

PHILIPS

Occupancy Sensor

MPS3100/05



Specification Sheet

MPS3100/05 OCC-DL IA WH 8M

The mains powered sensor is a standalone occupancy and daylight sensor. It is an Interact Ready sensor, which means it can be easily upgraded to a smart lighting system. It works with Interact ready luminaires with wireless drivers and the mounting height of the sensor can range from 2.1 to 8 m.

Its 2.4 GHz Zigbee technology enables reliable and secure communication towards the lights in your space. It triggers automatic responses to turn on or dim the lights according to the occupancy detection and daylight variations. The sensor is designed for waterproof applications and low to mid-bay heights.

MPS3100/05

Features

- Motion sensor PIR for occupancy detection
- Adjustable sensitivity
- Minimum false trigger
- Light sensor daylight dependant regulation (DDR)
- Infrared receiver module for IR remote control
- Zigbee and a bluetooth low energy (BLE) transceiver

Benefits

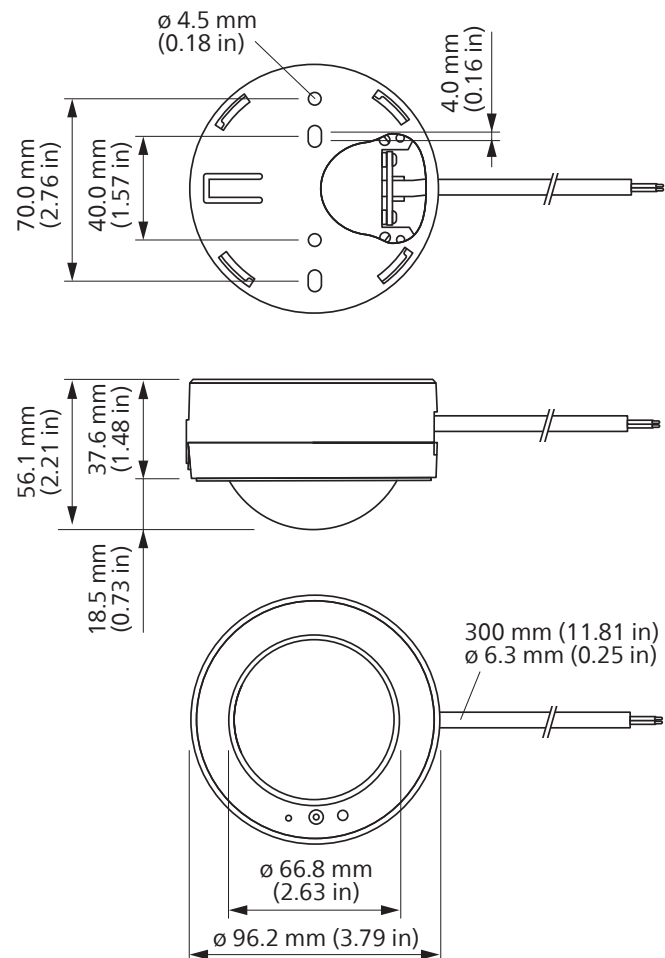
- Automatic light control based on occupancy detection and daylight sensing
- Adjustable sensor parameters for personalized lighting behaviors
- Status indication is done by three built-in LEDs

Applications

The typical application areas are warehouses, parking garage, factories, loading docks, classrooms, auditoriums, libraries, gymnasiums, hospital corridors, patient rooms, lobbies, office corridors, conference rooms etc...

The sensor is surface mounted on the ceiling, working with Interact ready luminaires with wireless drivers and the mounting height can range from 2.1 to 8 m.

Dimensional drawings



Mounting

Surface mounting with an installation height between 2.1 to 8 m from the floor.

