

# MICROWAVE MOTION SENSOR MCR-01

USER MANUAL

**exta**

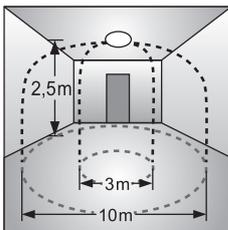
ZAMEL Sp. z o.o.

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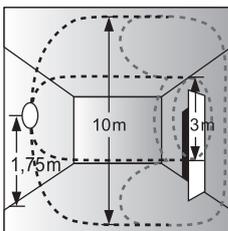
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## DESCRIPTION

The microwave motion detector is an active device. The integrated device transmits high frequency electromagnetic waves (5,8 GHz) and receives the wave echo. The device detects any echo changes within the working zone. When such changes are detected the CPU gives TURN THE LIGHT ON command. Thanks to its high sensitivity the device is capable of detecting movement through the doors, glass obstacles or cardboard-gypsum plates.



**Detection zones  
(mounted on the ceiling)**  
Zone diameter: 3 ÷ 10 m



**Detection zones  
(mounted on the wall)**  
Zone diameter: 3 ÷ 10 m

**NOTE!** The best device sensitivity is for people and objects moving towards the detector.

## FEATURES

- The motion detector is designed for placing within lighting fittings, plastic casings, under suspended ceilings, behind light partition walls, etc.
- movement detection through glass, plastic and cardboard-gypsum plate obstacles,
- high sensitivity and excellent motion detection regardless of the movement direction,
- temperature changes do not affect detection quality,
- protection degree IP20.

## TECHNICAL DATA

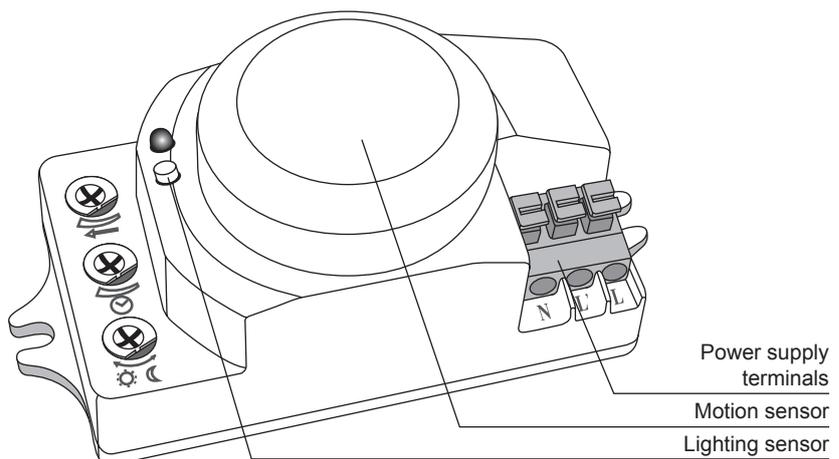
### MCR-01

Input rated voltage:	220 ÷ 240 V 50/60Hz
Operating frequency:	5,8 GHz
Rated power output consumption:	0,9 W
Operating range:	minimum: a circle (3 m diameter) maximum: a circle (9 m diameter)
Operating field adjustment:	fluent (rotational potentiometer)
Motion detection angle:	360°, with an open angle of 160°
Transmitting rated power:	< 10 mW
Lighting switch on time:	8 s ÷ 12 min. - fluent adjustment
Maximum lighting source rated power:	☉ 1200 W, ⚡ 21 W, ⚡ 30 W
Lighting sensor:	inner
Lighting sensor range adjustment:	2 ÷ 2000 lux - fluent adjustment
Protection degree:	IP20
Protection class:	II
Dimensions:	90 x 41,5 x 41,5 mm
Weight:	0,07 kg

### NOTE!

The 230 V AC power supply model is a transformerless device. Only authorised technician is allowed to mount the device.

