■ Line Voltage Passive Infrared Fixture
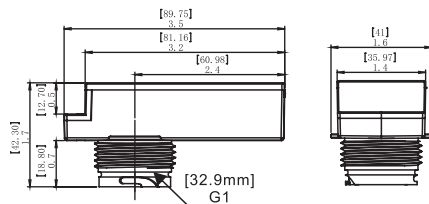## Integrated Outdoor Sensor BRI823-B-D Instruction

BRI823-B-D

RC-100
(OPTIONAL)

[89.75]
3.5
[81.16]
3.2
[60.98]
2.4
[12.70]
0.5
[12.30]
.7
[8.80]
0.3

[41]
1.6
[35.97]
1.4

[32.9mm]
G1

Unit:mm/in

Product brief

The BRI823-B-D mounts in an outdoor lighting fixture and provides multi-level control based on motion and/or daylight contribution. It controls 0-10 VDC LED drivers or dimming ballasts, as well as non-dimming ballasts and, with an Fresnel Lens, is rated for wet and cold locations. All control parameters are adjustable via a wireless configuration tool capable of storing and transmitting sensor profiles.

Technical parameters

120/277 VAC, 50/60Hz
Resistive/Halogen - 800W/1200W@120/277V
Fluorescent Ballast - 660W/1200W@120/277V
Electronic Ballast (LED/CFL) - 5A/5A@120/277V
Detect Area: 360°, maximum coverage 60' diameter from 40' height
High mode: 0-10 V; default 10 V
Low mode: Off, 0-9.8 V; default 1 V
Operating temperature: -40-158°F (-40-70°C)
Operating Humidity: 20-90%
IP66 for PIR LEN(top part of the sensor)
Five year warranty

Function and options

1.Bi-Level control
The PIR sensor to achieve tri-level dimming control, for same areas that require a light change notice before switch off.
If offers 3 levels of the light Control : 100%--dimming light (0,10%,30%,50%)--off;and 2 periods of selectable waiting time: motion hold-time and stand-by time. Selectable daylight threshold and choice of detection area.
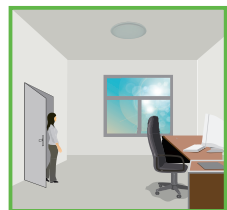
With sufficient natural light, the light does not switch on when presence detected.
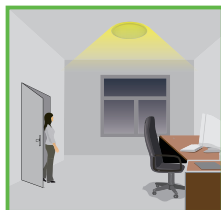
With insufficient natural light, the sensor switches on the light automatically when person enters room.
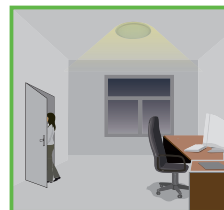
People left, light still dims to 0/10%/30%/50% (options) standby level after the hold time.

Light switches off automatically after after stand-by time elapsed.

2.Photocell(Daylight sensor) Control
In condition by setting, Press ⓘⓉ , the photocell(Daylight sensor) on/off setpoint is open. When the light level exceeds this setting, the lights will turn off even when the space is occupied. Once the light level exceeds this setting, the sensor will wait and monitor for 1 min in order to confirm the light level increase is not temporary before forcing the lights to go off. When light level goes below the settings, the light will turn on even without motion detection after 1min. This feature is disabled by default.

If with insufficient natural light, the light automatically dims to 0,10%, 30%, 50%.
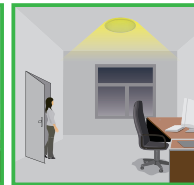
With insufficient natural light, the sensor switches 100% on the light automatically when person enters the room.