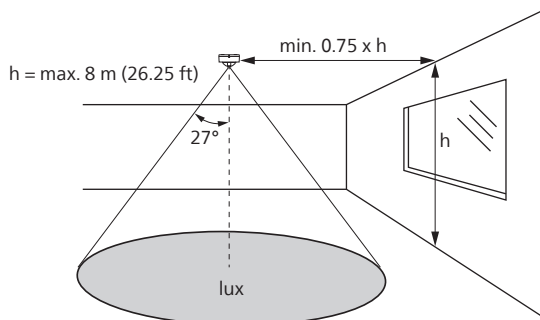
Cable

Type	H05RN-F 60245IEC57(YZW)
Color	Black
Strip length	8.5 ± 1 mm
Wire type	Solid 0.75 mm ²
Wire isolation	Insulation: EI4(IE4) + (EPR) Jacket: EM2(SE4) + (CPE)
Length	0.3 m

Daylight sensing



- High accuracy of ambient light measurement from approximately 1 to 1500 lux at sensor level
- Closed loop daylight regulation
- Daylight fast report for calibration

Field of view daylight



PIR occupancy sensing

Movement type	Sensor mounting height	Maximum sensor detection diameter (ratio of mounting height (H) and diameter (D)) H:D
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 Major movement	2.1 to 8 m	1:2
 Minor movement	2.1 to 5 m	1:1.5

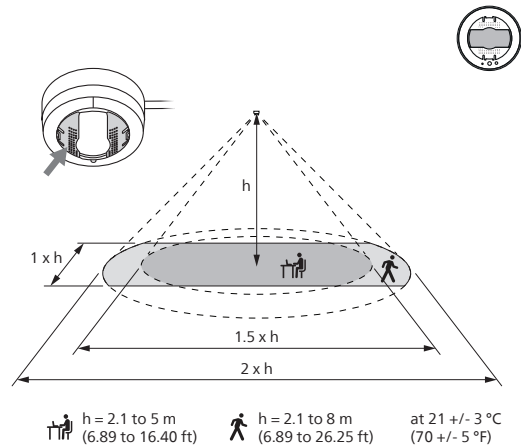
For example: if the mounting height is 5 m, then the maximum sensor detection diameter for major motion is 10 m and minor motion is 7.5 m.

Note

As PIR based sensing works on the difference between subject's temperature and ambient temperature, the occupancy detection could vary due to clothing and size of the subject. The sensor detection area will decrease when the difference in subject's temperature and ambient temperature is approximately 5 °C or less.

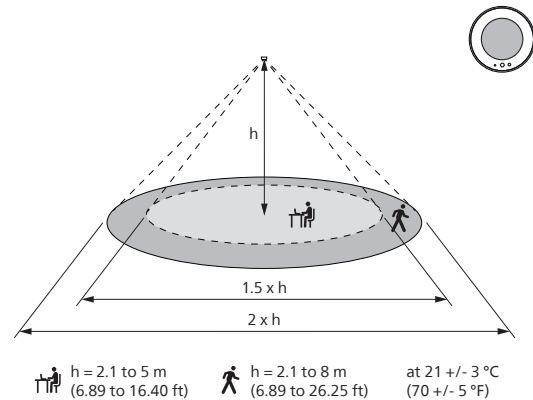
Field-of-View

Field of view motion (with lens shield)



Field of view motion (without lens shield)

Remove the shield on top of the lens to achieve complete detection area of a sensor.

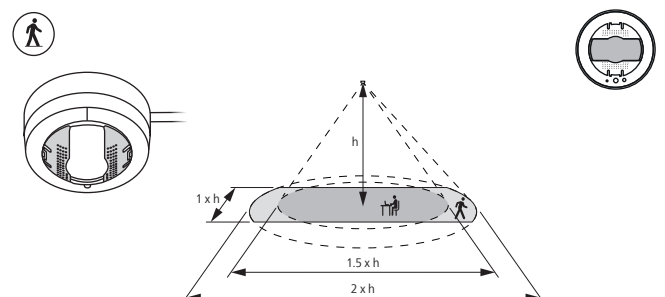


Lens shielding options

Use the shield on top of the lens to reduce the motion field of view.

