

24GHz Human Presence Sensor

EDQ255 Specification



EDQ255



Product Features

- Human presence/movement and illumination detection function
- Adjustable sensor sensing range (12 adjustable steps)
- Sensitivity adjustable in 3 steps
- Supports left and right detection/masking partition settings
- Supports separate output of manned and unmanned signals from the left and right zones
- Sensors support master-slave function settings

Electrical Parameters

Input voltage	12-30V DC
Operating current	≤50mA@24V DC
Output voltage	KNX
Power consumption	≤1.2W

Functional Parameters

Motion Sensing Radius ^①	5.5m max
Presence sensing radius ^①	4m max
Hanging height	<4m
Delay time	10-3600s

Output Parameters

Center frequency	24-24.25GHz
3dB beam angle	E-plane 87°, H-plane 84°

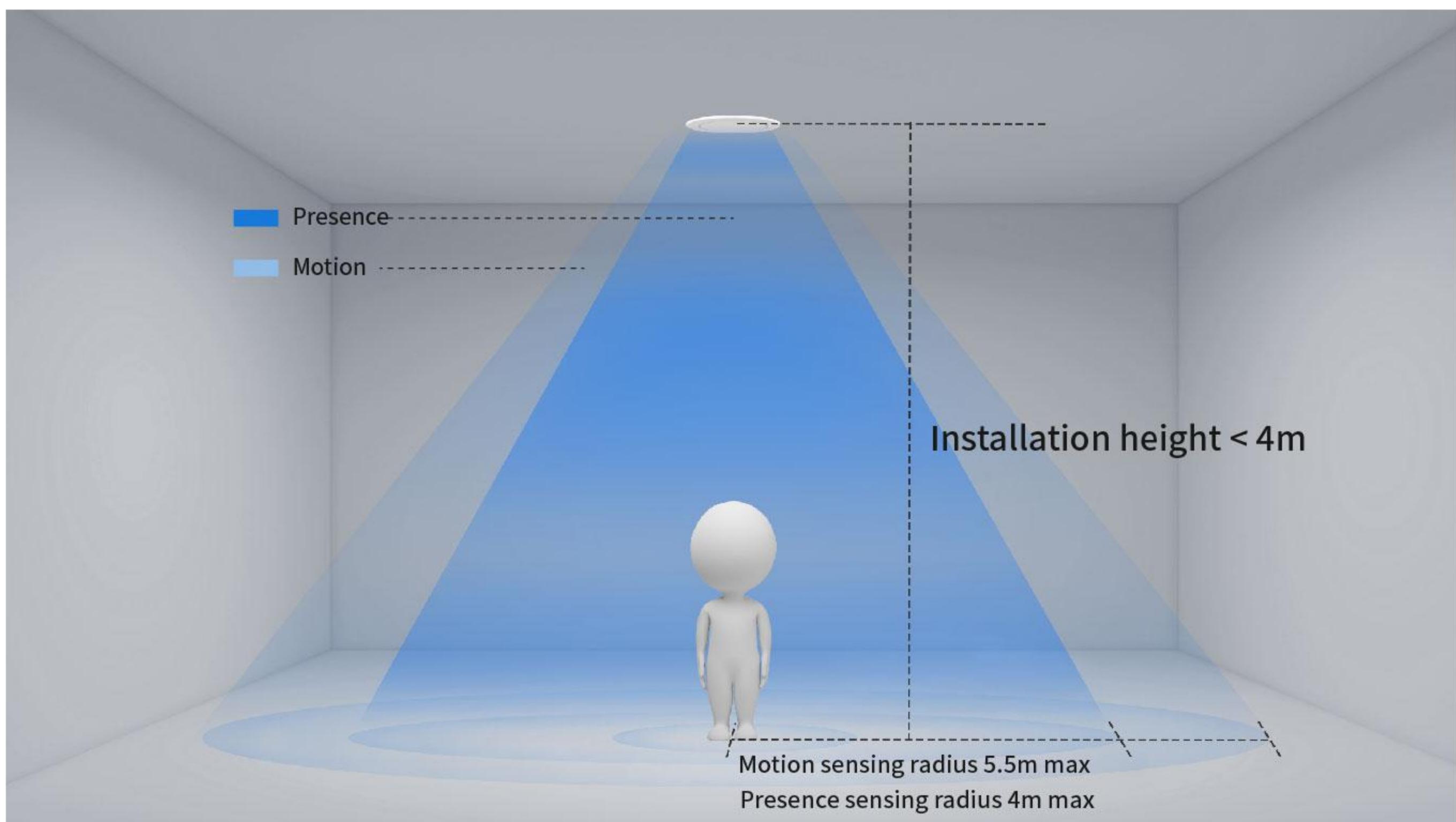
Environment & Lifespan

Operating temperature	-5~+45°C
Storage temperature	-25~+55°C

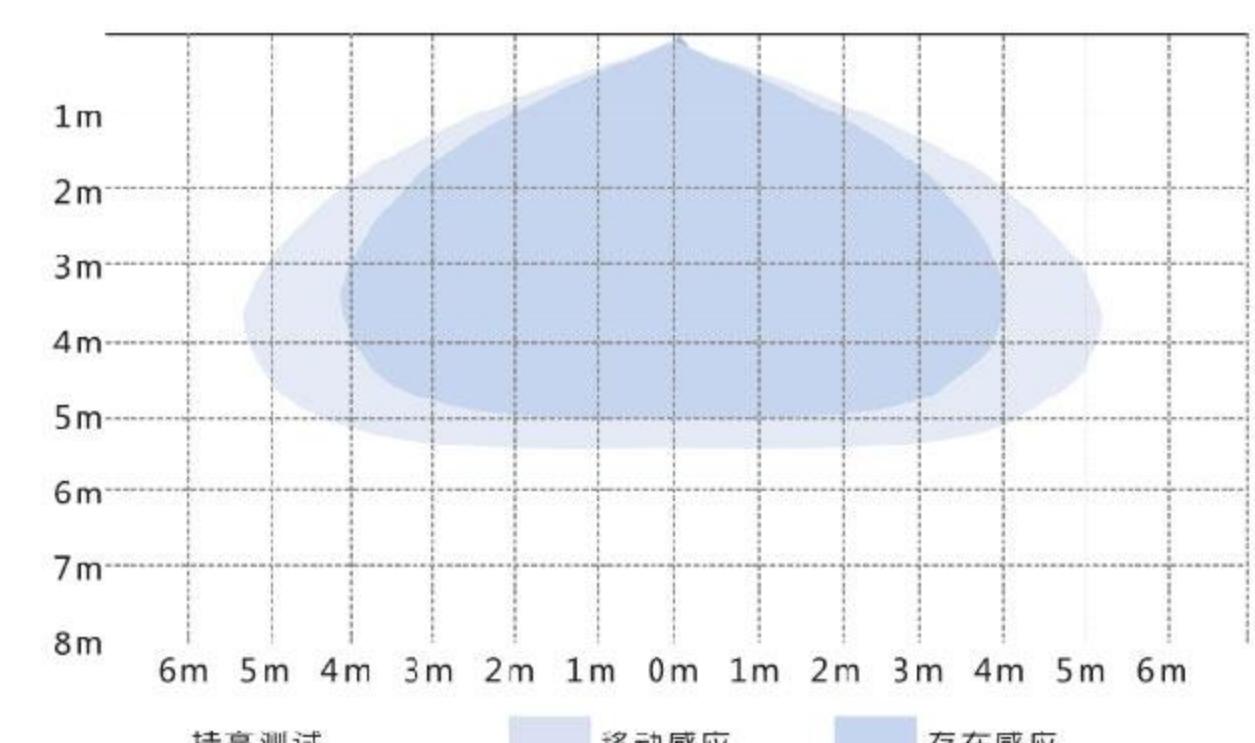
Remarks:

- 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 scenes may cause changes in the range of installation, subject to actual testing.
- ② Due to the spectral characteristics of the photosensitive device, the threshold is uniformly tested under natural light conditions.

