



Product Description

The RIGA Presence Sensor is a high-performance 24 GHz millimeter-wave radar presence sensor engineered for smart lighting control in commercial and residential spaces. Utilizing FMCW modulation, it provides accurate detection of major, minor, and micro movements—including human breathing—across a 120° field of view (6 – 8m coverage diameter). Unaffected by temperature, airflow, or environmental dust, the sensor features an integrated daylight threshold sensor and substantial load handling capacity (800 W resistive / 400 W inductive). Parameters can be tuned using on-board DIP switches or the MH10 infrared remote. Designed for discreet flush ceiling mounting (65 – 70mm cutout), RIGA delivers energy efficiency, long-term stability, and low RF power emission.

Sensor Body

Sensor Finish	: White
Dimension	: 85mm x 2.5mm
Connection	: 4pin Terminal

Sensor Metrics

Detection Level	: Micro Motion (Breathing Detection)
Sensor Type	: Presence Sensor
Radar Frequency	: 2.4Ghz-24.25gHZ ISM band
Transmitting Power	: 5mW max
Detection Area	: DIP or MH10 remote setting 0.5m-4m
Hold time	: Dip Setting : 10s/30s/1min/3min/5min/20min
Presence switch to Absence	: MH10 Remote : 5Lux/15Lux/30Lux/50Lux / 100Lux/150Lux/Disable
Remote Control	: Available
Mounting Height	: 2.5-4.0m typical value
Detecting Angle	: 120°

Max. load capacity	: 800W resistive loading
	: 400W inductive Loading
Motion Detection Diameter	: 6-8 Max
Absence Switch to Presence	: Within 0.5s
Presence switch to Absence	: less than 15s
Flush mounting Installation	: Available
Sensor Parameter Adjustable	: By Dip switch or Remote
Sensing function based on	: Millimeter wave radar technology

Input/Output

Input Voltage	: 100-240V C 50-60HZ
Rated Voltage	: 220V AC
Consumption	: <1W 230V DC
Output Signal	: 1 Channel ON/OFF
Max Surge current	: 50A

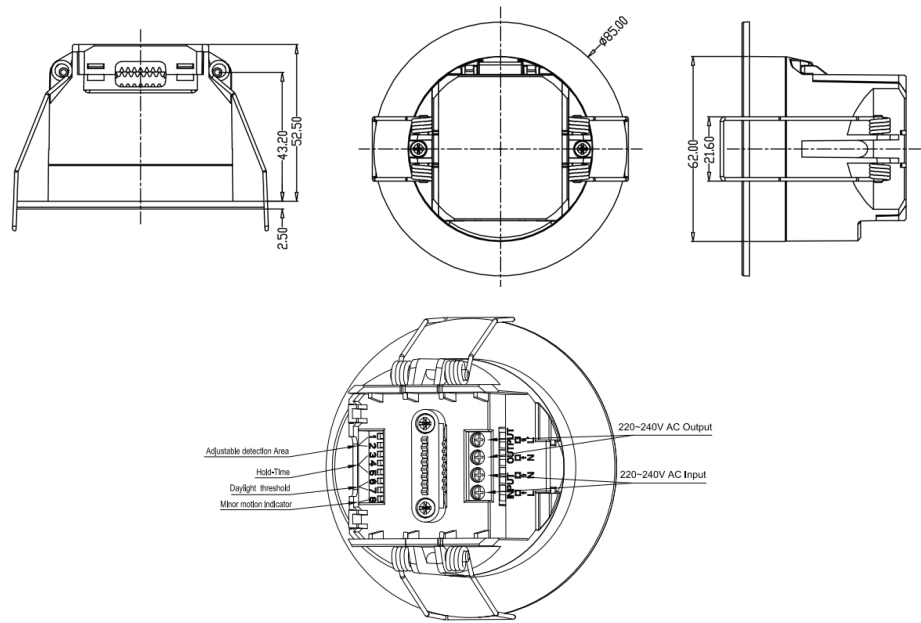
Application

Drill hole	: 65-70mm
Installation	: Surface Mounting
Working temperature	: 0°C...+50°C
Storage Temperature	: -25°C~...+80°C

