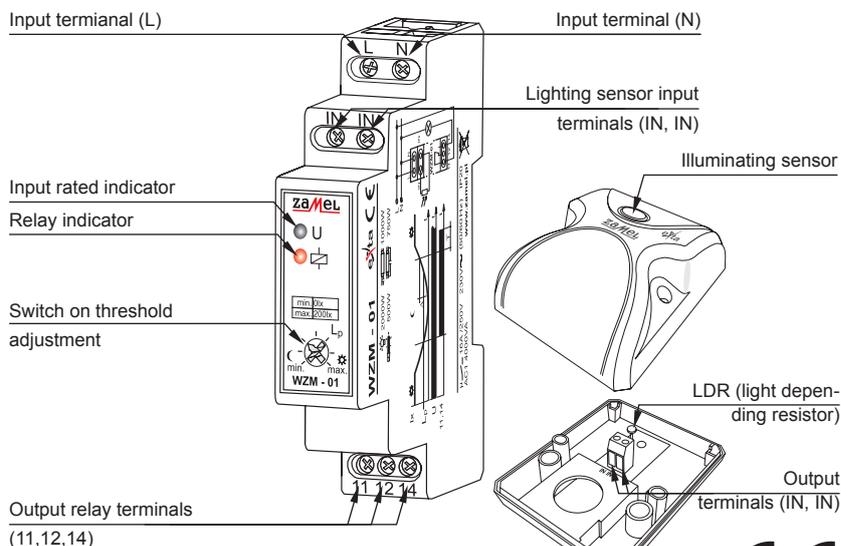
The symbol stands for selective collection of electrical and electronic devices. Placing used devices with other waste is not allowed

## TECHNICAL DATA

### WZM-01/SOS

Input terminals:	L, N
Input rated voltage:	230 V AC
Input voltage tolerance:	-15 ÷ +10 %
Nominal frequency:	50 / 60 Hz
Rated power consumption:	24 mA
Input rated indicator:	LED green
Light sensor terminals:	IN, IN
Maximum cable length:	50 m (MTY 2x 0,5 mm <sup>2</sup> )
Threshold adjustment range:	0 ÷ 200 lx (rotating potentiometer)
Relay indicator:	LED red
Output contacts parameters:	1NO/NC - 16 A / 250 V AC1 4000 VA
Number of terminal clamps:	7 (WZM-01); 2 (SOS-01)
Section of connecting cables:	0,2 ÷ 2,50 mm <sup>2</sup>
Ambient temperature range:	-20 ÷ +45 °C
Operating position:	free
Mounting:	TH rail 35 (PN-EN60715) (WZM-02), 2 rawplugs 6 x (3,5 x 35) (SOS-01)
Casing protection degree:	IP20 (WZM-01); IP54 (SOS-01)
Protection level:	II
Overvoltage category:	II
Pollution degree:	2
Surge voltage:	1 kV (EN 61000-4-5)
Dimensions:	monomodular (17,5 mm) 90 x 17,5 x 66 mm (WZM-01) 84 x 68 x 43 mm (SOS-01)
Weight:	0,075 kg (WZM-01); 0,05 kg (SOS-01)
Reference standards:	EN 60669-1, EN 60669-2-1 EN 61000-4-2,3,4,5,6,11