Detection Schematic



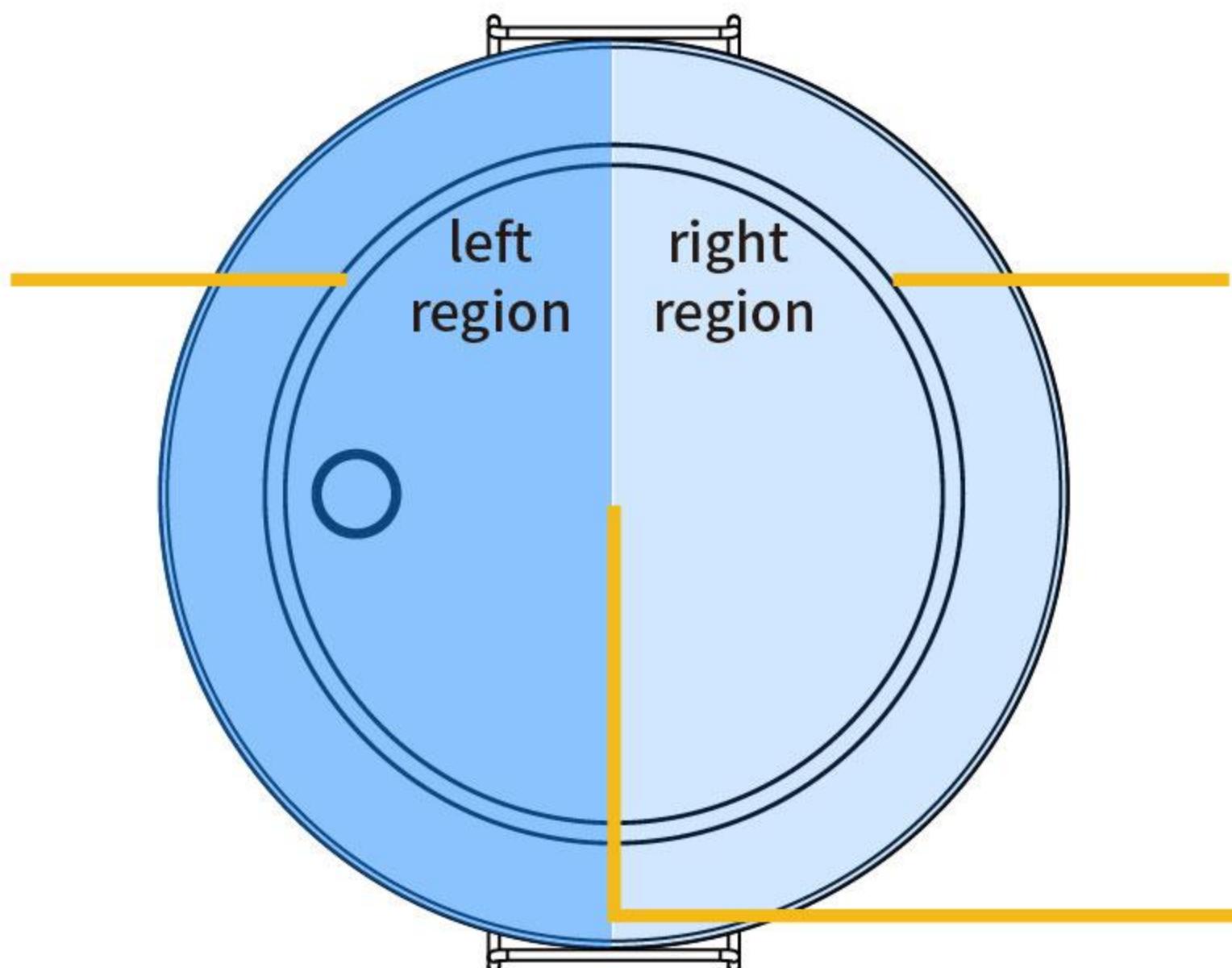
Radar Sensing Schematic



Left and right partition

Detection Area Left Zone:

When the left zone is selected, the corresponding right zone sensing range is not detected.



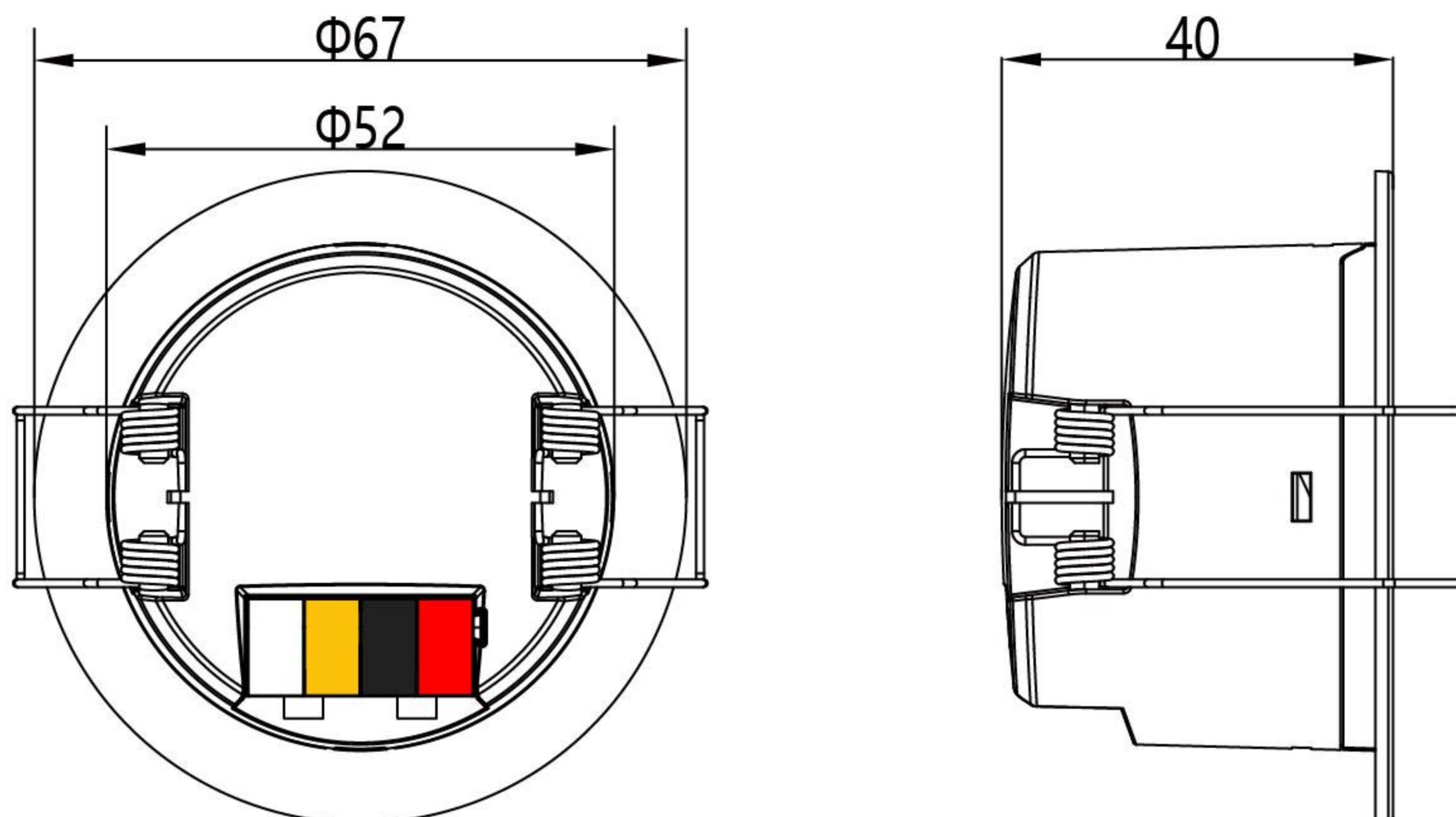
Detection area right zone:

When the right zone is selected, the corresponding left zone sensing range is not detected.

Zoning Description: Defaults to full zone detection. The partition is divided into two zones, left and right, with the two sides of the mounting spring clips as the centerline. The one with the light-sensitive opening is the left zone of the detection area, and the corresponding other half is the right zone of the detection area.

