深圳市易探科技有限公司
Shenzhen EasyDetek Technology Co.,Ltd

EasyDetek易探

24GHz Human Presence Sensor

EDQ282 Specification

EasyDetek technology·Habitat Detection Radar

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EDQ282

Product Features

- Embedded digital filtering algorithm with high immunity to interference
- Support dual strong power output control
- Support ambient light recognition
- Adopt human body detection algorithm, support movement and presence detection
- DIP-switch design supports user-configured different sensing parameters to enhance the experience

Electrical Parameters

Input Voltage	AC 90-260V 50/60Hz
Operating Current	⩽16mA @220V AC
Output Method	relay ON/OFF
Standby power consumption	0.5W @220V AC
	Resistance: Single 400W

Functional Parameters

Motion Sensing Radius ①	4.5m max
Presence Sensing radius ①	4m max
Mounting Height	＜4m
L1 output delay	5s / 60s (dial code adjustable)
L2 startup delay	30s / 60s (dial code adjustable)
light threshold ②	150lux / off (dial code adjustable)

Output Parameter

Transmission frequency	24-24.25GHz
Transmission power	5dBm (max)

Environment & Lifespan

Operating Temperature	-30~+60℃
Storage Temperature	-35~+85℃

Remarks:

① The test distance range is based on the sensor hanging height of 3m, indoor installation environment test,
the test person is 170cm tall, weight 65-75kg, walking speed 1m/s.
Different scenarios may cause changes in the range of installation, subject to the actual test.

② Due to the spectral characteristics of the photosensitive device, the illumination value is uniformly tested under natural light conditions.

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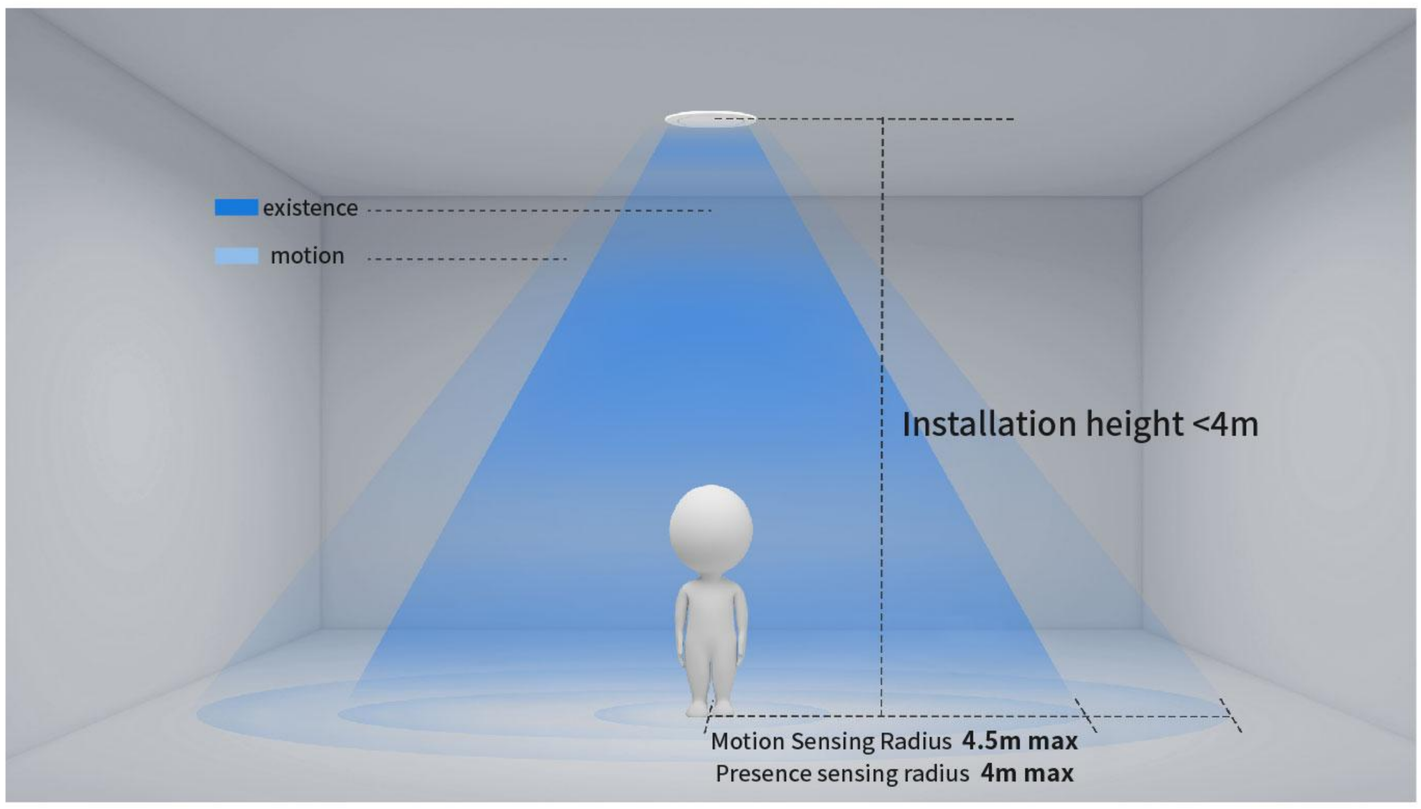
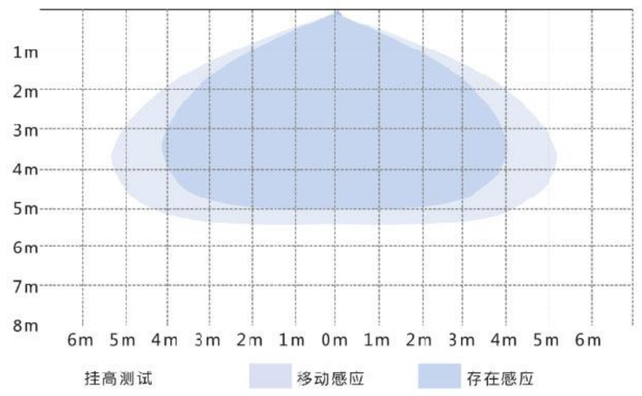
Detection Schematic



