5.8GHz Human Motion Sensor

EDC253 Specification

smart home

Smart Lighting

SmartBusiness

Healthcare and recreation

EDC253

📶 Product Features

- **5.8G Microwave Human Motion Sensor**

- **Integrated IOT TuYa Communications**

- **supporting embedded independent installation (with a hole diameter of 55mm)**

- **Embedded multiple digital filtering algorithms for higher immunity**

📶 Electrical Parameters

Input voltage	AC 90-260V 50/60Hz
Operating current	≤10mA
Output voltage	TUYA Zigbee
Standby power	0.3W @220VAC

📶 Functional Parameters

Motion Sensing Radius [1]	1.5-4m
Hanging height	≤3m
Delay time	5-1800s(APP/Remote control adjustable)
Illumination value [2]	0-1000lux

📶 Output Parameters

|	
Transmission frequency	5.8GHz±75MHz
3dB beam angle	90°(xz plane) 90°(yz plane)

📶 Environment & Lifespan

|	
Operating temperature	-30~+60℃
Storage temperature	-35~+85℃

Remarks:

1.The testing distance range is based on a sensor hanging at a height of 3m and indoor installation environment testing. The tester is 170cm tall, weighs 65-75kg, and walks at a speed of 1m/s.Installation in different scenarios may cause range changes, subject to actual testing.

2.Due to the spectral characteristics of photosensitive devices, the illuminance value is uniformly tested under natural light conditions.
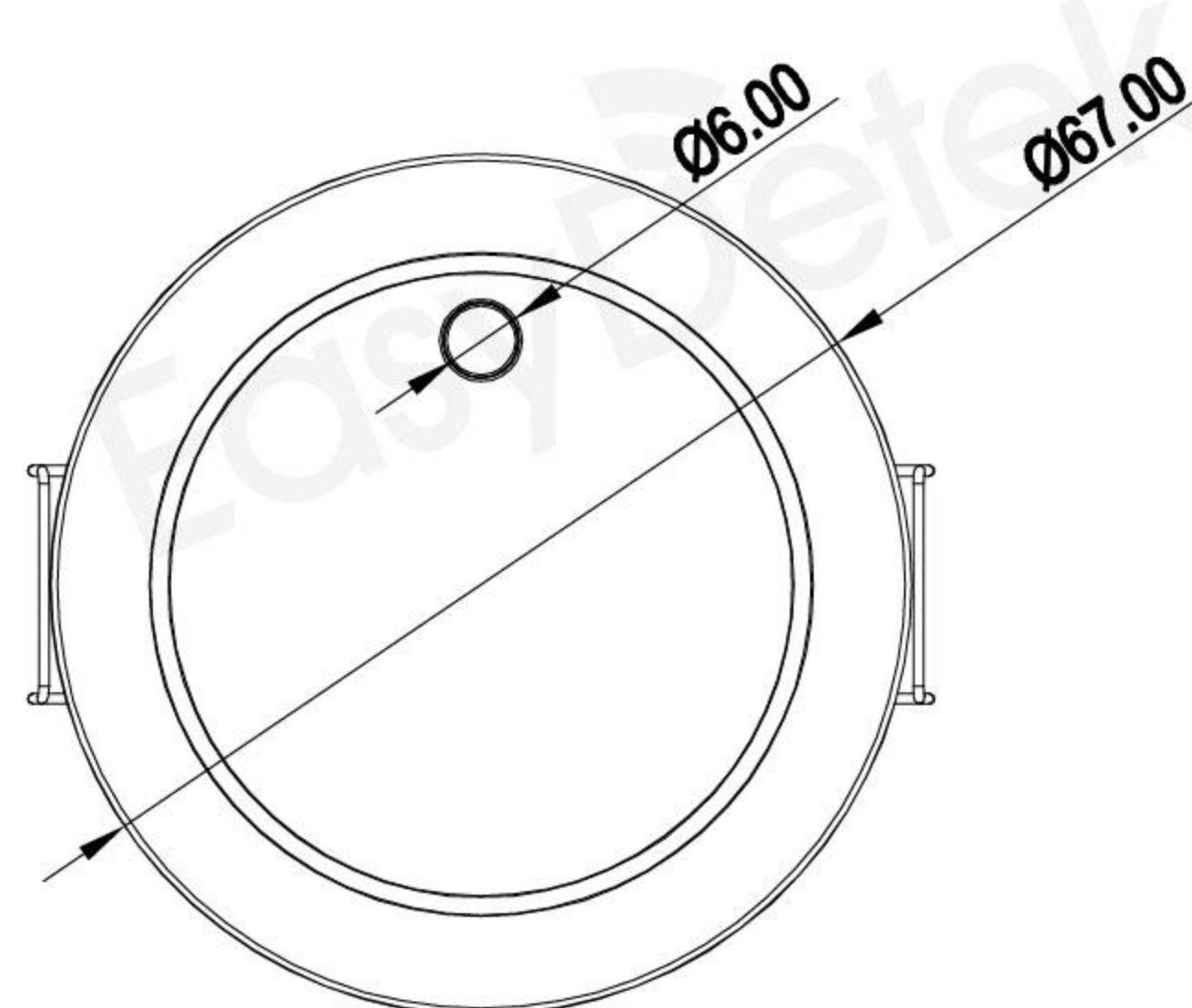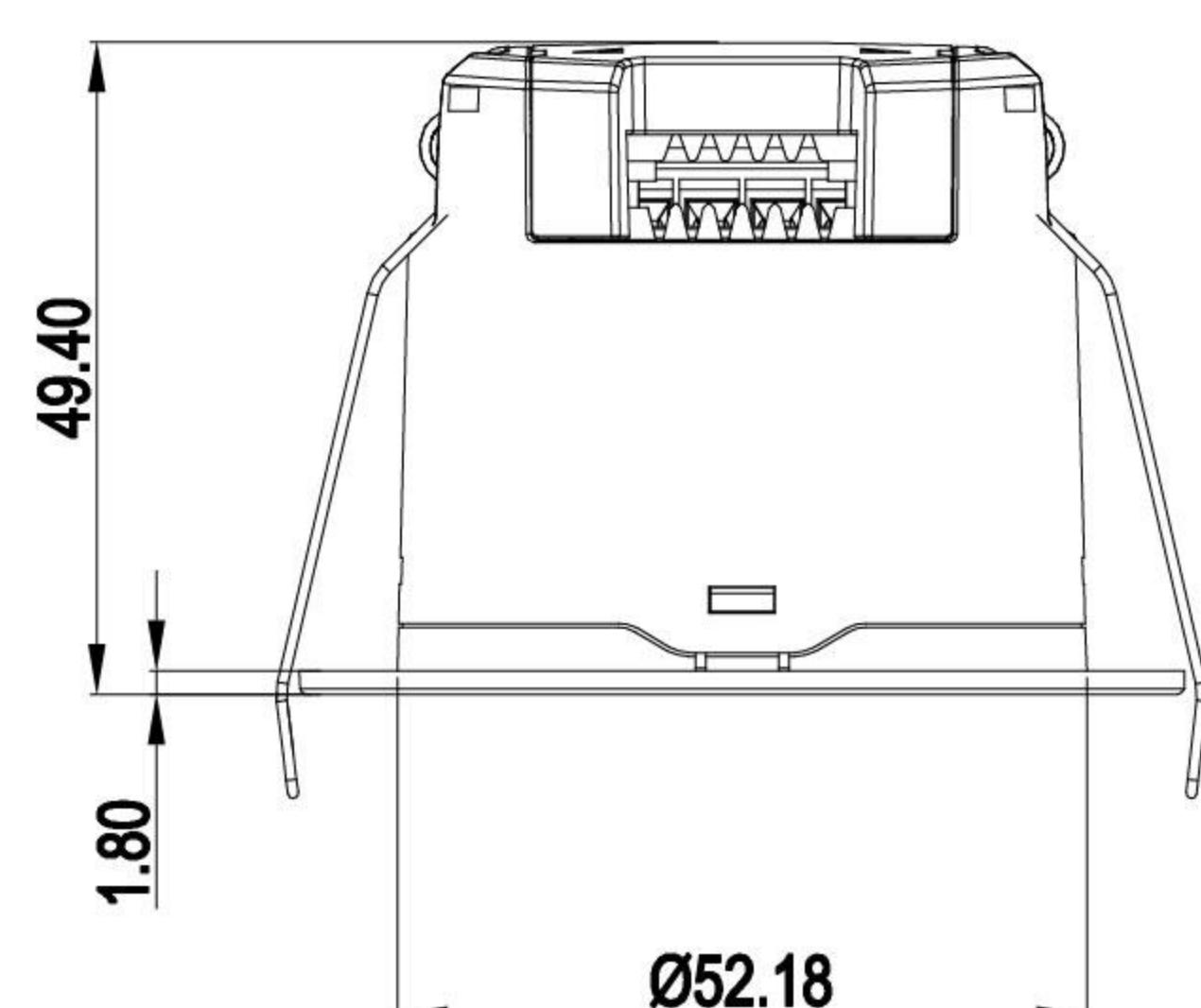
📡 Detection Schematic

