



PMSMC Surface Microwave Sensor



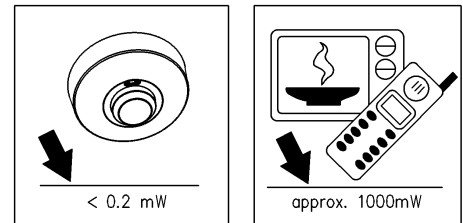
Instruction Manual

Please read the instruction manual before installing and retain for the user/maintenance engineer for future reference.

The PMSMC is a High Frequency (5.8GHz) 360° occupancy detector. High frequency signals are able to penetrate non-metallic materials such as wood, brick wall, glass, etc., but can not penetrate water or metal. High frequency sensors are less affected by temperature, airflow, wind, but humidity and vibration can often affect the performance of high frequency sensor. The sensor is more sensitive for movement at different speeds and it is less sensitive for movement at the same speed, therefore, the detection range could be reduced.

Due to high frequency signals can penetrate non-metallic materials, this may lead to false activations, i.e. water movement in plastic pipes, movement outside the area, or if there is a lot of metal in the detection area that may reflect the high frequency signals, therefore, the location of the sensor is very important.

NOTE: The high-frequency output of the sensor is <0.2Mw, that is just one 5000th of the transmission power of a mobile phone or the output of a microwave oven.



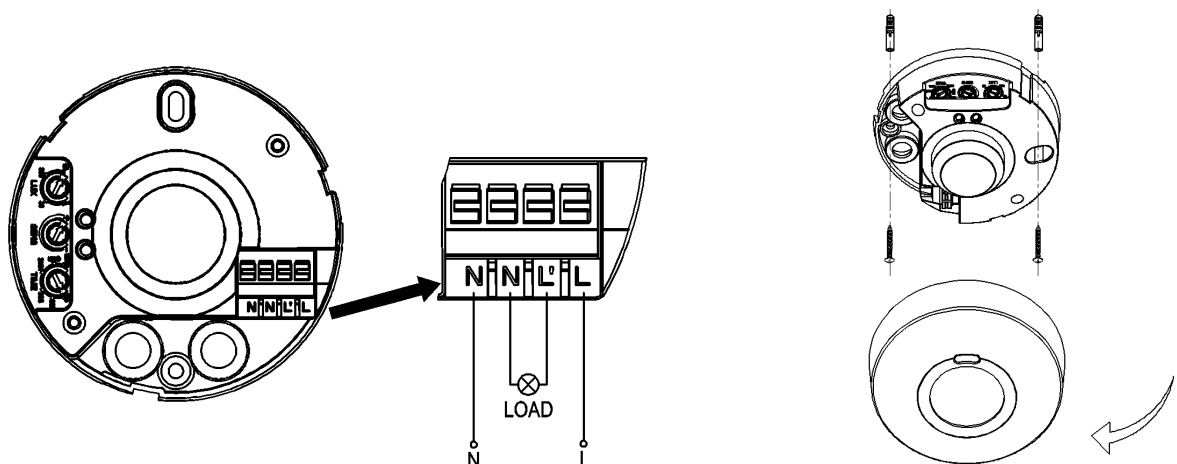
IMPORTANT NOTE:

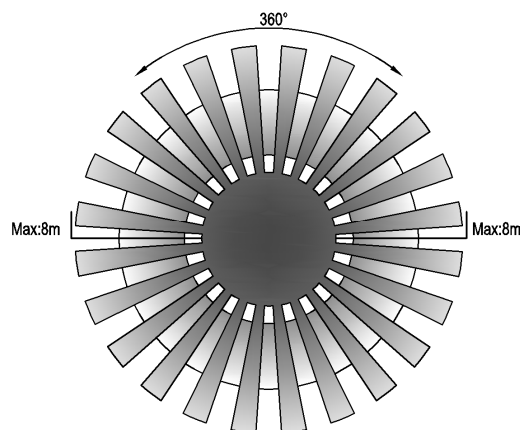
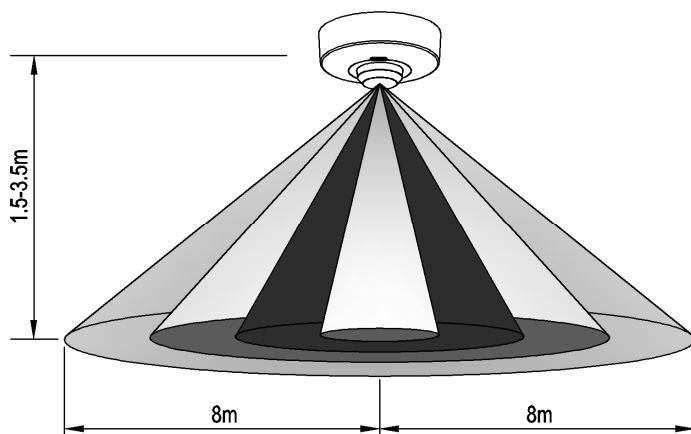
Installation must be performed by a skilled electrician who is familiar with the appropriate standards and technical requirements of the appliance and its proper installation.