People left, light dims to 0/ 10%/30%/50% (options) standby level after the hold time.
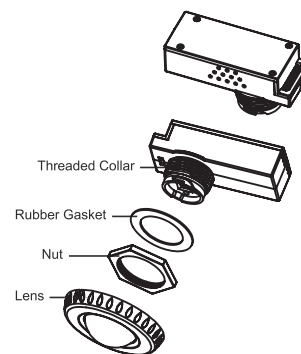
The ligth still dims to 0/10%/30% /50% if still insufficient natural light,the light never switch off until sufficient natural light.
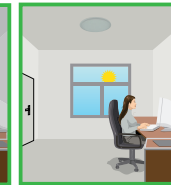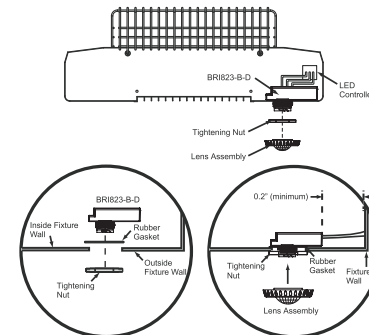
Light will switch off automaticallz even with presence detected, if the nature light is sufficient.
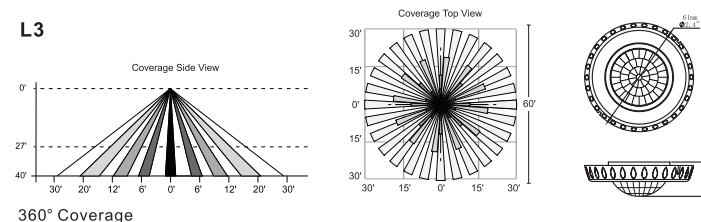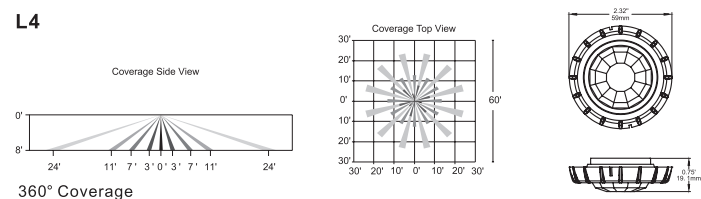
Sensor module

Threaded Collar

Rubber Gasket

Nut

Lens

Mounting

BRI823-B-D
LED Controller
Tightening Nut
Lens Assembly

BRI823-B-D
Inside Fixture Wall
Rubber Gasket
Outside Fixture Wall
Tightening Nut

0.2" (minimum)
Tightening Nut
Rubber Gasket
Fixture Wall
Lens Assembly

Coverage Patterns

L3

Coverage Side View
0°
27°
40°
30' 20' 12' 6' 0' 6' 12' 20' 30'
360° Coverage

Coverage Top View
30'
15'
0'
15'
30'
30' 15' 0' 15' 30'
60'

61mm
Ø.1"

L4

Coverage Side View
0'
8'
24' 11' 7' 3' 0 3' 7' 11' 24'
360° Coverage

Coverage Top View
30'
20'
10'
0'
10'
20'
30'
30' 20' 10' 0' 10' 20' 30'
60'

2.32"
59mm

PARAMETER SETTING BY DIP SWITCH

Consider the picture: 1, 2 set sensitivity; 3, 4 set hold time; 5, 6 set the lux; 7, 8 stand-by light level ;
9, 10 set stand-by time ;
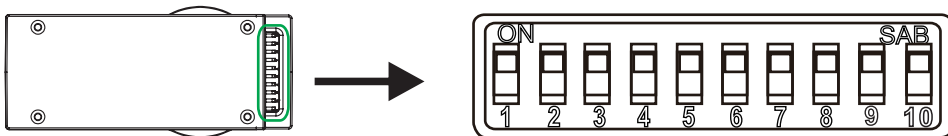
### Detection Range Setting (sensitivity)