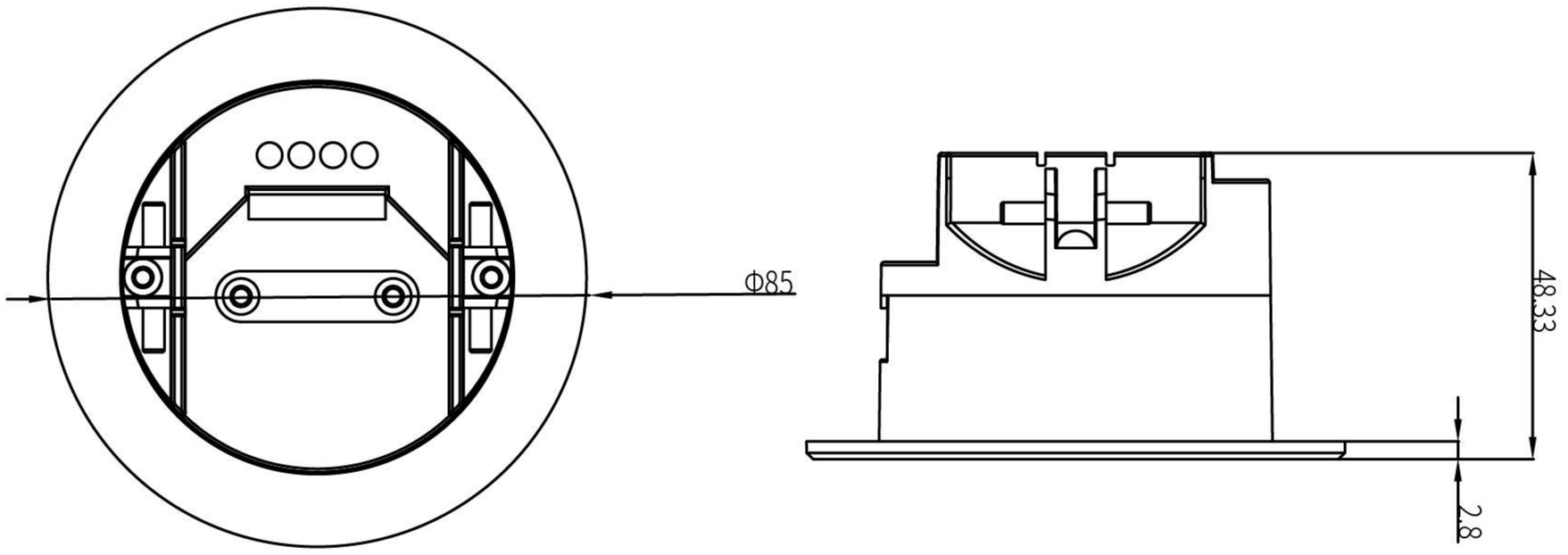
Radar Sensing Schematic



Motion Sensing Radius 4.5m max
Presence sensing radius 4m max

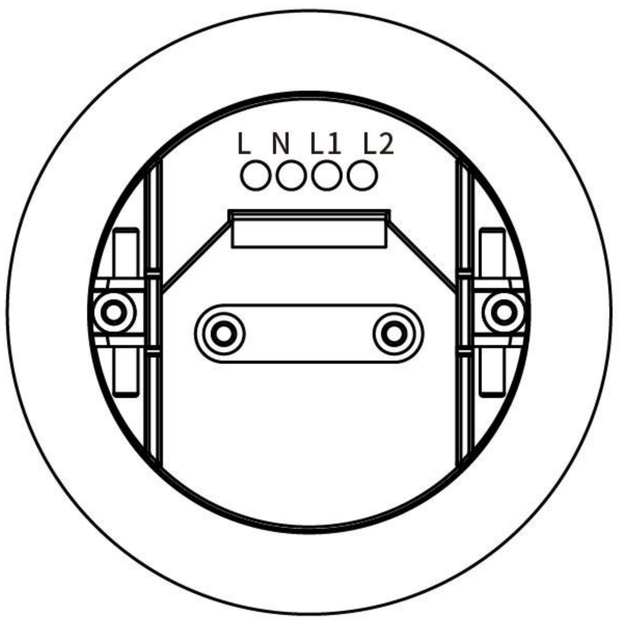
Product Dimension Drawing

Unit: (mm)



EDQ282 Dimensional tolerances: ±0.2

Pin Description



Pin	Description
L	FireWire input
N	Zero Line (common zero)
L1	1-way FireWire Output
L2	2-way Firewire Output

Output Application Notes

1.Relay output:

①.Initialization: after power-on, it enters the initialization stage, L1 road relay is closed, if no one triggers in the initialization stage, L1 road relay will be disconnected at the end of the initialization and enter 2s blocking time; if someone triggers in the initialization stage, L1 road relay will continue to be closed until the end of the time delay (the time delay can be set by the dial code);

②.Working state: after someone triggers, the L1 road relay is closed until the end of the delay (the delay can be set by the dial code), if the duration of the occupied time is more than 30s (can be set by the dial code 2), the L2 road relay is closed, if the duration of the occupied time is less than 3min, the L2 road relay will be disconnected in the unoccupied after a delay of 3min, if the duration of the occupied time is more than 3min and less than 15min, the L2 roadIf the duration of occupied time is more than 3min and less than 15min, the L2 relay will be disconnected after a delay of 15min after no one is there; if the duration of occupied time is more than 15min, the L2 relay will be disconnected after a delay of 45min after no one is there;