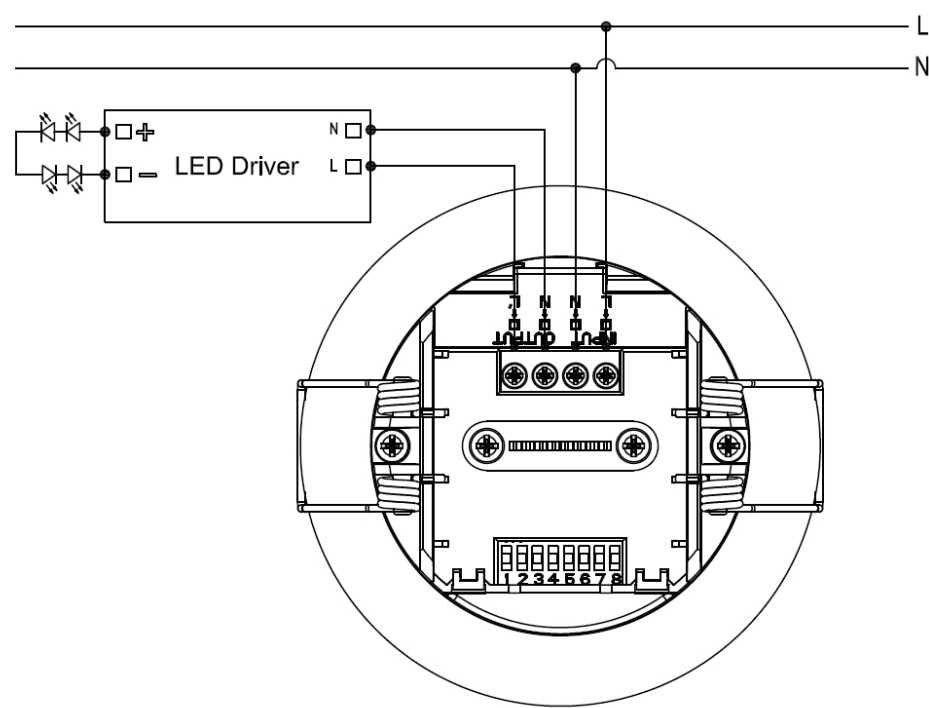
Certificate Standard

Certificate	: CE/RED
Environmental Requirement	: Compliant to RoHS
IP Rating	: IP20

DIMENSION & FUNCTION DIAGRAM



WIRING FUNCTION



Wiring layout suggestion:

1. LN terminal stands for AC input, L'N' stands for AC output, please wiring correctly
2. One sensor's max loading capacity is 800w resistive loading and 400w inductive loading for one single load. if you want connect more load in one loop, we recommend to add an AC contactor in our output LN terminal to avoid momentary surge overload.

Initialization

When powered on, sensor indicator will turn off after flashing for 10S and will enter a 20S detection cycle, if there's presence detected, then sensor will report presence and enter hold time calculating, if absence detected, then sensor will report absence. During initialization, sensor will not detect moving signal and you can use our MH10 remote or DIP switch to adjust detection area.

Factory setting

Detection Area: 4M

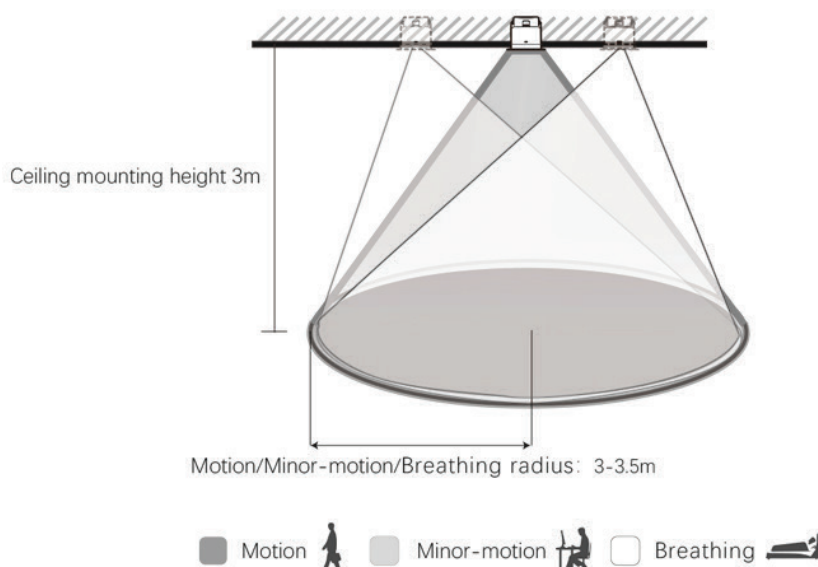
Hold Time: 30S

Indicator light :Open

Daylight sensor :Disable

Detection radiation

Highly recommended ceiling flush mounting and its detection radiation is as below shows:



Detection Signal

The product detects human moving, minor moving, and presence signals, and realizes the detection of human-existing/no-human in non-sleep state. The following is a description of the moving, minor moving and presence signals:

- **Major movement:** detect the human significant moving (walking) in the detection area.
- **Minor movement:** detect the human slight moving in the detection area, such as leaning forward, leaning forwarder and back, swinging limbs, shaking head, typing, playing with mobile phones and so on.
- **Micro movement:** detect human abdominal and thoracic expansion behaviors caused by breathing, but not detect moving signal and minor moving signal.



Major movement



Minor movement



Micro movement

DIP SWITCH SETTINGS

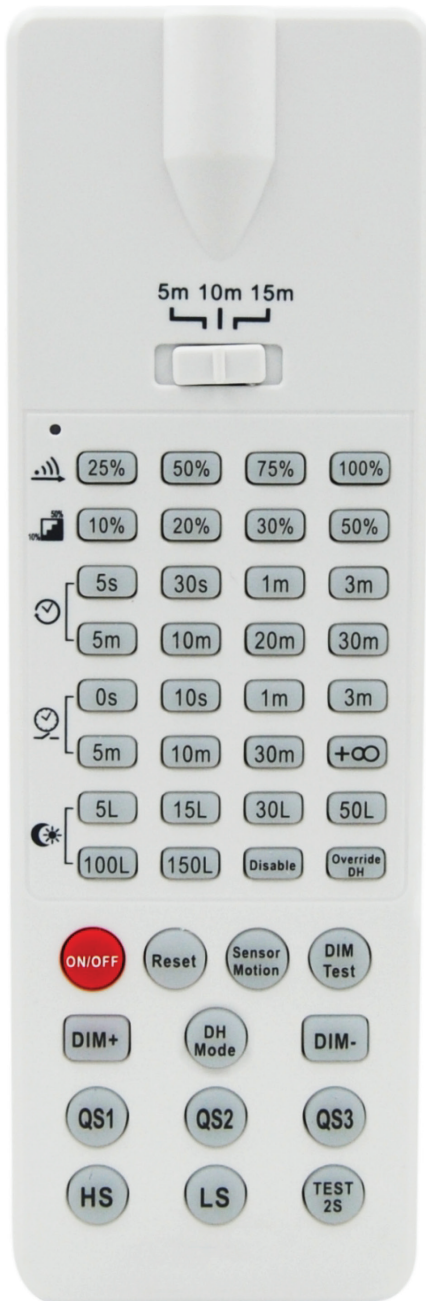
DETECTION AREA

	1	2	3
4m	ON	ON	ON
3.5m	-	ON	ON
3m	ON	-	ON
2.5m	-	-	ON
2m	ON	ON	-
1.5m	-	ON	-
1m	ON	-	-
0.5m	-	-	-

	4	5	6	
I	ON	ON	ON	10S
II	ON	-	ON	30S
III	ON	ON	-	1min
IV	-	ON	ON	3min
V	-	-	ON	5min
VI	-	-	-	20min

DAYLIGHT SENSOR

	7	8	
I	ON	ON	5Lux
II	-	ON	50Lux
III	ON	-	150Lux
IV	-	-	Disable



Detection area radius:

QS1+100%=4m, QS1+75%=3.5m, QS1+50%=3m, QS1+25%=2.5m,
QS2+100%=2m, QS2+75%=1.5m, QS2+50%=1m, QS2+25%=0.5m

Hold time: 10s (5S button) /30s/1min/3min/5min/10min/20min/30min

0S:High sensitivity 10S:Medium sensitivity 1m:Low sensitivity
10m: Slight self-learning 30m: Medium self-learning
∞: Heavy self-learning

Daylight threshold: 5lux/15lux/30lux/50lux/100lux/150lux/Disable

ON/OFF: Disable sensor detection function

Sensor motion: Enable sensor detection function

Reset: all parameter back to factory setting

DH mode:long press>3S to disable presence detection function

HS: Indicator ON

LS: Indicator OFF