Detection range is the term used to describe the radii of the more or less circular detection zone produced on the ground after mounting the sensor light at a height of 40ft, pull switch to the ON position as " ⬆ ", pull switch to the OFF position as "⬇", switch location and detection range of the corresponding table is as follows:
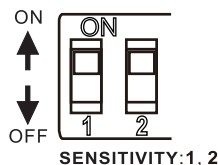
SENSITIVITY
| 1	2	
⬇	⬇	20%
⬇	⬆	50%
⬆	⬇	75%
⬆	⬆	100%

SENSITIVITY:1, 2

Hold Time Setting

The light can be set to stay ON for any period of time between approx. 10sec and a maximum of 60min. Any movement detected before this time elapse will re-start the timer. It is recommended to select the shortest time for adjusting the detection zone and for performing the walk test.
Pull switch to the ON position as "⬆", pull switch to the OFF position as "⬇", switch location and detection range of the corresponding table is as follows:
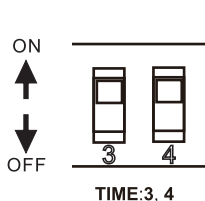
TIME
3	4	
⬇	⬇	10S
⬇	⬆	10Min
⬆	⬇	30Min
⬆	⬆	60Min

TIME:3, 4

Light-control Setting

The chosen light response threshold can be infinitely from approx. 10-50lux, pull switch to the ON position as "⬆", pull switch to the OFF position as "⬇", switch location and light-control of the corresponding table is as follows:
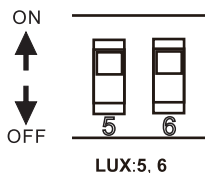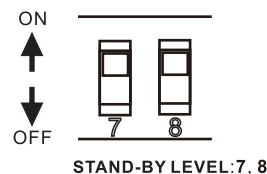

LIGHT
5	6	
⬇	⬇	☀ (light sensor disable)
⬇	⬆	10Lux
⬆	⬇	30Lux
⬆	⬆	50Lux

LUX:5, 6

Stand-by Light Level Setting

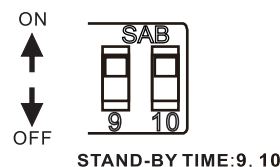Switch to the on is "⬆", switch to the off is "⬇"; he corresponding file of switch location and detection distance as follow:

STAND-BY LEVEL
7	8	
⬇	⬇	0%
⬇	⬆	10%
⬆	⬇	30%
⬆	⬆	50%

STAND-BY LEVEL:7, 8

Stand-by Time Setting

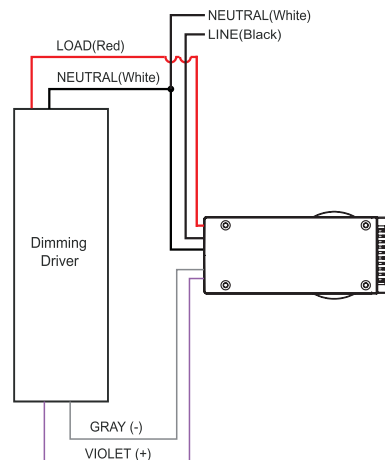File of switch location and detection distance as follow: file of switch location and detection distance as follow:

STAND-BY TIME
9	10	
⬇	⬇	+∞
⬇	⬆	1Min
⬆	⬇	30Min
⬆	⬆	60Min

STAND-BY TIME:9, 10

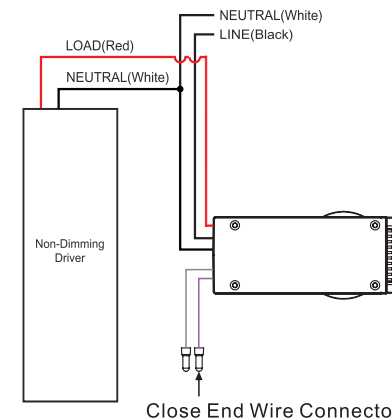## PARAMETER SETTING BY REMOTE CONTROL IN MANUAL OF RC-100