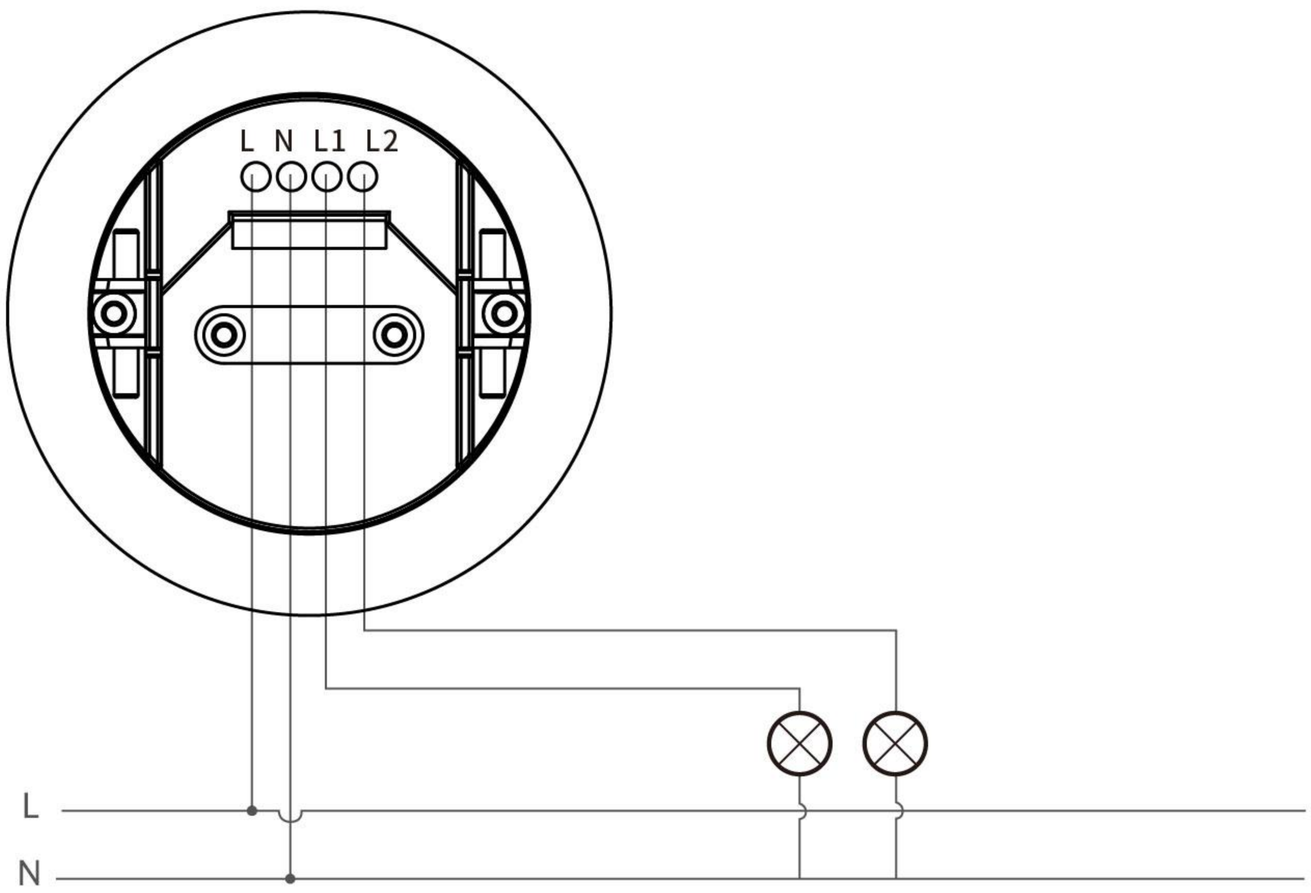
③.Configuration modification: Under the power-on condition, if the dialing code position is changed, the L1 relay will be flipped once and then return to its original state.

2. Indicator output:

①.Initialization: LED indicator light is on for 5s; LED indicator light is off after the end;

②.Working status: the sensor enters into occupied from unoccupied, LED indicator flashes once, during the period if it continues to be occupied, it flashes once every 5s.