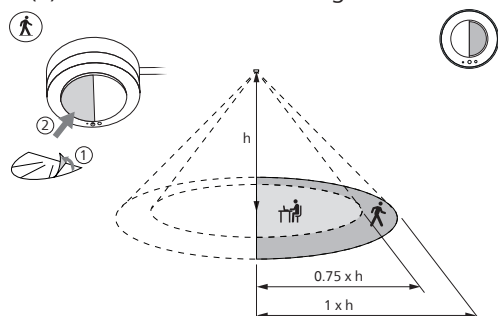
Shielding option: Rectangle field of view

Remove the parts to get a rectangle field of view as shown in the below figure.



Shielding option: Hemisphere field of view

Remove the parts (1) to get a hemisphere field of view (2) as shown in the below figure.



IR receiver

The working range of an IR receiver is within the taper area with an angle of 20°. The Philips IRT9015 or IRT9090 IR remote control is used to select luminaires during commissioning.

Zigbee

This device is compatible with the Zigbee standard IEEE 802.15.4. The firmware updates can be sent over the air. It provides a reliable and secure wireless communication.

Bluetooth

This device is compatible with the Bluetooth Low Energy protocol 4.2 (5.1 compliant) standard.

LED indicator

This device has a RGB LED indicator built-in underneath the PIR lens, which gives a clear visibility of the sensor functions.

LED pattern

Sensor is powered ON and stabilizing	Yellow LED is ON for 30 seconds.
Sensor detects occupancy	Red LED is ON
Sensor detects vacancy	Yellow LED is ON
If the mobile app or gateway sends BLINK command to sensor for identification	Green LED toggles at a rate of 10Hz frequency for 4 seconds.
In the mobile app, <ul style="list-style-type: none">Click Delete button to remove a sensorClick the Reset button to factory reset a sensor	Green LED toggles at a rate of 10Hz frequency for 10 seconds. Then Green LED stops blinking and Yellow LED starts blinking.
In the remote control, <ul style="list-style-type: none">Click Add button to localize a fixtureClick 0 (zero) button to reset a fixture	Green LED toggles at a rate of 10Hz frequency for 10 seconds. Then Green LED stops blinking and Yellow LED starts blinking.

Specifications

Physical data

Dimensions	Φ 96.2 x 56.3 mm
Installation height	2.1 to 8 m
Net weight	0.19 kg
Color	White

Environmental data

Operating temperature	-40 to +65 °C (-40 to +149 °F)
Storage temperature	-40 to +85 °C (-40 to +185 °F)
Operating relative humidity	20 to 85/85%, non-condensing
Storage relative humidity	10 to 95%, non-condensing
Protection rating	IP66, IK08

Electrical data

Input voltage	220 to 240 V (50 to 60 Hz)
Input current	5 mA
Input power	< 0.5 W
Surge protection	2 kV (line to neutral) 4 kV (line/neutral to earth)
Maximum distance BLE for commissioning	15 m line of sight
Maximum distance Zigbee MPS3100 to MPS3100	50 m line of sight, package error rate (PER) < 1%

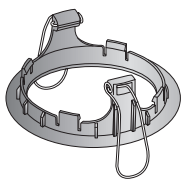
Compliance

IP IK rating	IP66 IK08
Approbation	CE, CB, UKCA, ENEC, WEEE, RCM



Accessory

Recessed mounting plate



Order name	Color	MOQ	Order number	Region of sale
SA3000/05 Rec Mnt MPS3xxx	White	1	9137 010 75003	Global

Ordering data

Order name	MOQ	Ordering number	Region of sale
MPS3100/05 OCC-DL IA WH 8M	1	9137 010 71203	Global (excluding North America) Mains power supply of 220 V to 240 V is compatible.

Note

The MPS3100/05 sensor is not suitable for use in North America as it is not compatible with 110 V mains power supply.



Warning

- Avoid touching live parts!
- Do not use drivers with damaged housing and/or connectors!
- Do not use drivers with damaged wiring!
- Class 1 luminaires must be connected to protective earth!
- Switchable function to make the open load on the driver output is abnormal condition, it is not an intended application that be allowed.

Safety warnings and installation instructions to be taken into account during design-in and manufacturing

- Do not use damaged or defective contacts or housings.
- Do not use damaged products.
- Do not service the driver when the mains voltage is connected; this includes connecting or disconnecting the LED load.