Mounting height ≤3m

Motion sensing radius ≈1.5-4m
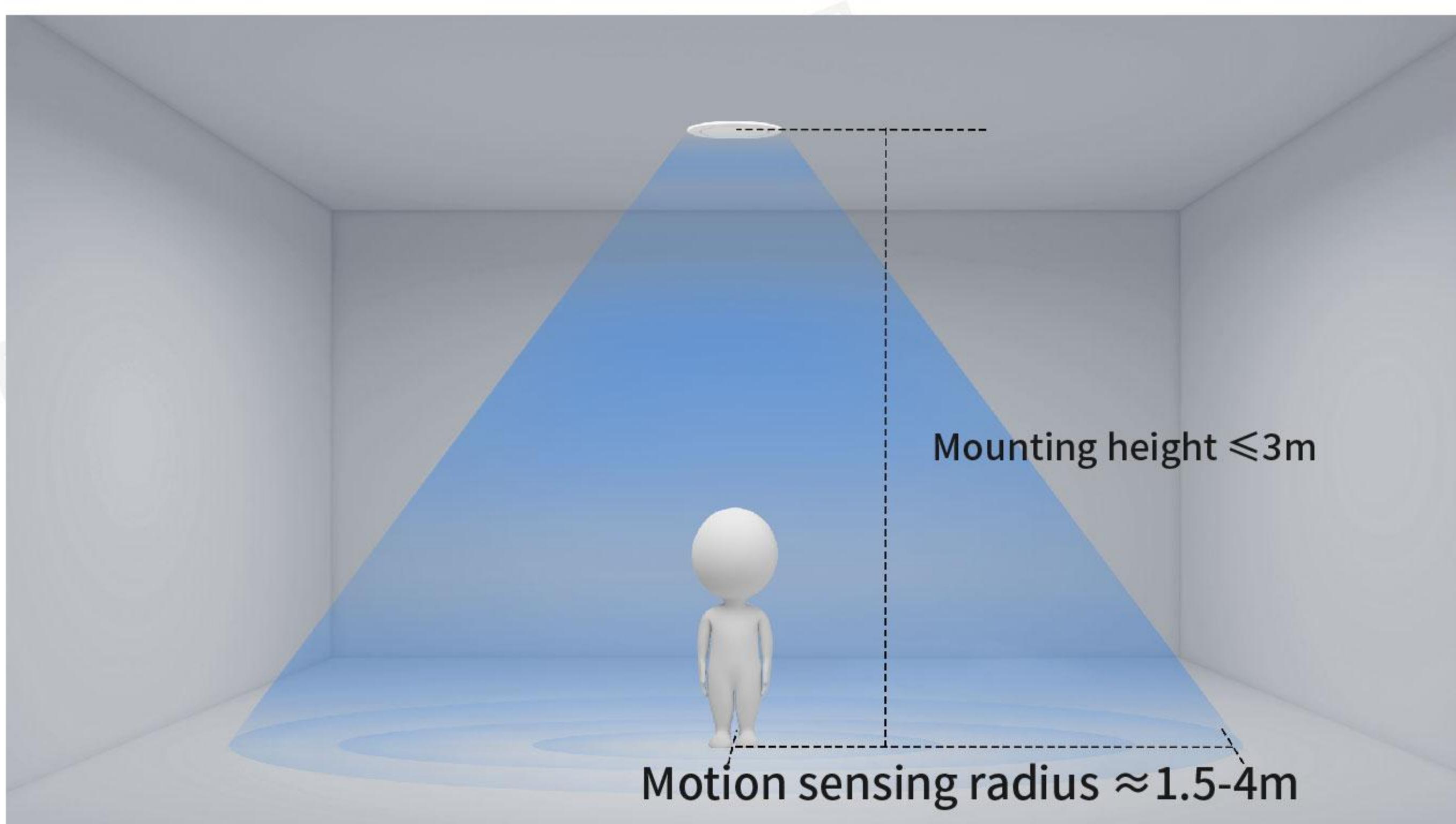
Radar induction schematic diagram