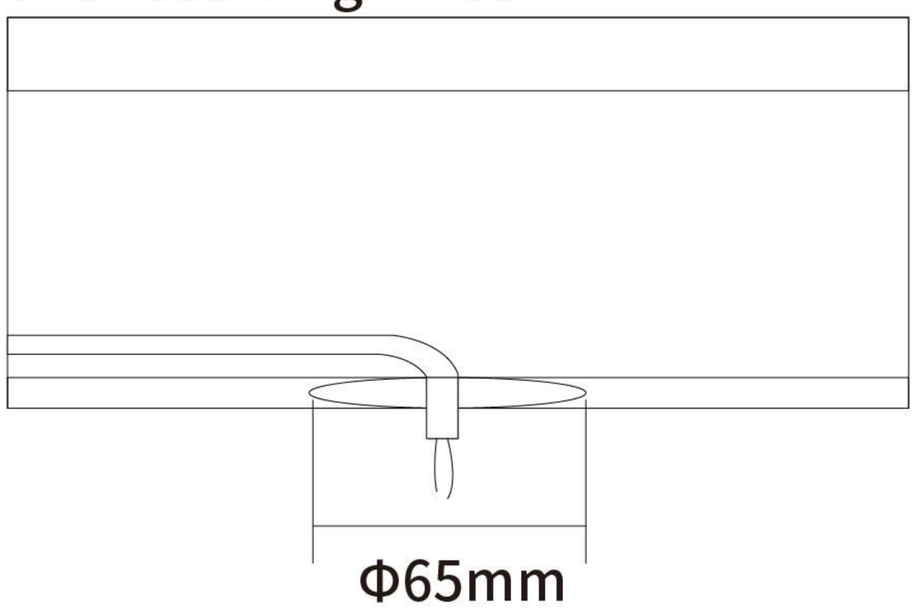
Wiring Diagram / Dialing Instructions



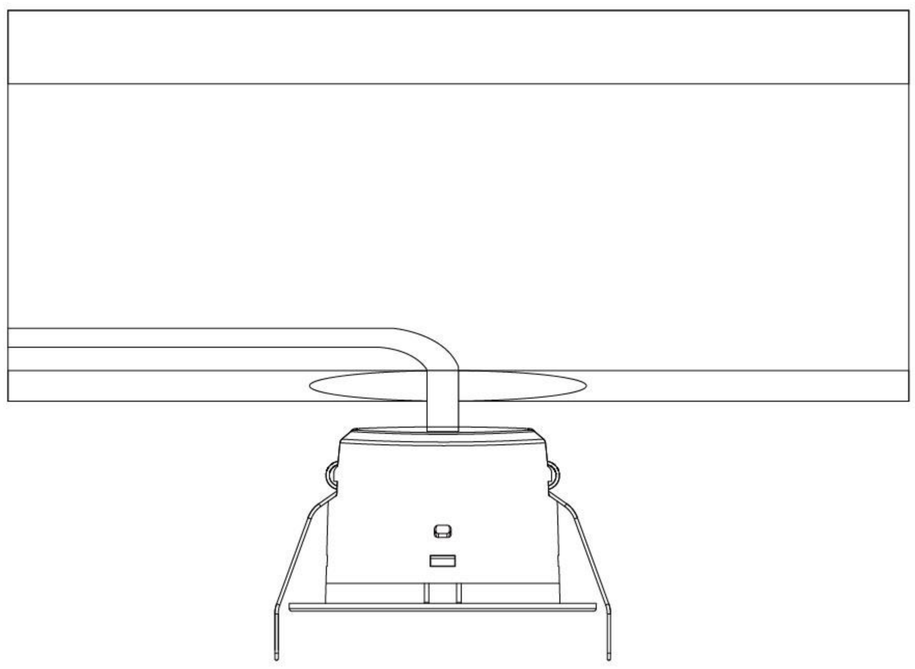
Delay time	1	Fan Start Delay	2	Sensing range	3	4	5	Sensing range	3	4	5	Photos-ensitive	6
5s	ON	1min	ON	4th gear	ON	ON	OFF	8th gear(far)	ON	ON	ON	150lux	ON