Wiring Diagrams

BRI823-B-D wiring with dimming ballast or LED driver.
Dimming Driver

BRI823-B-D wiring with non-dimming ballast or LED driver.
Non-Dimming Driver

Close End Wire Connector

V1.0

PRODUCT SPECIFICATION

MODEL NO	HD09VR Highbay Series
INPUT	12VDC
DESCRIPTION	HIGHBAY PIR SENSOR SERIES (BLUETOOTH & REGULAR)

HIGHBAY PIR SENSOR SERIES (BLUETOOTH & REGULAR)

WRITTEN BY	夏勇
CHECKED BY (R&D)	陈启东
CONFIRMED BY (SALES)	周蕾
DATE	2023.04.19

Features & Benefits

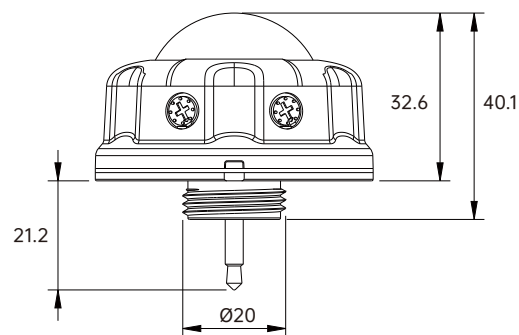HD09VR-PH/HD09VR-PHB

HD09VR-PH-1/HD09VR-PHB-1

HD09VR Highbay Series

• Rotator & Remote control, app control for BLE version.

• 12VDC Input, 0-10V Dimming, with Daylight Harvesting and Photocell Function.

• ONE for ALL Installations Parterning With Different Receptacles & Brackets.
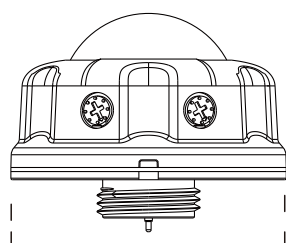
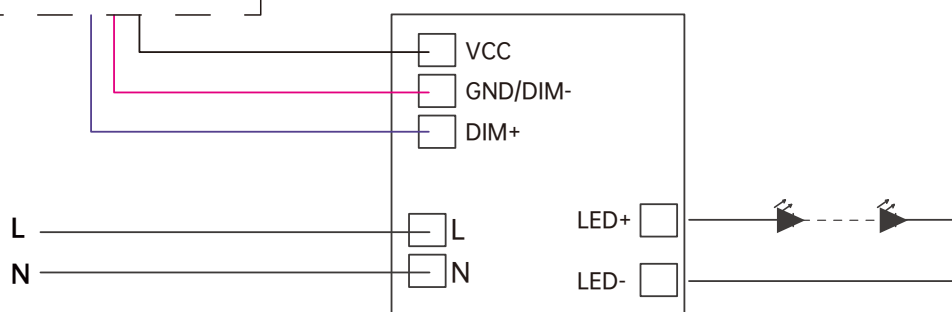# Demensions Unit:mm
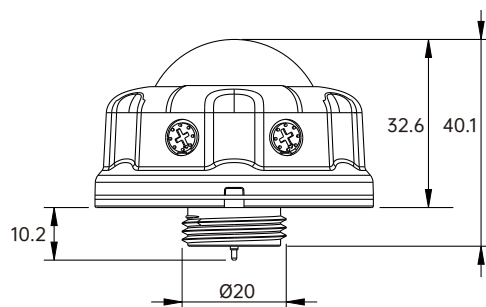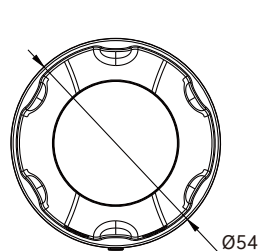
HD09VR-PH/HD09VR-PHB