安装高度

Motion sensing radius ≈1.5-4m
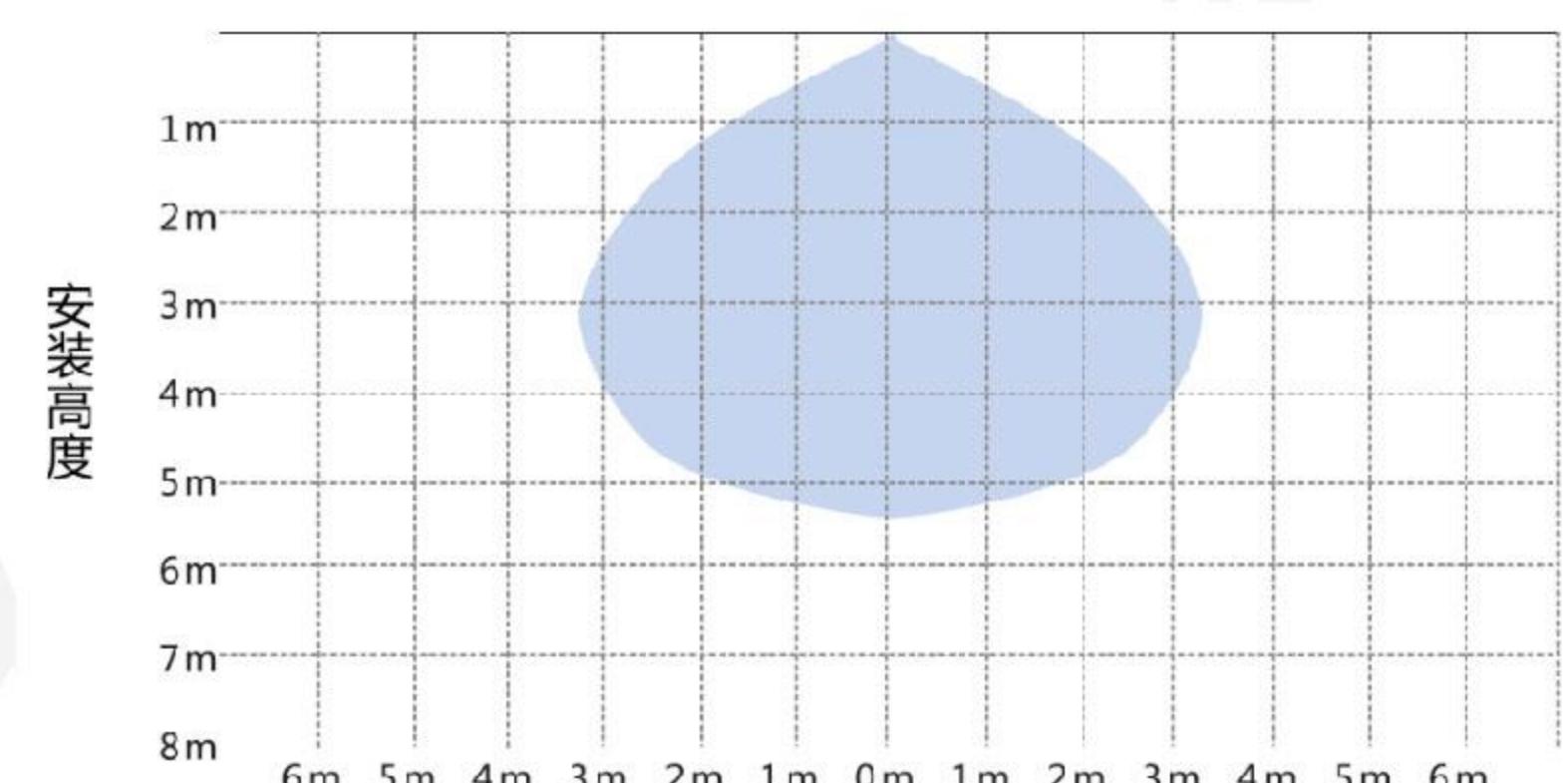
📡 Product Dimension Diagram

Unit: (mm)

49.40

1.80

Ø52.18

Ø6.00   Ø67.00

EDC253 Dimensional tolerance: ±0.2

📡 Indicator Status

1、Power on initialization: The LED indicator light stays on for 5 seconds. After initialization, the LED indicator light goes out and the sensor enters absence status.

