LENA LIGHTING

CE emc S △ CB IP20

Product Description

HMW28/PRO is Microwave standalone motion sensor integrated True presence detection technology, On/Off control with one relay channel output, which is NO (normally open contact). The True presence detection technology works to detect human breathing rather than the mirror movements. No matter if the person sit/stand statically or turns their back to the sensor. The sensor can accurately recognize presence and keeps the lights on all the time. It is ideal for typical indoor applications such as classroom, office, healthcare, and other commercial areas.

Features

Store settings in the remote for easy commissioning when programming multiple sensors

Intelligent photodiode - lights and sensors only operate when needed, natural light has proirity

Zero crossing detection to reduce in-rush current and maximise relay life

IP20/IP54 Ceiling/Surface mount box available as accessory

User-friendly design for installation

5 Year, 50,000hr Warranty

Technical Data

Input Characteristics

Model No.	HMW28/PRO
Mains voltage	220~240VAC 50/60Hz
Stand-by power	<0.3W
Load ratings:	
Capacitive	800VA
Resistive	800W
Warming-up	20s

Safety and EMC

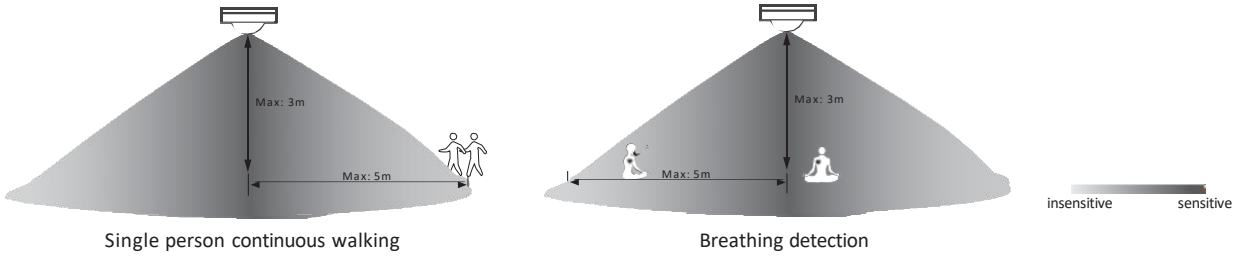| EMC standard (EMC)	EN55015, EN61000
Safety standard (LVD)	EN60669-1, EN60669-2-1
Certification	Semko, CB, CE , EMC, LVD, RCM

Sensor Data

Model No.	HMW28/PRO
Sensor Model	Presence Motion detection
Detection range (Max.)*	Installation Height : 3m Detection Range(Ø) :10m
Detection angle	360°

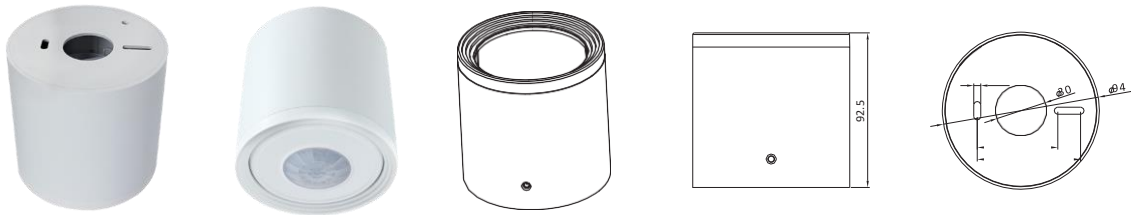* For more details of detection range, please refer to "detection pattern" section.

Environment

Operation temperature	Ta: -20°C ~ +50°C
IP rating	IP20

Mechanical Structure

Note:

1. We recommend the mounting distance between sensor to sensor should be more than 2m to prevent sensors from false-triggering.

2. The face-to-face installation between sensors and sensors or other radio sources is not recommended, or false trigger issue will potentially behave. Make sure the installed environment is free of any obvious vibration, strong air blows, curtain swing, water flow in pipe … …
The recommended mounting distance between sensor to sensor is >3m to prevent sensors from false-triggering and furtherly adjust per actual environment.