HD09VR-PH-1/HD09VR-PHB-1

Wiring Diagram

Black White +12V 12VDC input
Pink GND 0/1-10V DIM
Purple DIM+ 0/1-10V DIM+

VCC
GND/DIM-
DIM+

L
N

L
N

LED+
LED-

Parameters

Model NO.		HD09VR
PIR INFORMATION	Infrared Wavelength	5-14um
	Output Signal Peak	≥3500mV
	PIR Sensitivity	3200V/W
	Installation Height	12m/39ft Max.
	Detection Distance	≥3m/9ft
	Detection Angle	Fresnel Lens ≤120° Fersnel Lens
	Warranty	3 Years
SENSOR PARAMETER	Detection Area	Remote Control: 25%/50%/75%/100%
	Holdtime	Remote Control: 5s/30s/1min/3min/5min/10min/20min/30min Rotating switch: 5s/1min/5min/10min
	Daylight Threshold	Remote Control: 2Lux/10Lux/30Lux/50Lux/80Lux/120Lux/ 200Lux/250Lux/300Lux/350Lux/400Lux/Disable
	Standby Dimming Level	Remote Control: 10%/20%/30%/50% Rotating switch: 0%/10%/30%/50%
	Standby Period	Remote Control: 0s/10s/30s/1min/5min/10min/30min/60min/+∞
	Dusk/Dawn Sensing/ Photocell	Daylight threshold as 30lux/50lux/80lux/120lux/200Lux/ 250Lux/ 300Lux/350Lux/400Lux Standby period as +∞ ; Standby dimming level as 10%/20%/30%
	Daylight Harvesting	1. Adjust "daylight" value higher than 50lux 2. Preset "standby period" 0S 3. press MW/PIR button 3 times till MW/PIR icons both blicking on LCD screen, daylight harvesting function enabled. (With BLE verison, press DH button, daylight harvesting function enabled.)
	Output	ON/OFF,0-10V Dimming
	Warm-up Period	45s
INPUT	Input Range	12VDC
	Voltage Range	10-15VDC
	Current	<15mA
OUTPUT	Signal	DIM 0-10V
ENVIRONMENT	Working Temp	-20℃~+60℃
	Storage Temp	-40℃~+80℃ Humidity: 85% (non-condensation)
CERTIFICATE & STANDARDS	Environmental Requirements	In accordance with CE ROHS
	IP Rating	IP65

Model Information

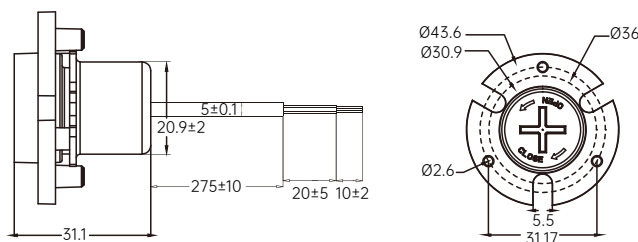| Model Number	Sensor Type	Connector	Controller
HD09VR-PH	PIR	3-Pin	Remote Control HD05R
HD09VR-PH-1		Audio Jack	
HD09VR-PHB Bluetooth		3-Pin	HAISEN BLUE APP
HD09VR-PHB-1 Bluetooth		Audio Jack	

Receptacle Options

Type A
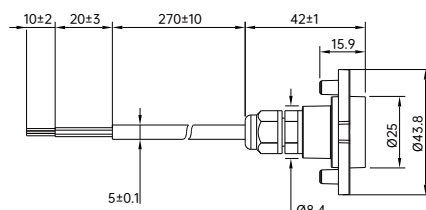
3 pogo-pin connection
Wire color: Black/white, Pink, Purple
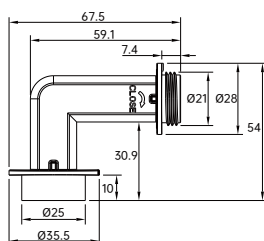The length of the wire: 330mm