2、The indicator light keeps flashing: the device is in distribution network mode for 3 minutes, and the successful network connection indicator light stays on for 5 seconds.

3、Operating mode: The sensor enters from absence to presence, and the LED indicator light flashes slowly once.

4、Parameter setting: The successful setting indicator light flashes twice.

Note: when the motion is triggered multiple times within 5 seconds, the indicator light only flashes once.

📶 Pin and Key Description
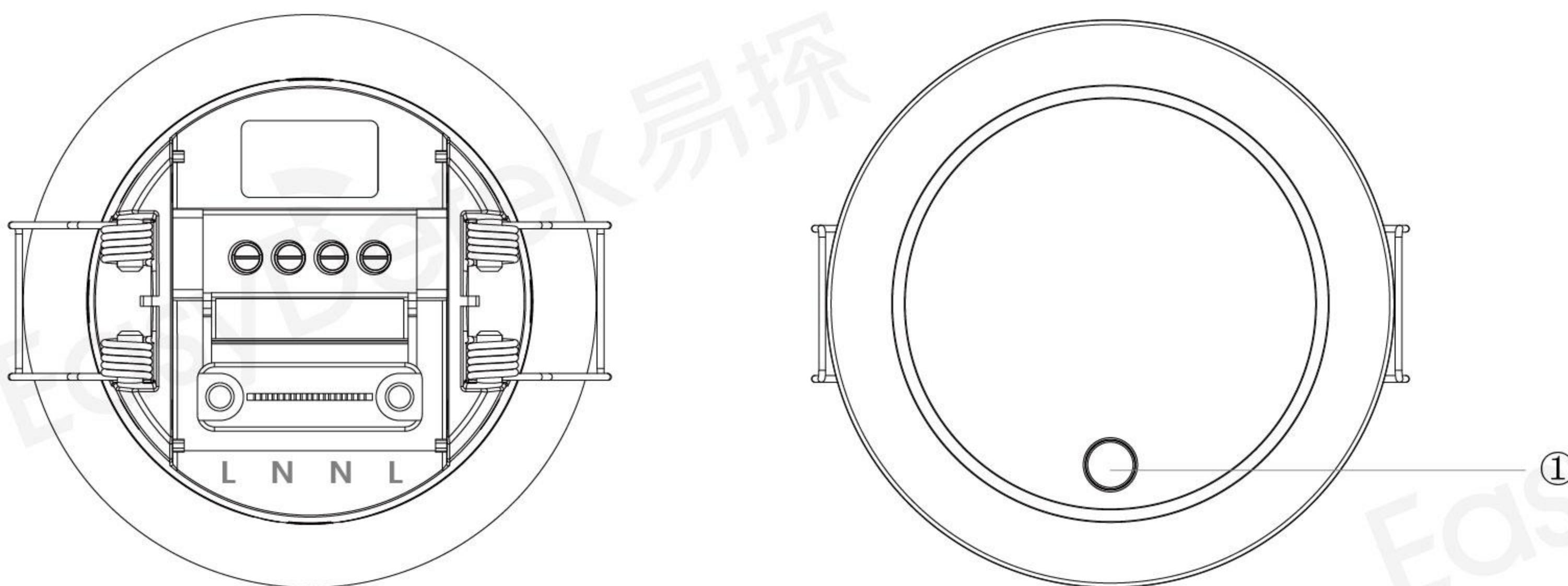
Pin	Description
L	Firewire input/output, output in parallel to the next power supply device
N	N line
N	N line
L	L line input/output, output in parallel to the next power supply unit
button①	Network entry and reset, opening for light reception.

1.Distribution network: Pressing and holding the button for 3 seconds, and the indicator light will flash to enter distribution network mode. The successful distribution network indicator light will stay on for 5 seconds, and the failed distribution network indicator light will remain off for 5 seconds. The indicator light flashes for 3 minutes. If the APP does not perform any network access operation during this period, the device will resume normal operation after the time ends.