1min	OFF	30s	OFF	3rd gear	OFF	ON	OFF	7th gear	OFF	ON	ON	OFF	OFF
				2nd gear	ON	OFF	OFF	6th gear	ON	OFF	ON		
				1st gear (near)	OFF	OFF	OFF	5th gear	OFF	OFF	ON		

Installation Diagram

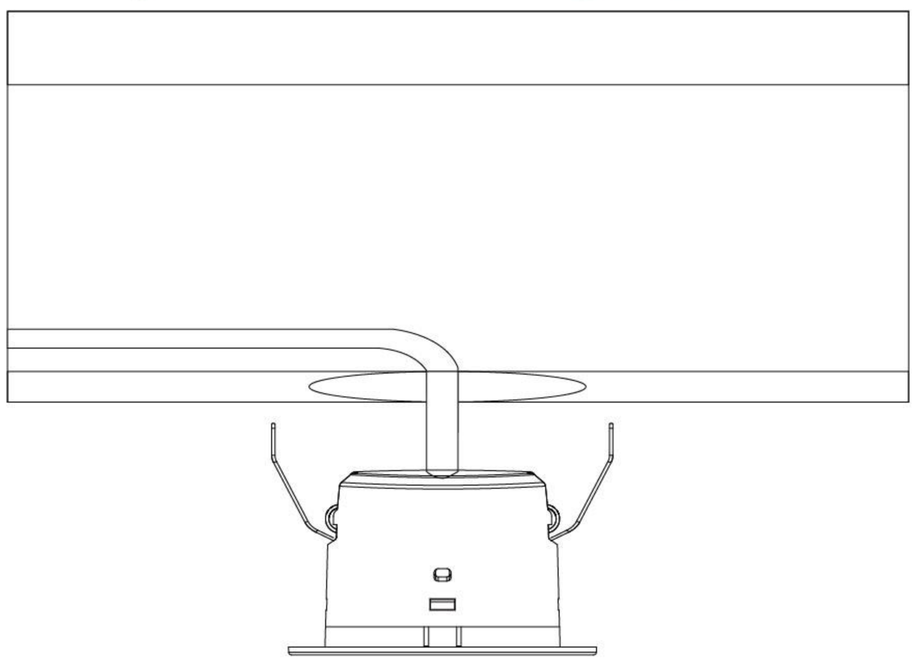
1、Punching holes in the ceiling and reserving wires