HD07VRA-1

Audio Jack connection
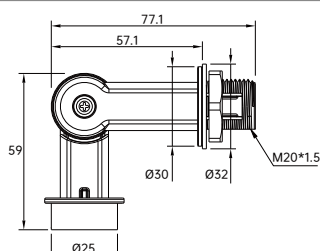Wire color: Black/white, Pink, Purple
The length of the wire: 330mm

Type A-3
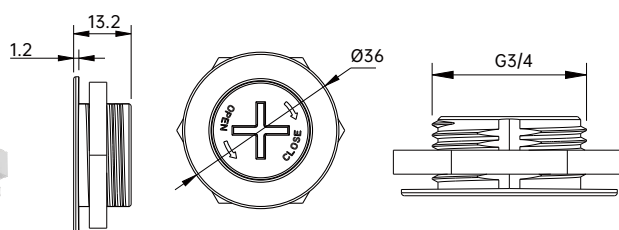
3 pogo-pin connection
Wire color: Yellow, Pink, Purple
The length of the wire: 330mm

Type B
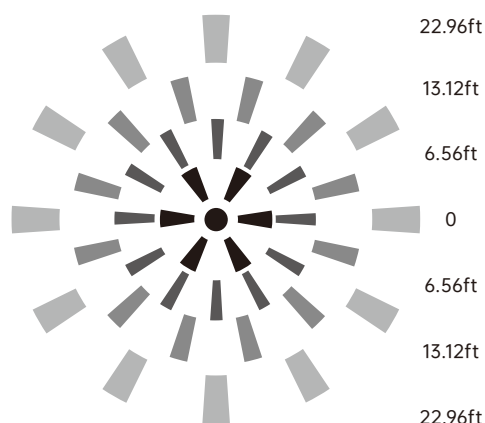
3 pogo-pin connection
Wire color: Black/white, Pink, Purple
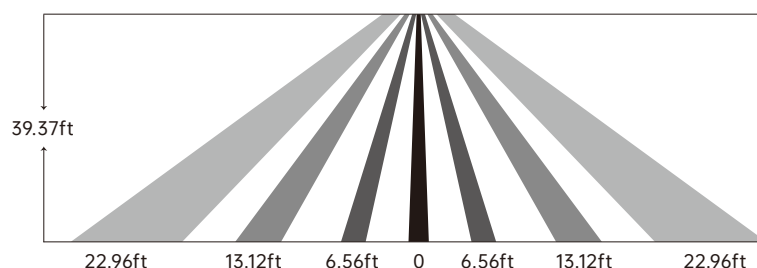The length of the wire: 330mm

Type C

3 pogo-pin connection
Wire color: Black/white, Pink, Purple
The length of the wire: 300mm

Detection Coverage

22.96ft
13.12ft
6.56ft
0
6.56ft
13.12ft
22.96ft

Mounting Height
<12m/39.37ft Ceiling Mounted

Detection Distance
Radius 3-7m/9.84-22.96ft

39.37ft

22.96ft   13.12ft   6.56ft   0   6.56ft   13.12ft   22.96ft
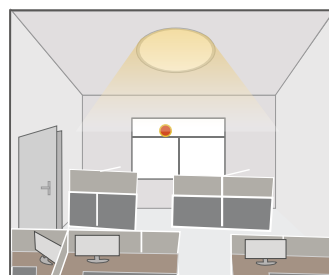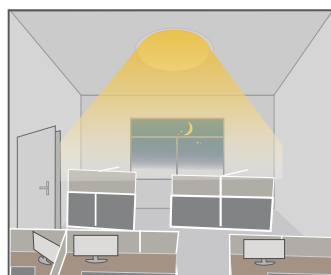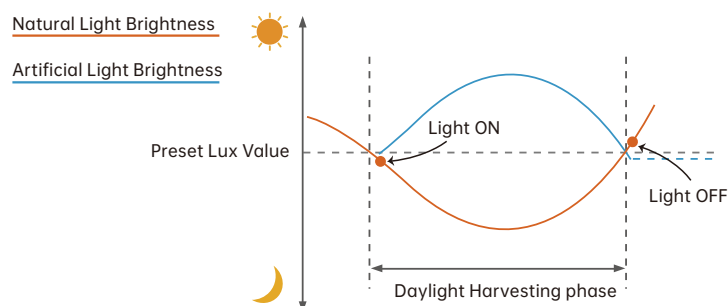
Performance