2.Parameter restoration to factory default values: Press and hold the button for 7 seconds, the indicator light will remain on, and then release it. Parameter restoration to factory default values: Delay for 30 seconds, sensing range 7th gear, illumination difference of 10lux, illumination compensation factor 1x.
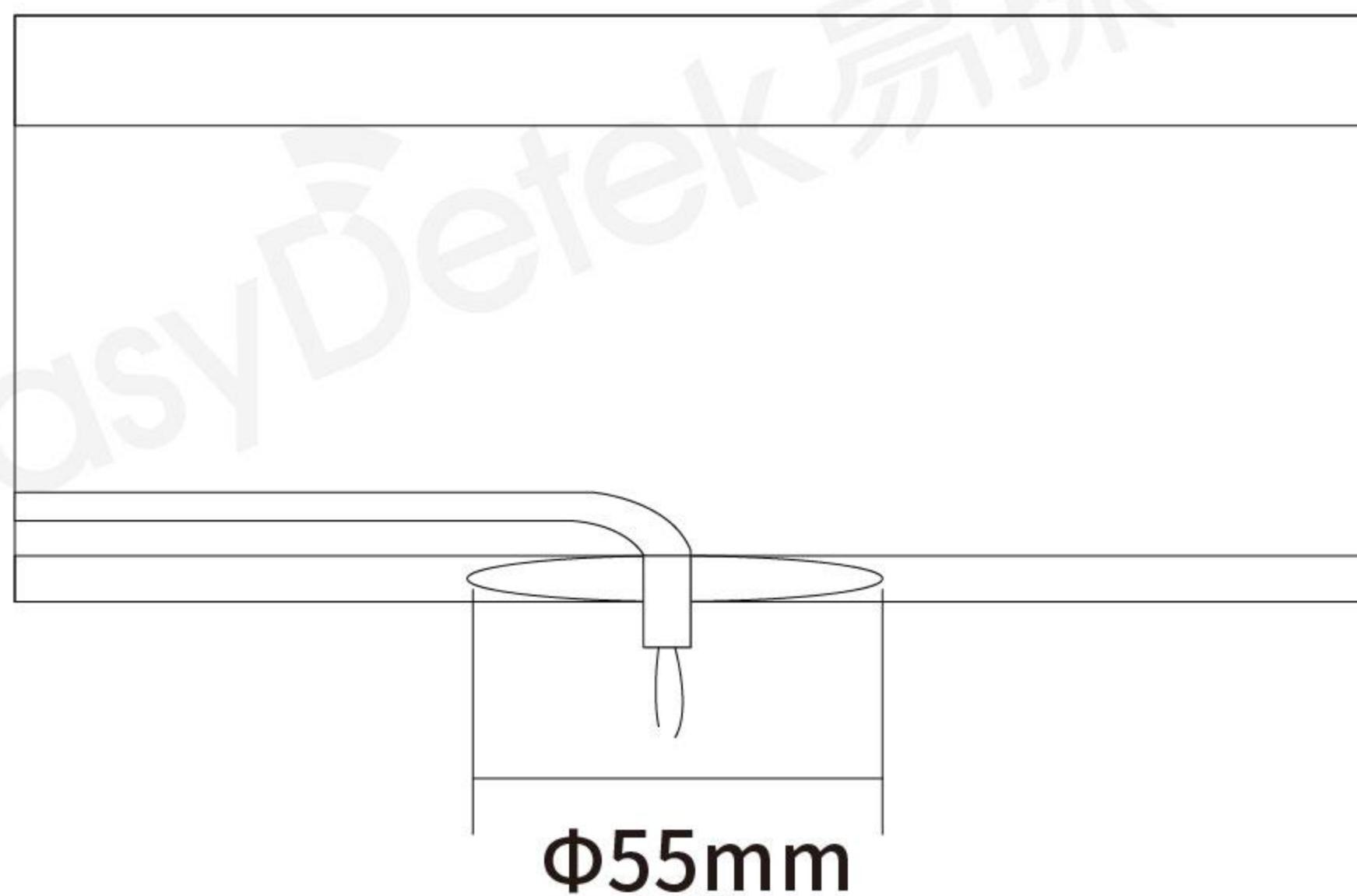
3. The opening is for the position of the illuminance sensor and is designed to be integrated with the button.
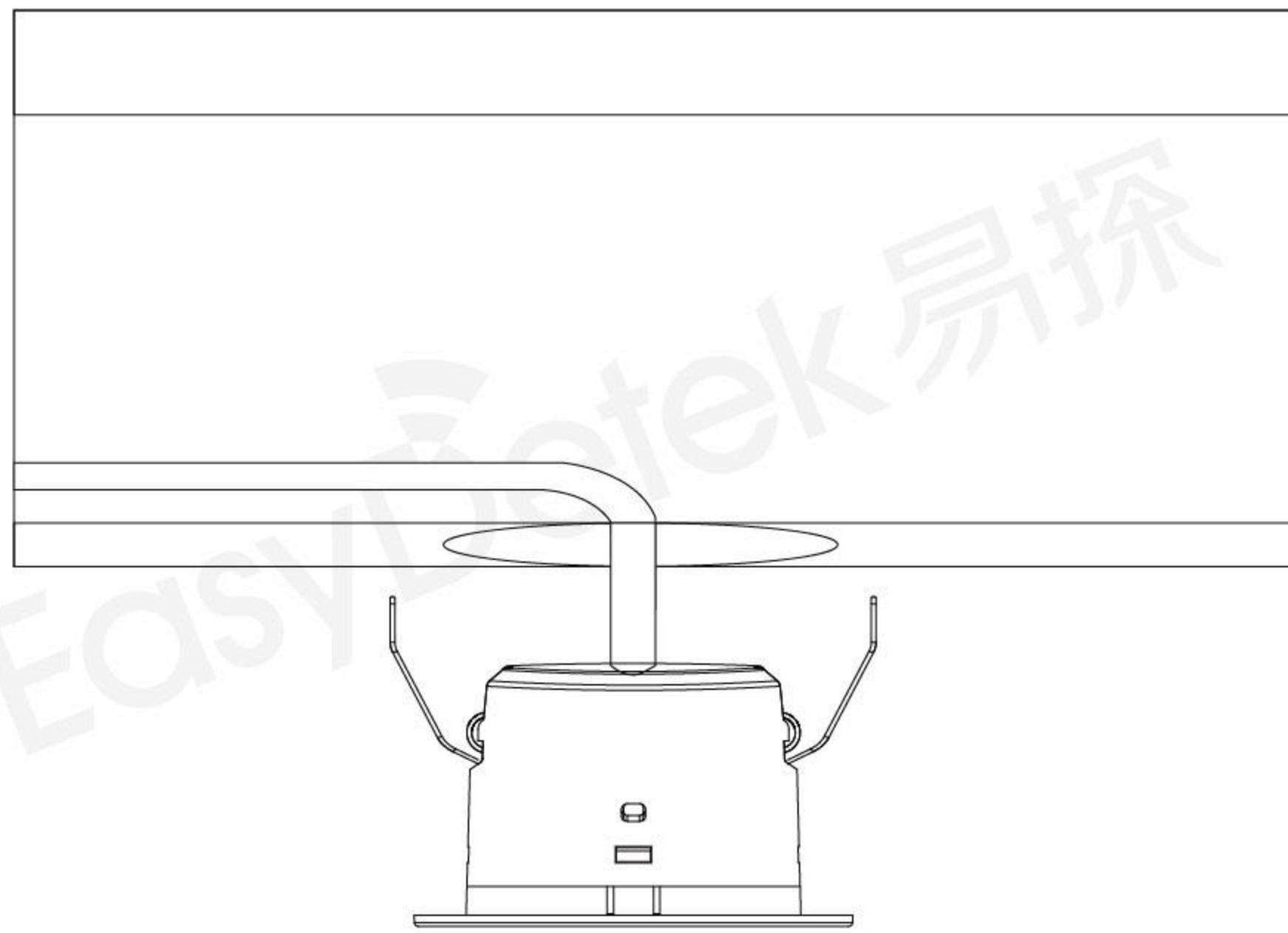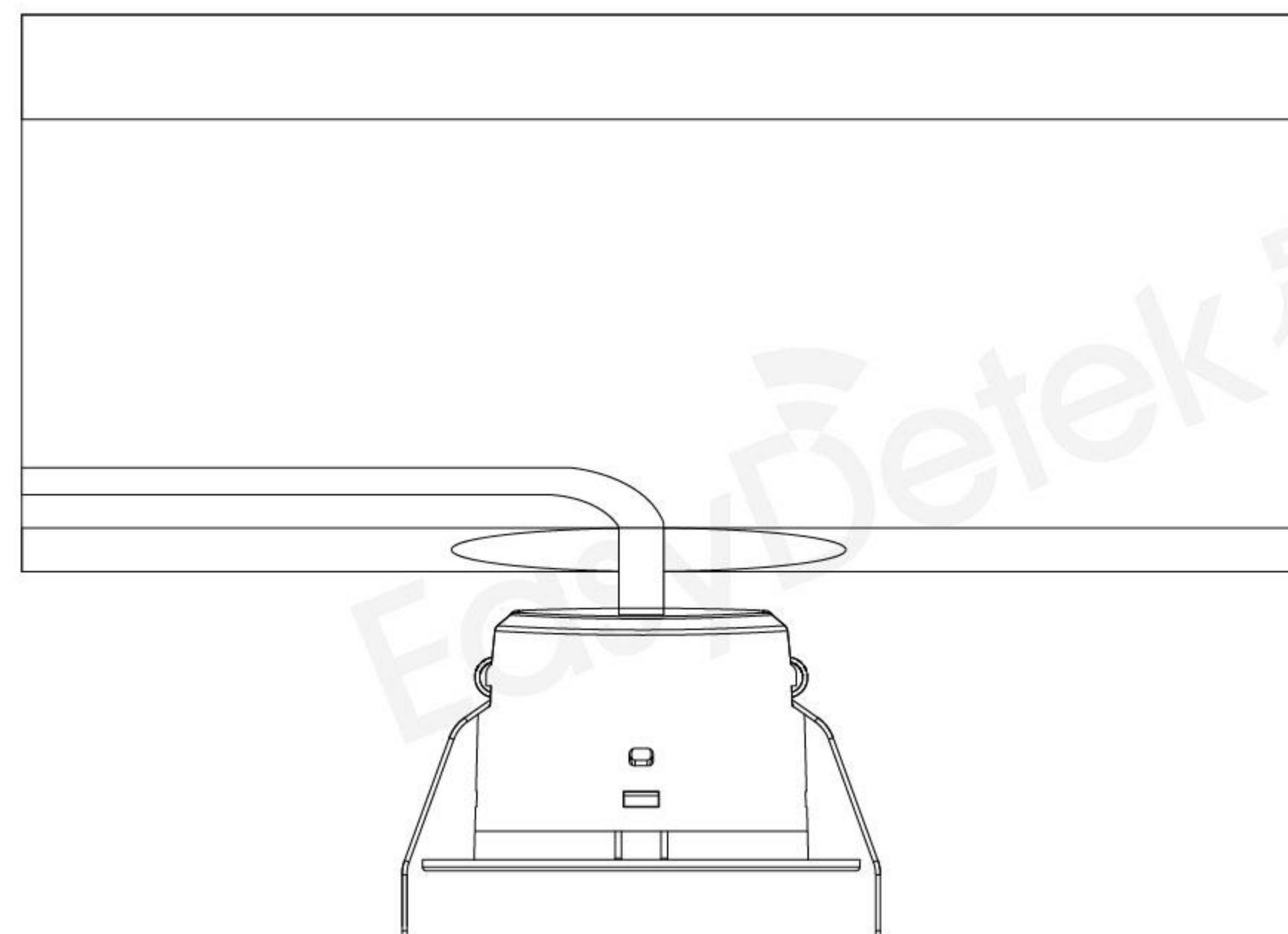
📶 Wiring Diagram