Dimension Drawing

Unit: (mm)

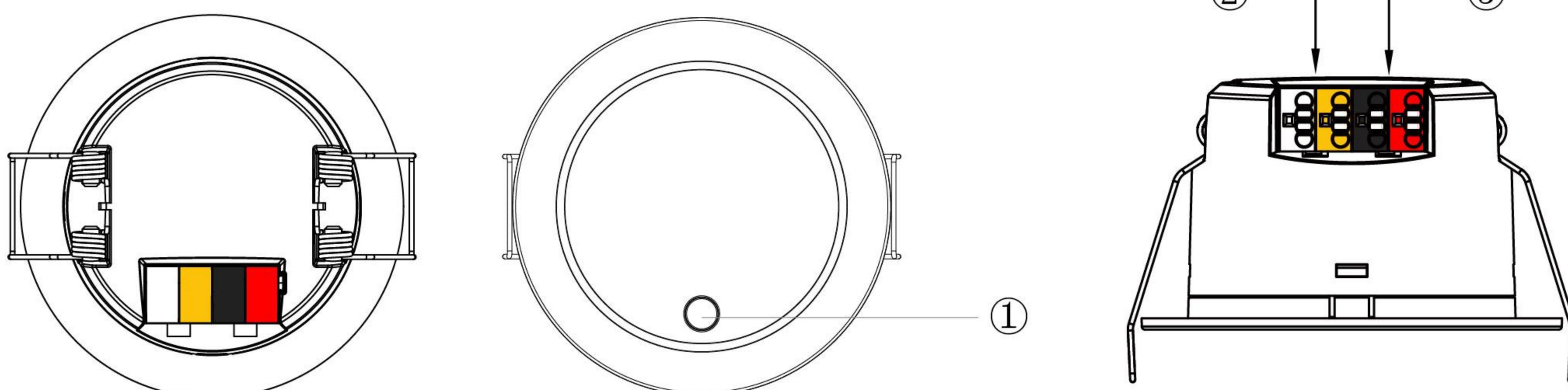


EDQ255 Dimensional tolerance: ± 0.2

Indicator Status

1. Initialization: power on, LED indicator light, light flashes 10s red, LED indicator light off, the device enters the normal working state. 2. Working mode: If a person is detected, the indicator light flashes once to send a man signal to the bus, the end of the delay, send no one signal to the bus. 3. Programming mode: short press the programming button, the LED light red is always on, the device is in programming mode. Note: When the movement is triggered several times within 5 seconds, the indicator light will flash only once.