The person carrying out the installation is to check and verify that the total load including in-rush current on the circuit, the rating of the cable, fuse and/or circuit breaker is not exceeded.

INSTALLATION

- Ensure the mains supply is isolated
- Remove the cover by rotating
- Secure the sensor on to a surface free from movement or vibration with appropriate fixings at a mounting height between 1.8 - 3.5m
- Feed the cables through the rear cable entry knockouts and grommets and refer to the wiring diagram for terminal connections
- Test the time, range of the sensor, please see below test section
- After testing and final adjustment of the TIME & LUX to the desired levels and replace the cover

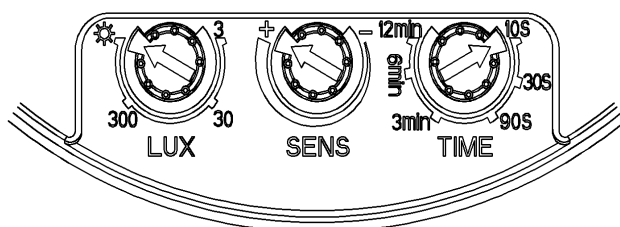




1. Testing

Turn the LUX adjuster fully clockwise (SUN); turn the TIME adjuster fully anti-clockwise to the minimum (10s).

- Switch on the AC supply and after a 30sec warm-up period the sensor will now be in test mode
- Walk test the sensor, when the sensor receives a valid trigger signal within its detection area the lamp will turn on. If the sensor does not receive any other valid trigger signal then the light should switch off 10sec (± 3 sec).
- While the lamp is on and if the sensor receives additional valid trigger signal then the timer will re-start and the light will remain on.
- Adjusting SENS adjuster for desired the detection range.
- Walk test immediately outside the area to ensure detection is not possible through walls and floors to minimize unwanted activations.
- After testing the sensor ensuring the required area can be detected, Turn the LUX adjuster to the required light operational level, and adjust the TIME adjuster clockwise to the required time for the light duration to be on.



Troubleshooting

The load does switch on:

- o Please check the connections, and the AC mains supply is on
- o Please check if the load is operational
- o Please check the adjustment settings and make the necessary adjustments if required

The sensitivity is poor:

- o Please check if there is any metallic obstructions in front of the sensor
- o Check that the sensor is mounted with in the recommended mounting height
- o Please check if the moving orientation is correct

- The sensor cannot turn off the load automatically:
 - o Please check if there is a lot of metal in the area i.e. metal containers, walls etc.
 - o Please check the TIME and SENS adjustments
 - o Please check if the connections and that a permanent Live is not connected directly to the load

Specification

Power Source:	230v AC 50/60Hz
Power Consumption:	approx. 0.9W
Frequency:	5.8GHz - 0.2mW
Ambient Light:	<3 to 2000LUX (adjustable)
Detection Range:	360°
Detection Distance:	1 - 8m Radius
Installation Height:	1.5 - 3.5m
Detection Moving Speed:	0.6-1.5m/s
Time Delay:	Min.10sec ±3sec Max.12min ±1min
Working Humidity:	<93%RH
Working Temperature:	-20~+40C
Dimensions:	96x44mm
Weight:	120g (net)
IP Rating:	IP20
Rated Load:	
Fluorescent:	Max.1200W
Energy Saving:	Max. 300W
LED:	Max. 300w or maximum 6 number of LED drivers

Environment:

Please DO NOT dispose of electrical items or packaging as unsorted waste, use the recycling facilities provided by your local authorities.

Due to our policy of continuous improvement we reserve the right to change specification without prior notice. Errors and omissions excepted. These instructions have been carefully checked prior to publication. However, no responsibility can be accepted by Challenger for any misinterpretation of these instructions.

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