L
N

L
AC 220V
N
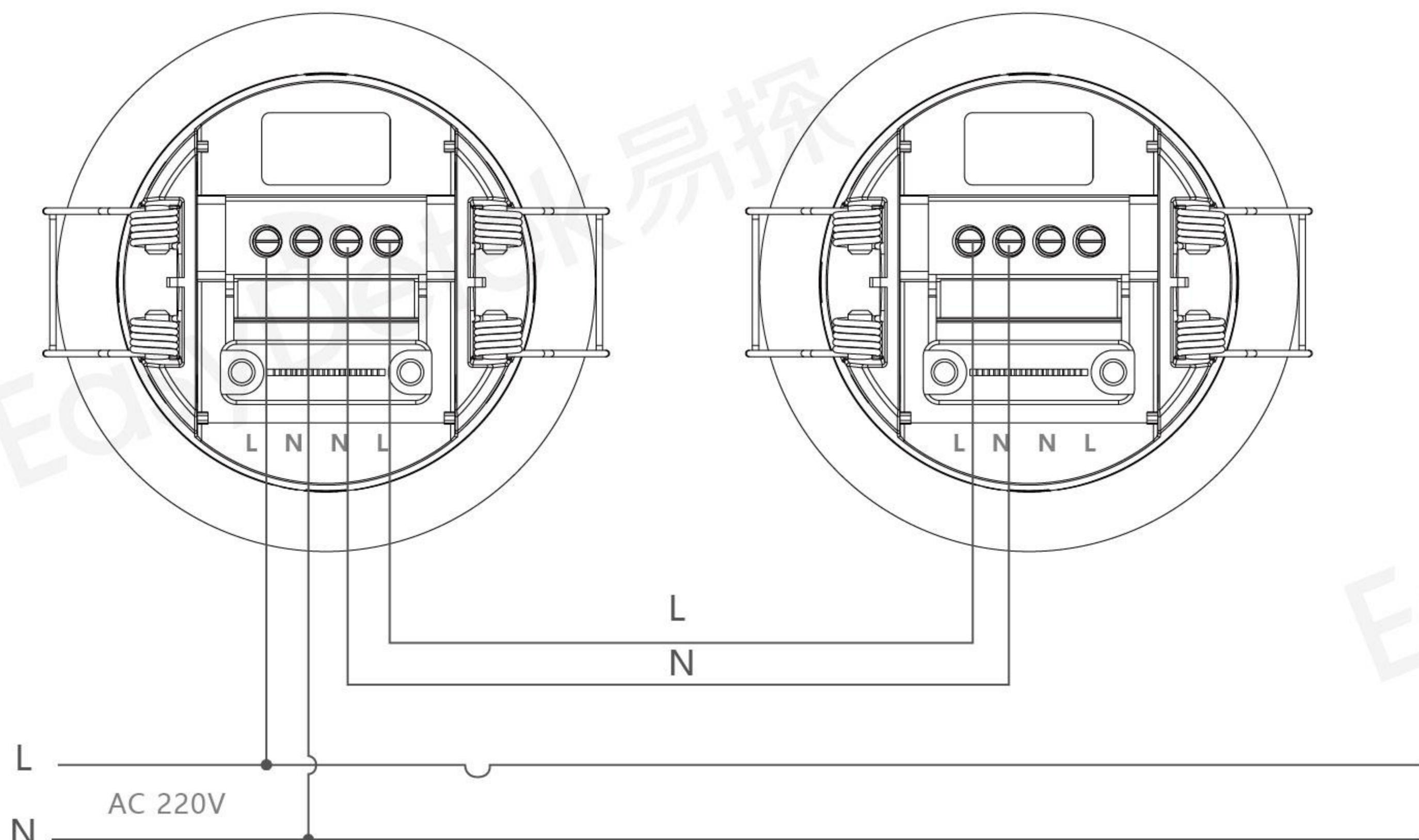
🔊 Installation Diagram

1、Ceiling perforation, reserved wires

Φ55mm

2、Equipment and wire connection
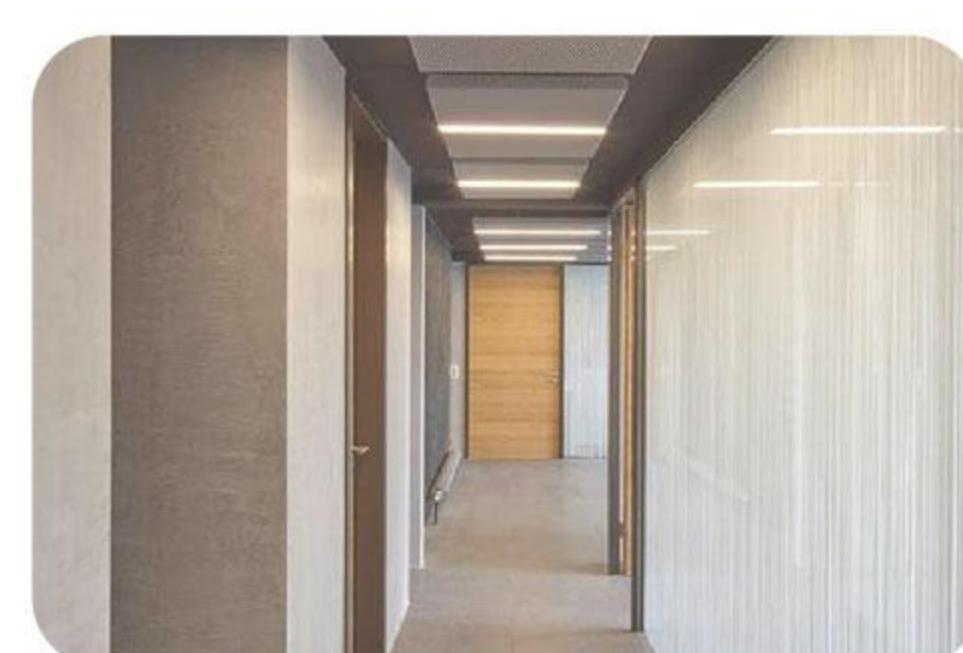
3、Adjust the installation buckle