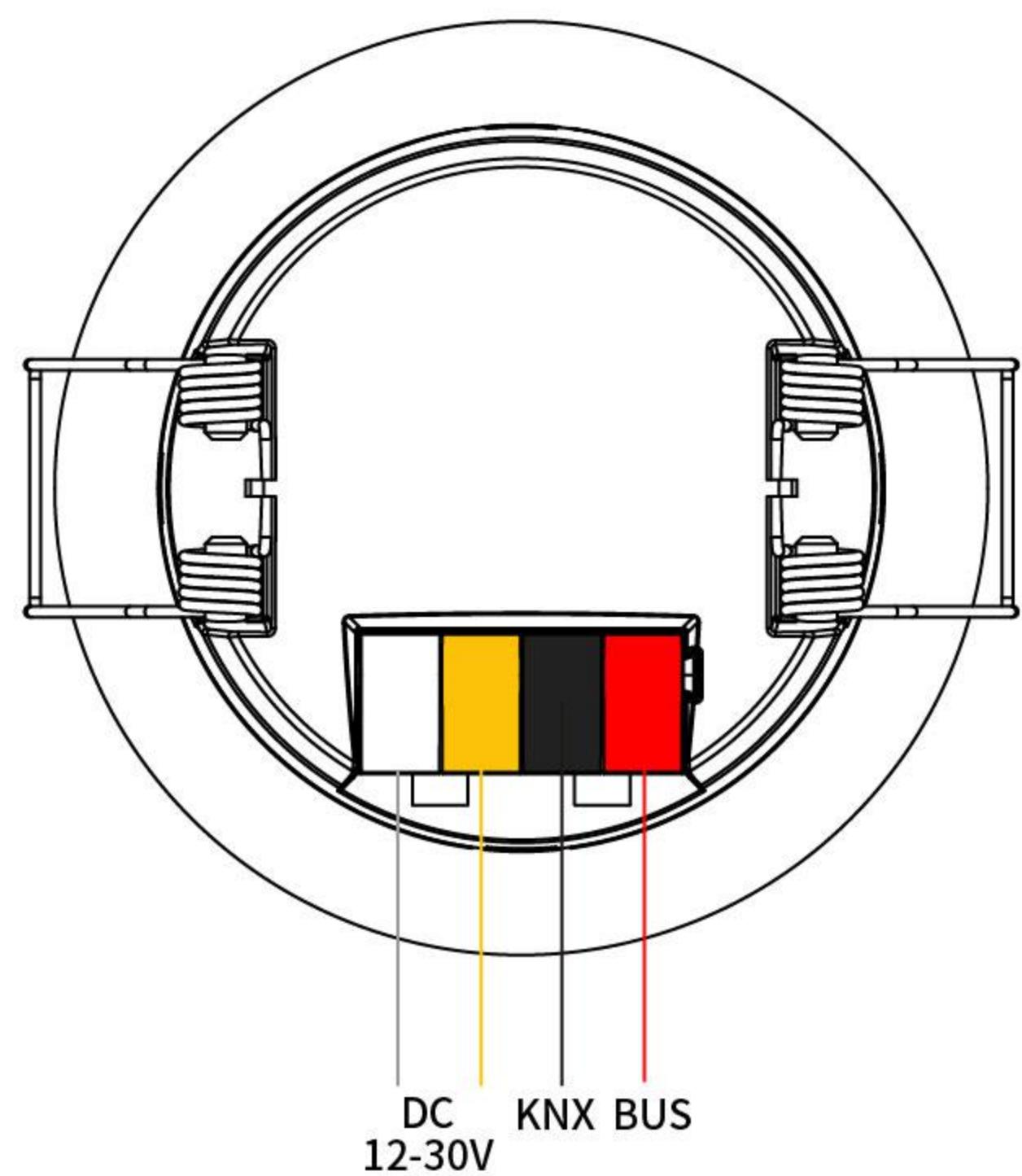
Pin and Key Description



Pin	说明
Red	KNX +
Black	KNX -
Yellow	auxiliary power supply +
White	auxiliary power supply -
Illumination Sensor and Programming Keypad	LED flashing green: indicates that the radar has detected a manned state LED red is always on: the device is in programming mode

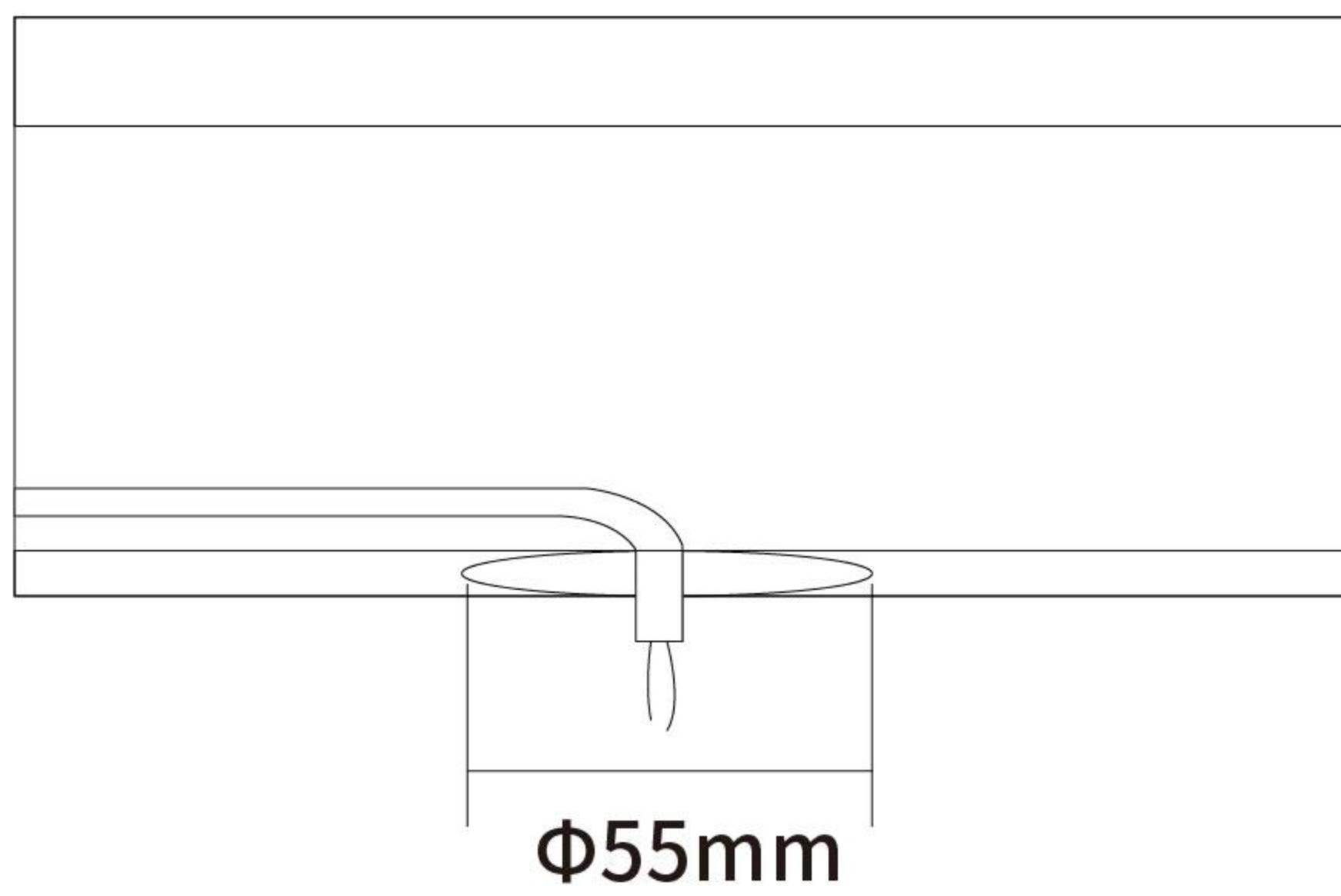
- ① Illumination sensor and programming integrated key: LED flashes green: indicates that the radar detects the status of people; LED is always red, the device is in the programming mode
- ② 12-30V auxiliary power supply terminals
- ③ KNX bus connection terminals