1.Daylight Harvesting

1. Adjust "daylight" value higher than 50lux
2. Preset "standby period" 0S
3. press MW/PIR button 3 times till MW/PIR icons both blicking on LCD screen, daylight harvesting function enabled.
(With BLE verison, press DH button, daylight harvesting function enabled.)

Natural Light Brightness

Artificial Light Brightness

Preset Lux Value

Light ON

Light OFF

Daylight Harvesting phase

When ambient brightness is lower than preset lux level, sensor will turn on light automatically and keep dimming according to the change of the ambient brightness;
when outside is getting darker, the inside will be brighter, and brighter darker.

Light OFF when ambient brightness becomes higher
than the preset lux level.

2.Dusk/Dawn function

HD09VR is able to differentiate artificial light brightness from natural light after installed inside the fixture, and automatically turn off light when ambient brightness exceeds preset lux level.
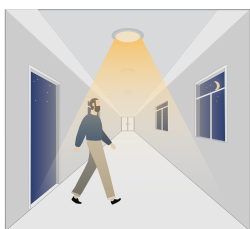
Precondition of Dusk/Dawn function:

1. Standby period is +∞;

2.Standby dimming level is on 10%,20% or 30%;

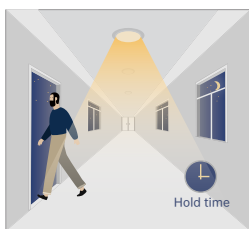3. Daylight threshold is on 30lux/50lux/80lux/120lux/200Lux/250Lux/300Lux/350Lux/400Lux
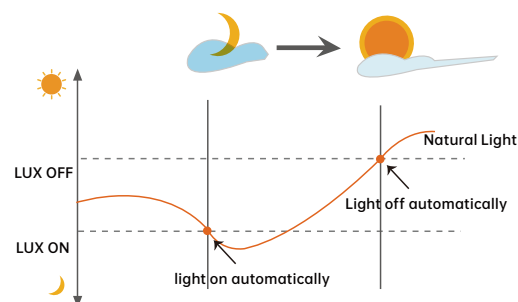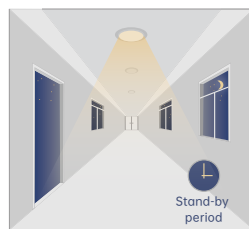
3. With Dusk/Dawn function
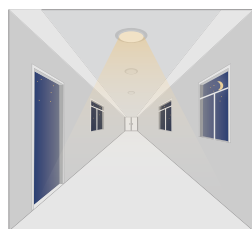
With insufficient ambient brightness, sensor turns on light and keeps it at standby dimming level even if there is no motion or persence.
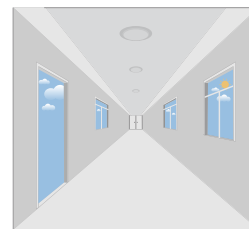
When sensor detects motion or presence it will bring the light level up to 100%.

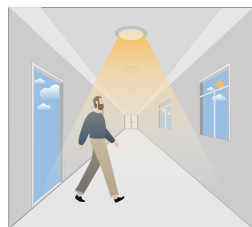After motion is no longer detected,fixture remains at 100% for hold time.

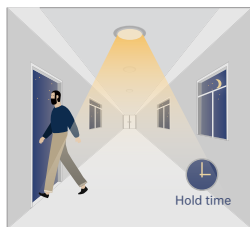After pre-set hold time period it will dim light to standby dimming level again and always keep it.