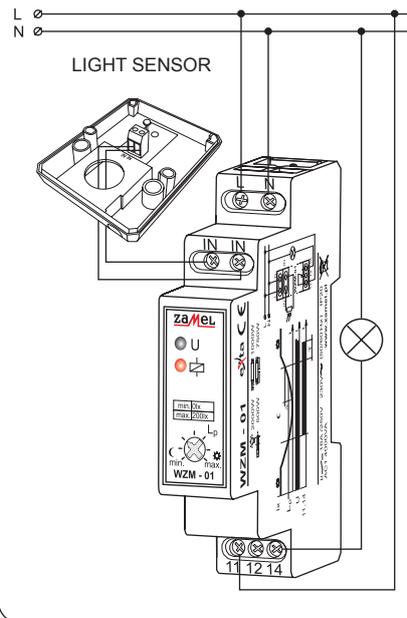
## APPEARANCE



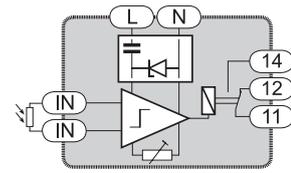
## MOUNTING, FUNCTIONING

1. Disconnect the power supply
2. **By means of special equipment check if there is no voltage on connection cables**
3. Install **WZM-01** device in the switch-board on TH-35 rail
4. Connect the cables with the terminals according to installing diagram,
5. Switch on the power supply from the mains
6. Set the potentiometer of the threshold of switch on the lighting to a minimum.
7. If the lighting outside reaches the level at which the lighting installation is to be switched on – turn delicately the potentiometer in the direction of a maximum, until it switches on
8. 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 illuminous 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 illuminous flux density is over the preset threshold. Using the illuminous flux density hysteresis ( $\Delta$ ) and relay switching off time delay (T) makes the system resistant to momentary and accidental sensor lighting. During installation attention should be paid that switched on lighting will not disrupt the functioning of the lighting sensor

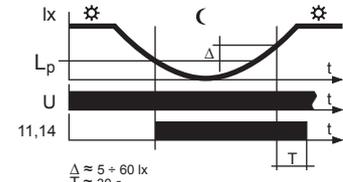
## CONNECTING



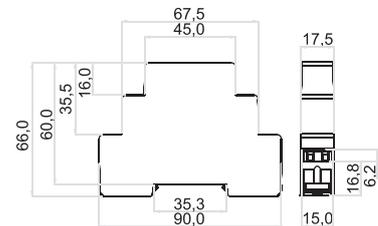
## INNER DIAGRAM



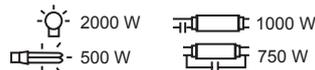
## TIME COURSE



## CASING DIMENSIONS

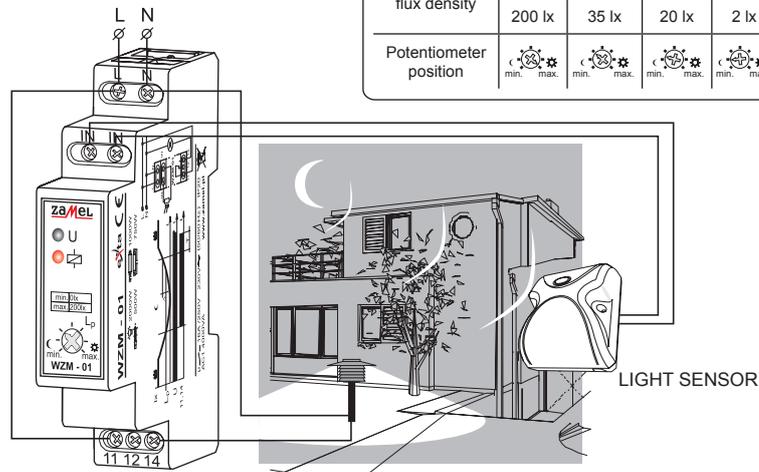


## RELAY CAPACITY



## EXAMPLE OF INSTALATION

Illuminous flux density	200 lx	35 lx	20 lx	2 lx
Potentiometer position				

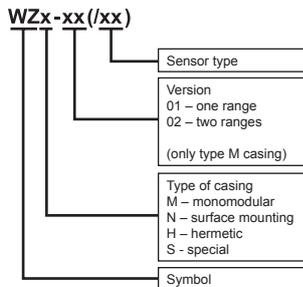


## Typical application:

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

## PRODUCT FAMILY

Twilight switch WZM-01/SOS belongs to the WZx twilight switches family.



## LIGHT SENSOR FAMILY

SENSOR	Lenght
SOH-01	1 m
SOH-03	3 m
SOH-05	5 m
SOS-01	no

## WARRANTY CARD

There is 24 months guarantee on the product

Salesman stamp and signature, date of sale

1. ZAMEL Sp. z o.o. 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 mounting or misuse of ZAMEL Sp. z o.o products
  - 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 on grounds of the guarantee card in writing to the dealer or ZAMEL Sp. z o.o
4. ZAMEL Sp. z o.o is liable for processing any claim according to current Polish legislation
5. ZAMEL Sp. z o.o 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 guarantee card.