Wiring Diagram

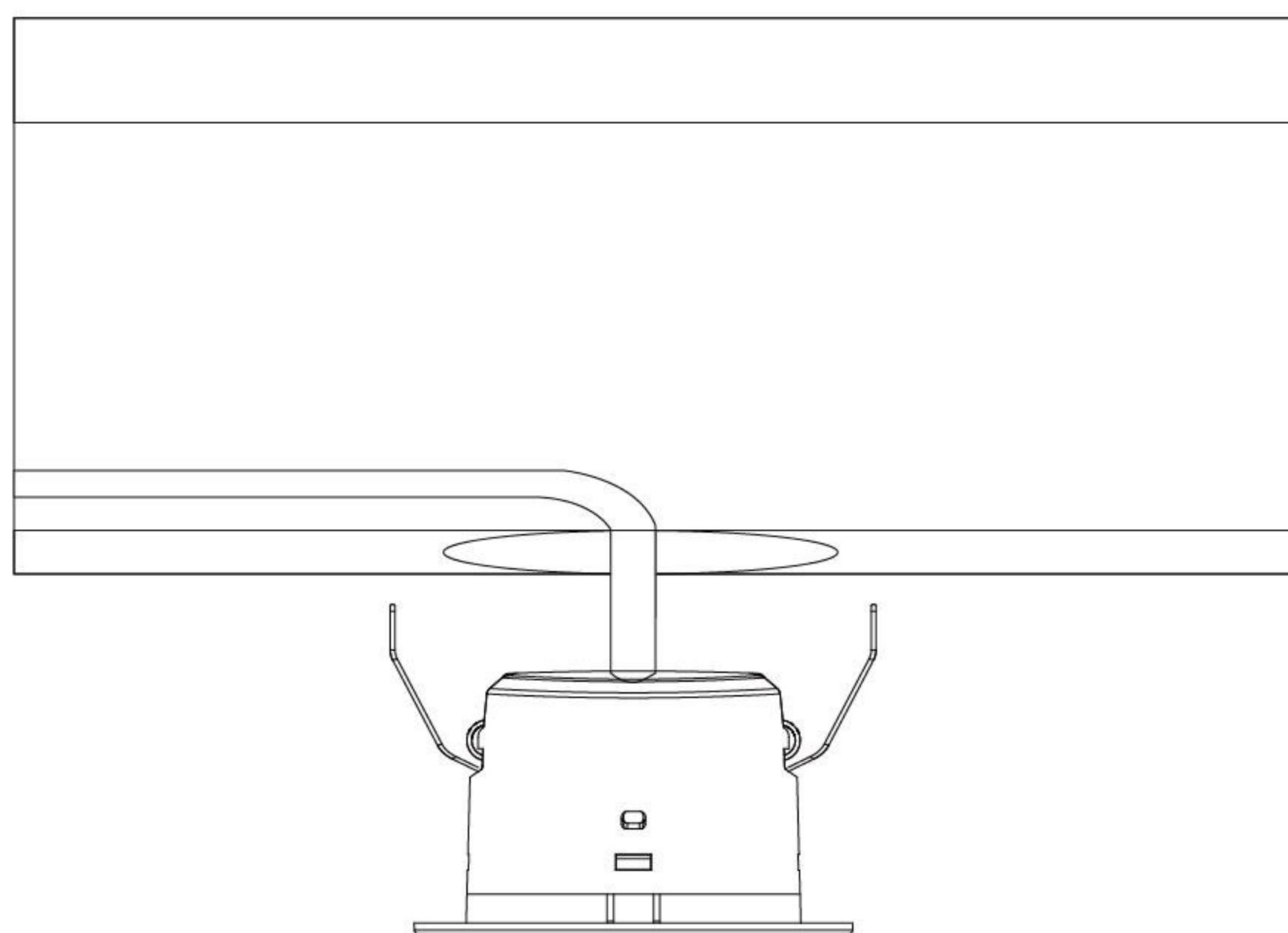


Installation Diagram

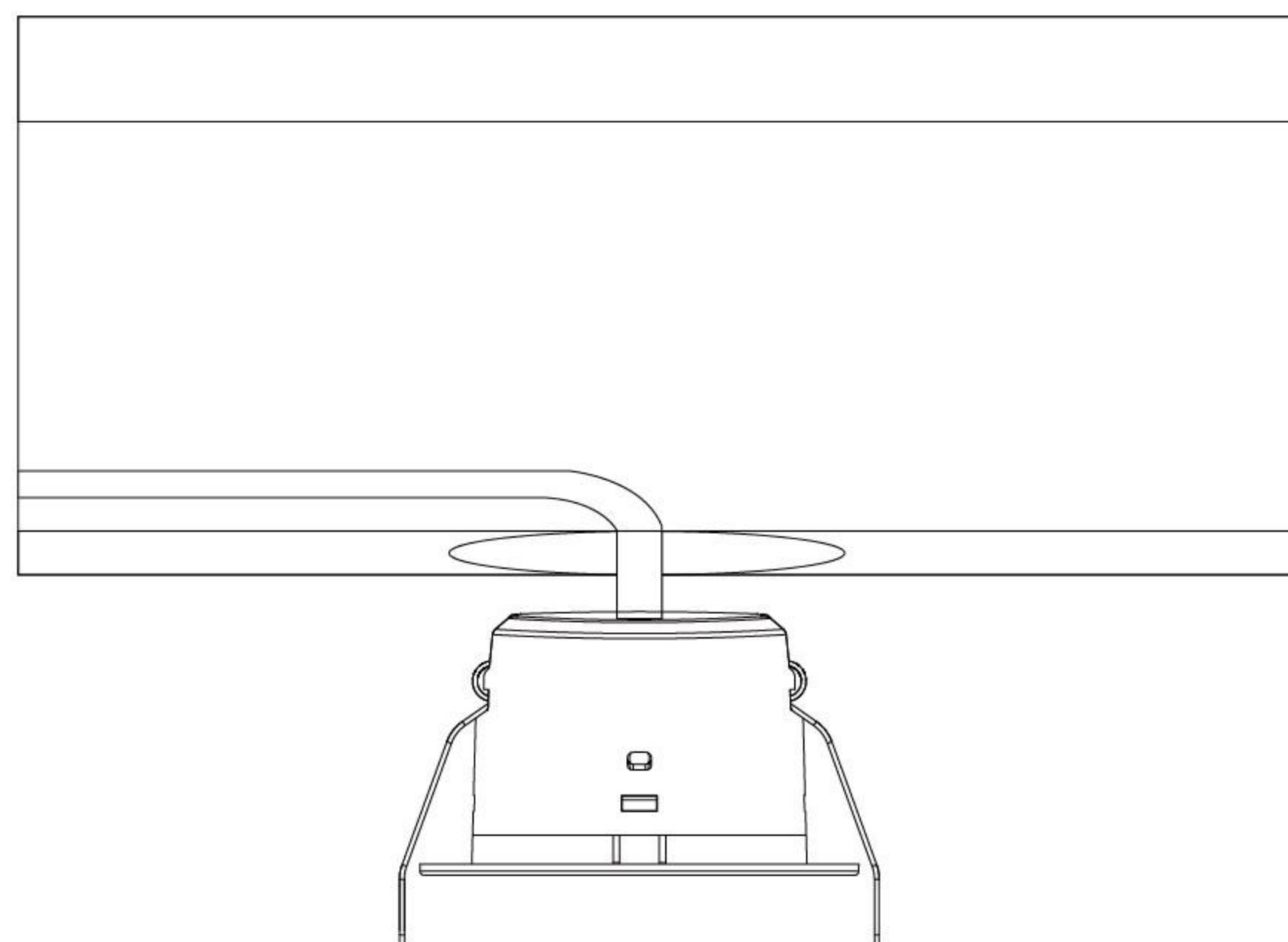
1. Punching holes in the ceiling and reserving wires



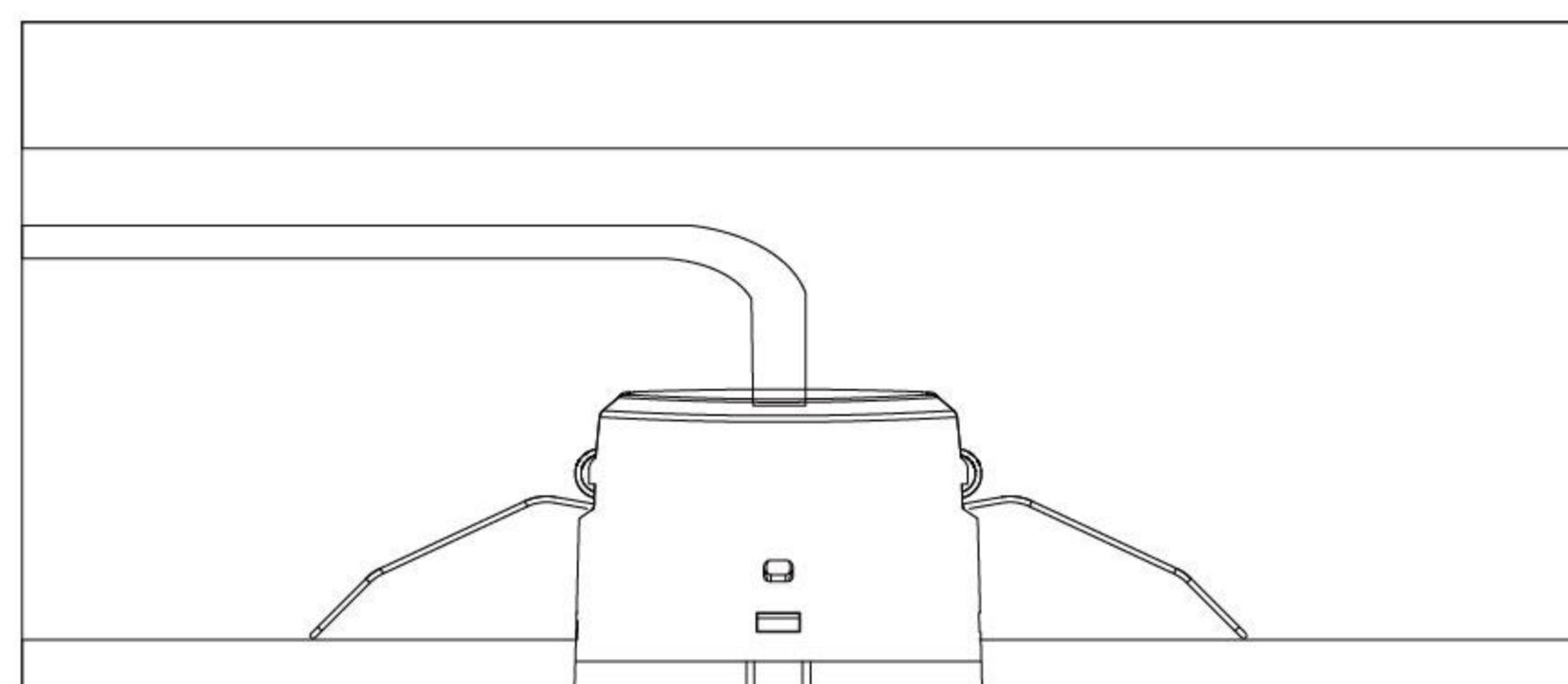
3. Adjust the mounting clips



2. Equipment and wire connection



4. embedded fixed, installation is complete



Application Scenarios



smart home



smart light



Smart Business



Healthcare and recreation

Functional Description

Illumination function on



When there is sufficient ambient light and the sensor detects a moving object, the light will not come on automatically.