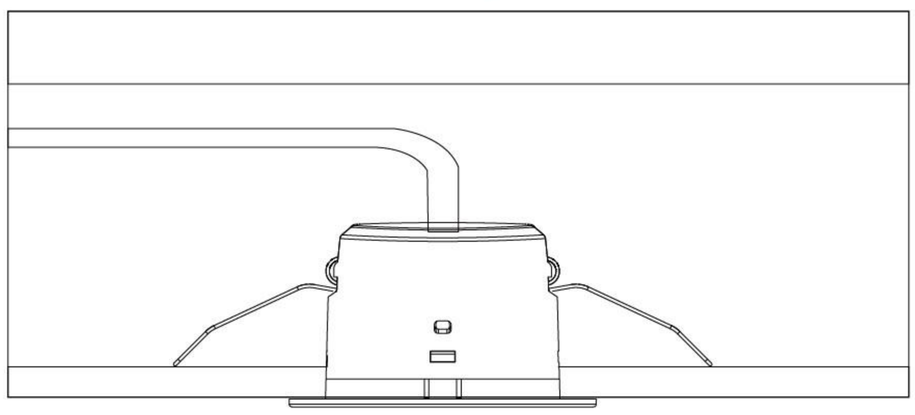
2. Equipment and wire connection



3. Adjust the mounting clips



4.Embedded fixed, installation is complete



Application Scenario

Smart home

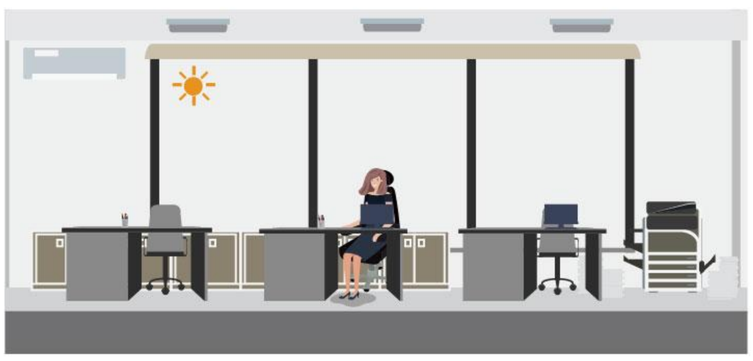
Smart lighting

Smart Business

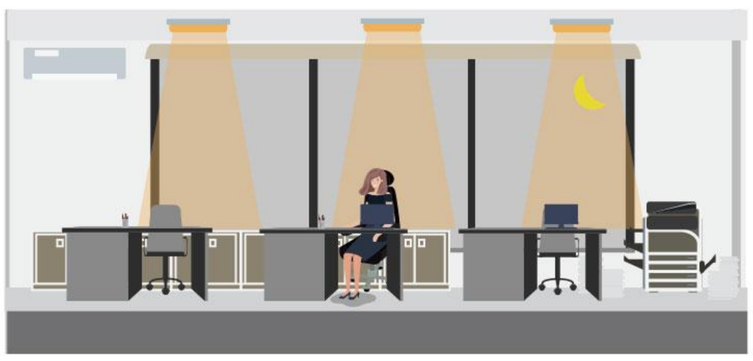
Medical and Health Care

Functional Description

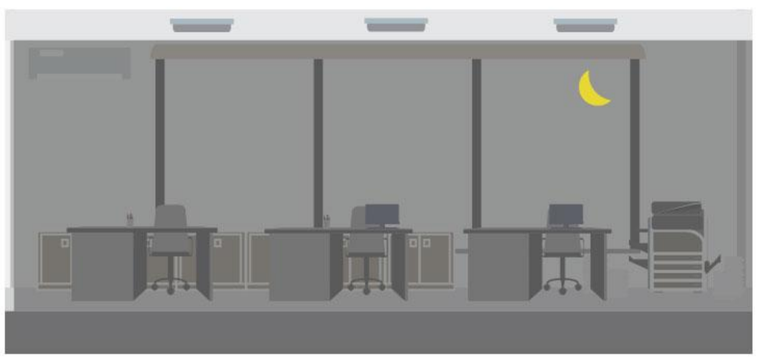
Illumination function on



When the ambient light is sufficient, the sensor detects moving objects and the light will not automatically turn on

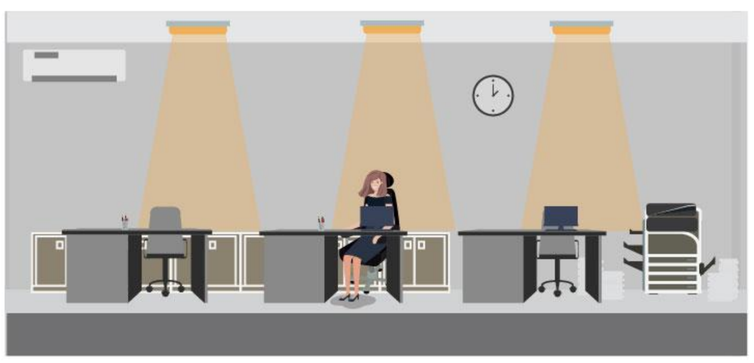


When the ambient light is insufficient, the sensor detects moving objects and the light automatically lights up



The moving object leaves, and after a preset delay, the light will automatically turn off

Illumination function off



When the sensor detects a moving object, the light automatically lights up and enters the set delay time

After the delay time, if the sensor cannot detect the moving object, the light fixture will turn off

Product Naming Law

ED	Frequency Band	Product Categories	Product Subdivision	Product Number	Delay Time	Serial number
ED	Q	2	8	2	Y	
EasyDetek	C 5.8GHz	1 Microwave sensor module	0 Ultra-low-power series	0-9, A-Z	Y Has light sensor	
	X 10.5GHz	2. Microwave radar switch	1 Flagship series		N no light sensor	
	Q 24GHz	3 Radar antenna	2 Short-distance series		P programmable	
	V 60GHz	4 MCU	3 Adjustable series			
	W 77GHz	5 Microwave power supply	4 External antenna series			
		6 IC	5 General Series			
		7 Other	6 To be defined			
		8 Networking	7 To be defined			
			8 Basic series			
			9 High altitude series			

Historical Revision Record

Versions	Time	Description	Note
V2.0	2024-11-30	Software and hardware version updates	-

Precautions

1. When installing the product, it should be kept at a distance of more than 50cm from the exhaust fan and air conditioning outlet. The vibration generated by the exhaust fan and air conditioning outlet during operation can cause false triggering of sensor detection. During installation, it is also necessary to avoid areas where external people or objects can cause vibrations.
2. The product has certain penetrability to thinner wooden boards and glass materials, and these two factors should be considered when installing the fabric points. At the same time, avoid large areas of metal in front of the sensor to prevent accidental triggering.
3. When there is a large area of glass and smooth tiles on the decorative surface within the detection range of the sensor, electromagnetic wave reflection will be strengthened. It is recommended to adjust the sensing range appropriately according to the size of the space.
4. When multiple sensors are applied in the same site, it is recommended that the installation distance of the product be greater than 2.5 meters. Installing too close may cause periodic false alarms for individual sensors.
5. The electromagnetic waves emitted by sensors have different reflectivity of obstacles in practical application environments, resulting in different sensing ranges. This is a normal phenomenon, for example, in corridors and wide rooms, the sensing distance may vary slightly.
6. EasyDetek Technology is committed to providing customers with high-quality and better experience radar sensors. Product version updates and iterations will not be notified separately.