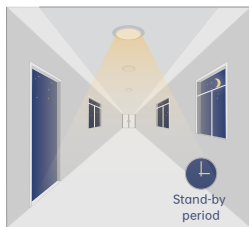With sufficient ambient brightness, sensor will turn OFF light automatically.
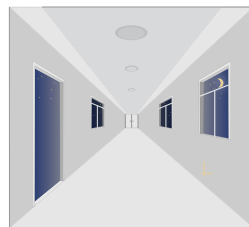
4. Without daylight disabled

Sensor turns ON light when motion is detected.

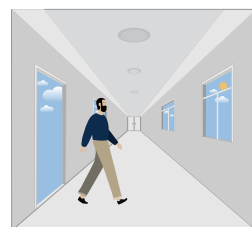Sensor keeps for a hold time period after motion leaves

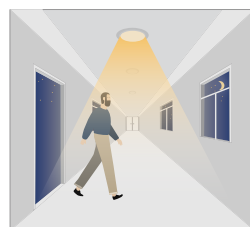Sensor dims light to standby dimming level after hold time if there is still no motion

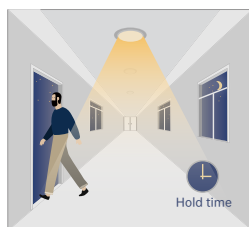Sensor turns OFF light after standby period

5. With Daylight Threshold

With sufficient daylight, the sensor keeps light OFF even motion gets detected

With insufficient daylight, the sensor turns light ON when motion gets detected

After there's no motion detected, the sensor keeps light ON 100% for holdtime.
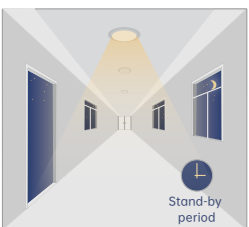
After holdtime, sensor dims light to standby dimming level for standby period.
if the standby period has been set as Os, sensor turns light OFF automatically after holdtime.

The sensor turns OFF light automatically after the standby period when there's no motion detected.

Attention

1. The sensor should be installed by qualified electrician and ensure power is OFF before installation.
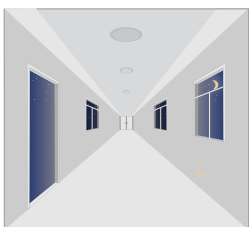
2. Please read the instruction carefully before using the product and keep it well for other users to read any time.

3. We reserve the right to modify any incorrect text, image and technical parameters.

4. Any unauthorized modification is forbidden. Otherwise all guarantees will be immediately invalid.

5. Product could be optimized without prior notice.

APPLICATION NOTES

1. Suitable for indoor application, half/completely outdoor environment conditions might trigger the sensor.

2. Suitable for ceiling mount installation, adjust sensitivity properly if it's installed on side-wall because it gets more sensitive.

3. PIR sensor can't be placed inside any material, fresnel lens must completely exposed in air.

4. Fresnel lens of the PIR sensor must be lower than light fixture.

5. Not suitable environment if there's sudden changed temperature of airflow for PIR sensor.

6. Not suitable environment if there's shelves blocking between the sensor and presence area.

7. Detection area options may NOT working obviously because it works depends on fresnel lens, it's physically defined.

8. Detection distance performance works better when moving parallelly than moving towards to the sensor.

9. Daylight testing delivered in bright day without shadow or specially designed lampshade or lens.

10. Dimming performance differs when connected to different drivers; If the driver can't completely turn OFF, sensor can't either.

11. Input power voltage must be stable with float less than 10%.

12. The first time powered ON sensor, light will be ON 100% for about 45S then dims to standby level or OFF.

13. Distance detection is delivered by testing person about 165cm in open area as reference, the result differs by size and speed of moving objects, mountng height and real-life situation.