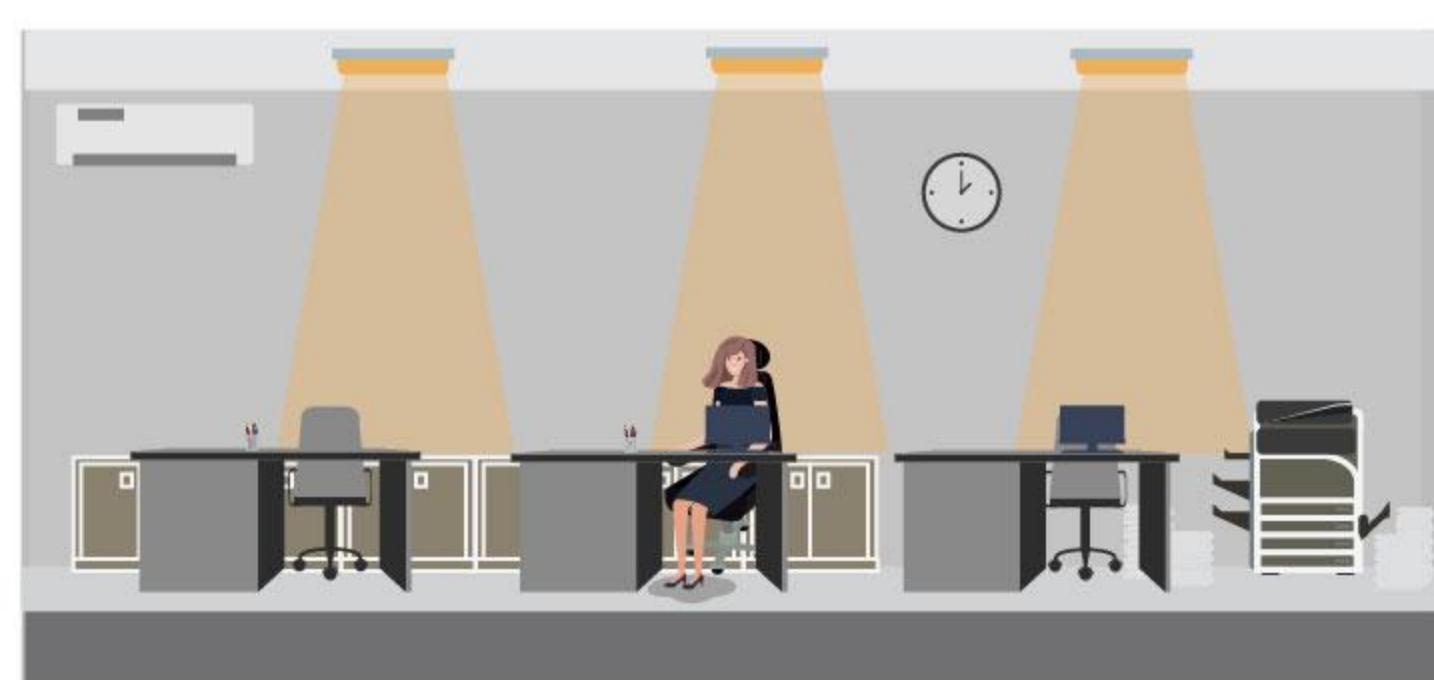


When the ambient light is not sufficient, the sensor detects a moving object and the light comes on automatically.



The light goes out automatically after the preset delay time has elapsed when the moving object leaves.

Illumination function off



When the sensor detects a moving object, the light automatically turns on and enters the set delay time.



After the delay time has elapsed
When the sensor does not detect a moving object, the luminaire goes out.

Product Naming Law

ED	Frequency Band	Product Categories	Product Subdivision	Product Number	Delay Time	Serial number
ED	Q	2	5	5	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			

历史修订记录

Versions	Time	Description	Note
V1.0	2023-09-25	First Edition	-
V2.0	2024-09-26	Software and hardware version update	-

Precautions

- 1, the product should be installed with the exhaust fan, air conditioning vents to maintain a distance of more than 50CM, exhaust fans, air conditioning vents, such equipment work, the vibration generated by the sensor will detect the formation of false triggers. Installation also needs to avoid outside people or objects caused by vibration activities in the region.
- 2, the product has a certain degree of penetration of thin wood, glass material, the installation of the distribution point should take into account these two factors. At the same time to avoid large areas of metal in front of the sensor, so as not to cause false triggers.
- 3, the sensor detection range, the decorative surface has a large area of glass and smooth tiles, electromagnetic wave reflection will be strengthened, it is recommended that according to the size of the space to reduce the appropriate induction range.
- 4, a number of sensors in the same site application, recommended product installation spacing greater than 2.5 m, the installation distance is too close to the individual sensor cycle may trigger false alarms.
- 5, the sensor emits electromagnetic waves in the actual application environment, the reflectivity of the obstacles are different, bringing different sensing range, which is a normal phenomenon, for example, in the corridor and the wide room, the sensing distance will have a slight difference.
6. Easy to explore technology is committed to providing customers with high quality and better experience of the radar sensor. Product version updates and iterations without notice.