Wire Preparation

0.75 -2.5mm$^\square$

8mm

(min 6mm, max 11mm)

Pluggable screw terminal. It is recommended to make connections to the terminal before fitting to the sensor.

Wiring Diagram

HMW2B/PRO

L N PUSH

N

L

LED Driver

L N LED+ LED−

Max.800VA

LED Driver

L N LED+ LED−

L'

Detection Pattern

Max: 3m
Max: 5m

Single person continuous walking

Max: 3m
Max: 5m
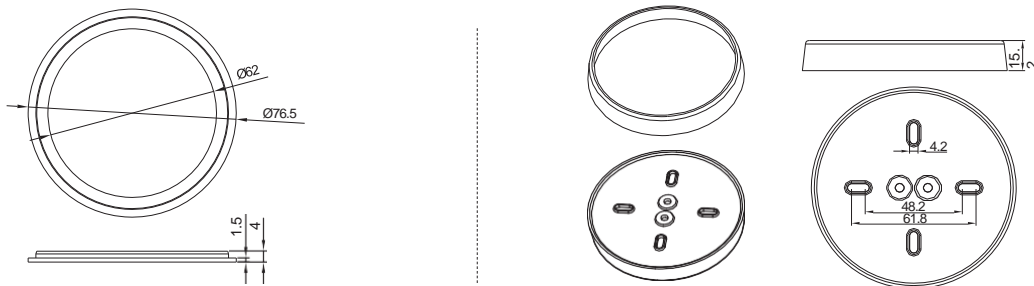
Breathing detection

insensitive   sensitive

When it's in breathing & true presence detection mode and in sitting situation, facing to sensor directly will have a better detection range than 90 degrees side facing to sensor.

Optional Accessory —Ceiling/Surface Mount Box: HA09/W, HA09/B, HA09/G
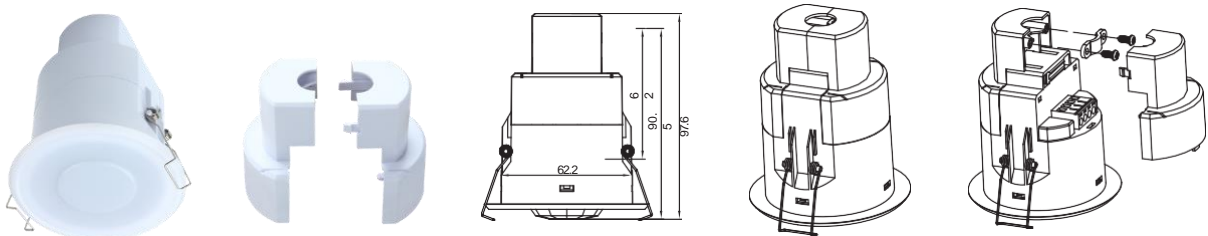

92.5   Ø20   Ø4

Big and small silicon gasket used to make IP54 degree protection when mounted into HA09 housing for ceiling mount

Ø62
Ø76.5
1.5 4

Small silicon water-proof gasket dimension(size:mm)

15. 2
4.2
48.2
61.8

Big silicon water-proof gasket dimension(size:mm)
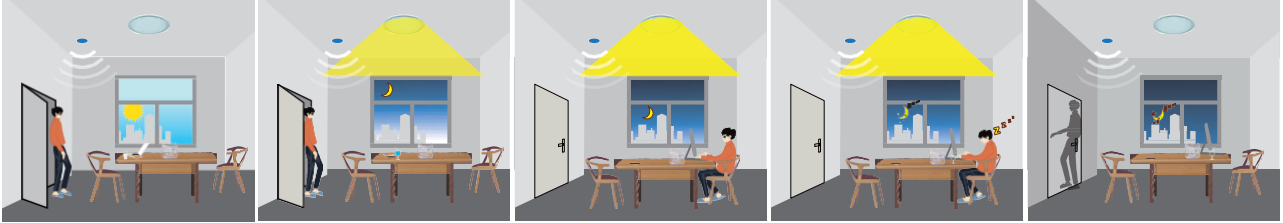
Optional Accessory —HA08

6
90. 2
5
97.6
62.2

*Note: Optional Accessory HA09 & HA08 can not be uesd together.