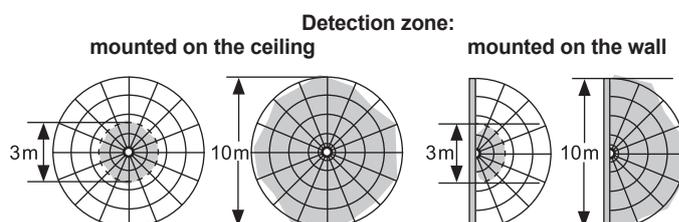
## APPEARANCE



Power supply terminals

Motion sensor

Lighting sensor



### Detection zone:

mounted on the ceiling

mounted on the wall



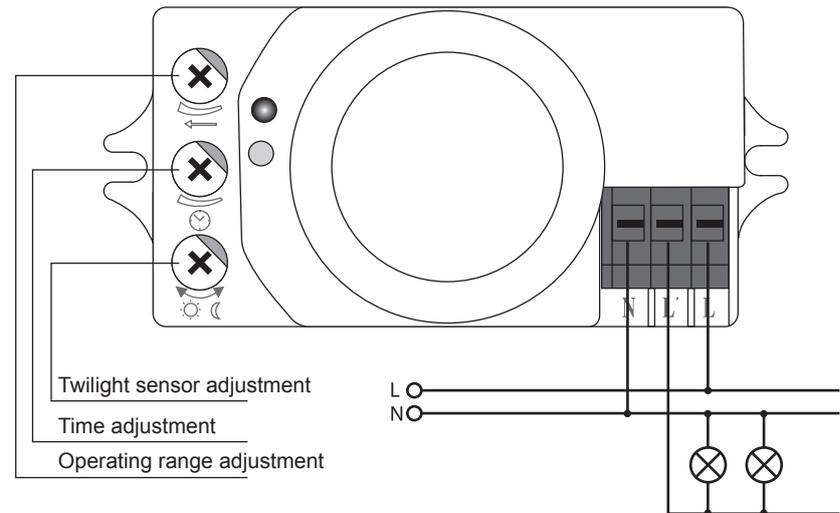
## INSTALLATION

1. Disconnect the power supply circuit with a help of an appropriate fuse, overcurrent switch or a switch-disconnector.
2. Check if there is no voltage between power leads by means of an appropriate gauge.
3. Mount the MCR-01 device to the substrate by means of the appropriate bolts.
4. Connect leads to the connecting terminals according to the electrical diagram.
5. Turn on the mains.
6. Adjust the detector operating parameters (operating time, operating distance, the twilight switch sensitivity).



Do not dispose of this device with other waste! In order to avoid harmful effects on the environment and human health, the used device should be stored in designated areas. For this purpose, you can dispose of household waste free of charge and in any quantity to a collection point set up, as well as to the shop when you buy new equipment.

## CONNECTION



## FUNCTIONING

### Operating Distance (Sensitivity) Adjustment:



The operating zone is a circle. The circle radius is the operating distance measure, when the device is mounted 2,5 metres over the ground. It is possible to adjust the device sensitivity smoothly by means of turning an appropriate knob. The minimum setting (left extreme position) is about 3 metres and when you turn the knob clockwise to the right extreme position the device operating distance reaches 10 metres.

### Timer Setting:



It is possible to switch the light on, via the device, for 8 secs + 12 minutes (when you turn the appropriate knob clockwise to the right extreme position).

**NOTE:** Here is approx. 1 second dwell time after the light has been off. If needed, the light will be on after the dwell time is off.

### Twilight Switch Setting:



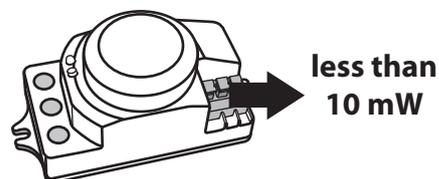
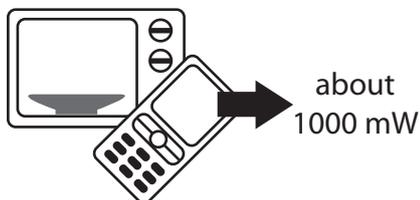
It is possible to set light intensity threshold for switching the device on from 2 to 2000 lx (the appropriate knob right extreme position). It is necessary to turn the knob clockwise to the right extreme position when the detector is to operate by day.

**NOTE:** The sensitivity of the twilight sensor changes are the greatest around the maximum value.

### Connecting Load to the Device:

It is possible to connect some types of load to the device (bathroom fans, lights) in order to switch them on automatically. It is necessary to connect the load leads to N and L' terminals accordingly to the connecting diagram.

**Operating Safety:** High frequency electromagnetic wave power transmitted by the device is less than 10 mW, i.e. 100 times less than a microwave oven emits.



## WARRANTY CARD

There is 24 months guarantee on the product

1. ZAMEL provides a two-year warranty for its products.
2. The ZAMEL warranty does not cover:
  - a) mechanical defects resulting from transport, loading / unloading or other circumstances
  - b) defects resulting from incorrect installation or operation of ZAMEL products;
  - c) defects resulting from any changes made by CUSTOMERS or third parties, to products sold or equipment necessary for the correct operation of products sold;
  - d) defects resulting from force majeure or other aleatory events for which ZAMEL is not liable;
  - e) power supply (batteries) to be equipped with a device in the moment of sale (if they appear);
3. All complaints in relation to the warranty must be provided by the CUSTOMER in writing to the retailer after discovering a defect.;
4. ZAMEL will review complaints in accordance with existing regulations.;
5. The way a complaint is settled, e.g. replacement of the product, repair or refund, is left to the discretion of ZAMEL.
6. Guarantee does not exclude, does not limit, nor does it suspend the rights of the PURCHASER resulting from the discrepancy between the goods and the contract.

Salesman stamp and signature, date of sale