---

1 On/ off Control

This sensor is a motion switch, which turns on the light upon detection of motion or breathing, and turns off after a pre-selected hold-time when there is no movement or breathing. A daylight sensor is also built in to prevent the light from switching on when there is sufficient natural light.
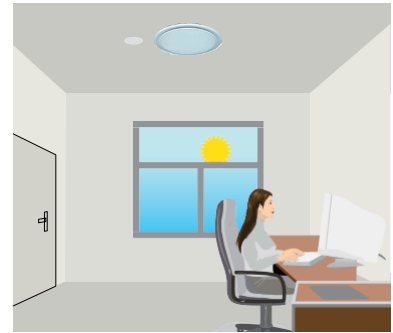
2 Lux Off Function

The built-in photodiode will also automatically turn off the light when the ambient natural light exceeds the programmed lux level for more than 5min, regardless of whether motion is detected or not.

With sufficient natural light, the light does not switch on when presence is detected.

With insufficient natural light, the sensor switches on the light automatically when presence is detected.

The sensor switches off the light when natural light is sufficient, even with presence.

3 Manual Override

With the help of push-switch, this sensor can be over-ridden by the end-user to manually switch on/off the light, which makes the product more user-friendly and offers more options to fit some extra-ordinary demands:

* Short Push (<1s): on/off function;
  On → Off: the light turns off immediately and cannot be triggered ON by motion until the expiration of pre-set hold-time. After this period, the sensor goes back to normal sensor mode.
  Off → On: the light turns on and goes to sensor mode, no matter if ambient Lux level exceeds the daylight threshold or not.

Note: if end-user do not want this manual override function, just leave the "push" terminal unconnected to any wire.
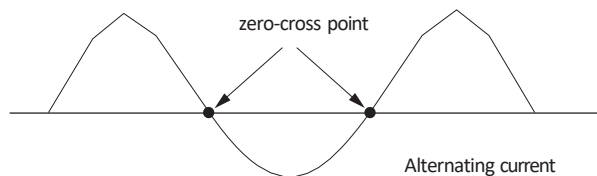
4 Semi-auto Mode (Absence Detection)

It is easy to forget to switch off the light, in office, corridor, even at home. And in many other cases, people do not want to have a sensor to switch on the light automatically, for example, when people just quickly pass-by, there is no need to have the light on. The solution is to apply this "absence detector": motion sensor is employed, but only activated on the manual press of the push-switch, the light keeps being ON in the presence, and switches off in the long absence.

Note: end-user can choose either function 3 or function 4 for application. Default function is manual override.

5 Zero-cross Relay Operation

Designed in the software, sensor switches on/off the load right at the zero-cross point, to ensure that the in-rush current is minimised, enabling the maximum lifetime of the relay.

zero-cross point

Alternating current

ON / OFF Permanent O N / O F F function

Press button "O N / O F F" to select permanent O N or permanent O F F mode.
* Press button "AUTO", "RESET" or "Ambient" to quit this mode.
The mode will change to A U T O Mode after power failure.

RESET Reset Settings

Press button "RESET", all settings go back to default values as below:
Detection range: 100%; Hold-time: 5min; Lux disabled

AUTO Sensor mode

Press "Auto Mode" button, the sensor starts to function and all settings remain the
same as the latest status before the light is switched on/off.

SEMI AUTO SEMI-AUTO mode

Press "SEMI-AUTO"button, to enter semi-auto mode. The fixture is manually on by
push-switch and automatically off in this mode.

HRC-12

Detection range

Press buttons in zone "HF sensor Detection range" to set detection range at 100% / 75% / 50% / 10%.

Daylight threshold

Press buttons in zone " Daylight threshold" to set daylight sensor at 2 Lux/ 10Lux / 50Lux / 100Lux / 300Lux / 500Lux / Disable.

Ambient daylight threshold

Press button "Ambient", the surrounding lux level is sampled and set as the new daylight threshold.

Hold-time

Press buttons in zone "hold-time" to set the hold-time at 5sec / 1min / 5min / 10min / 15min / 30min / 60min.
Press button 30min / 60min, the actual setting is 25min.

For more information, contact iot@lenalighting.pl