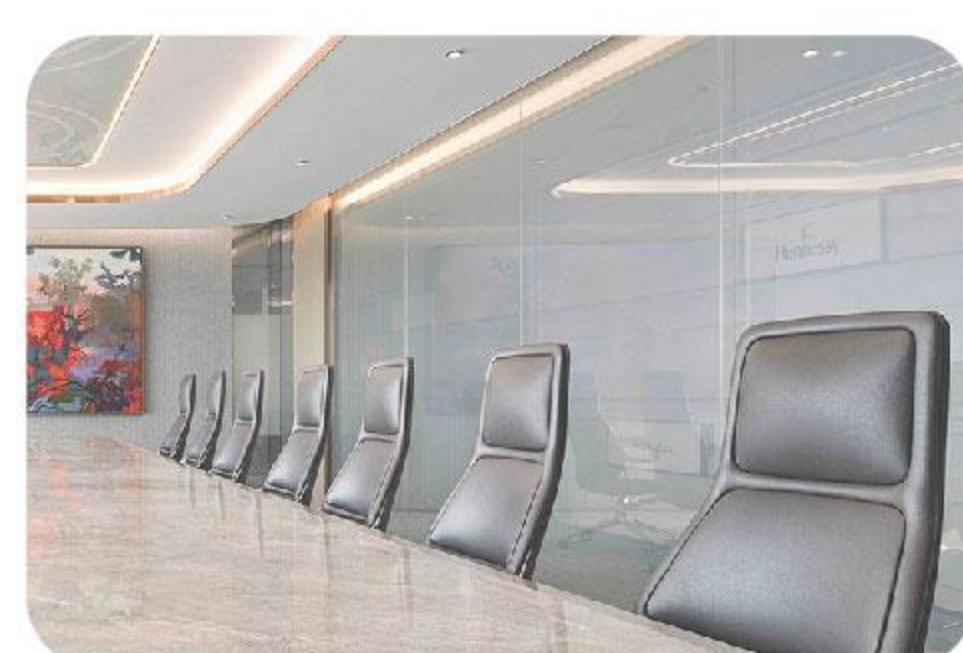### 4、Embedded and fixed, installation completed
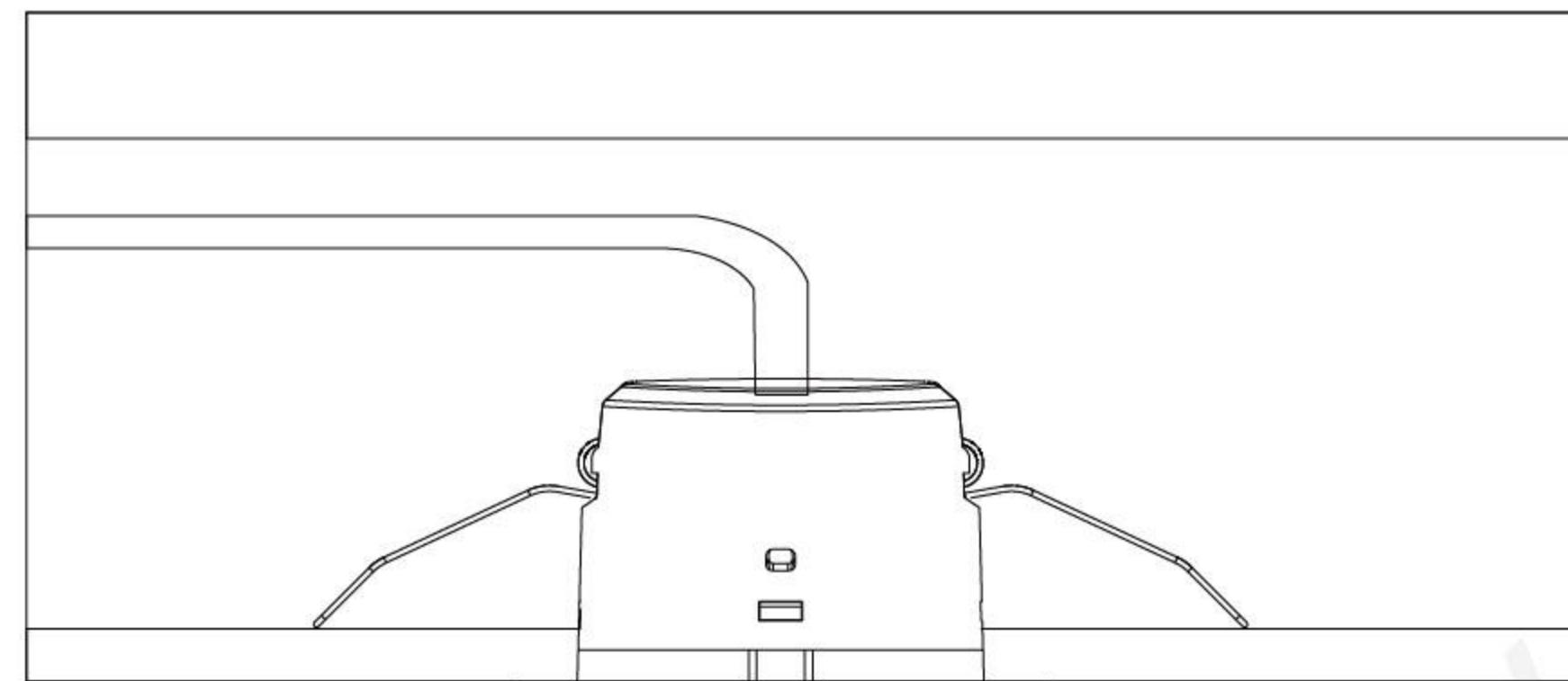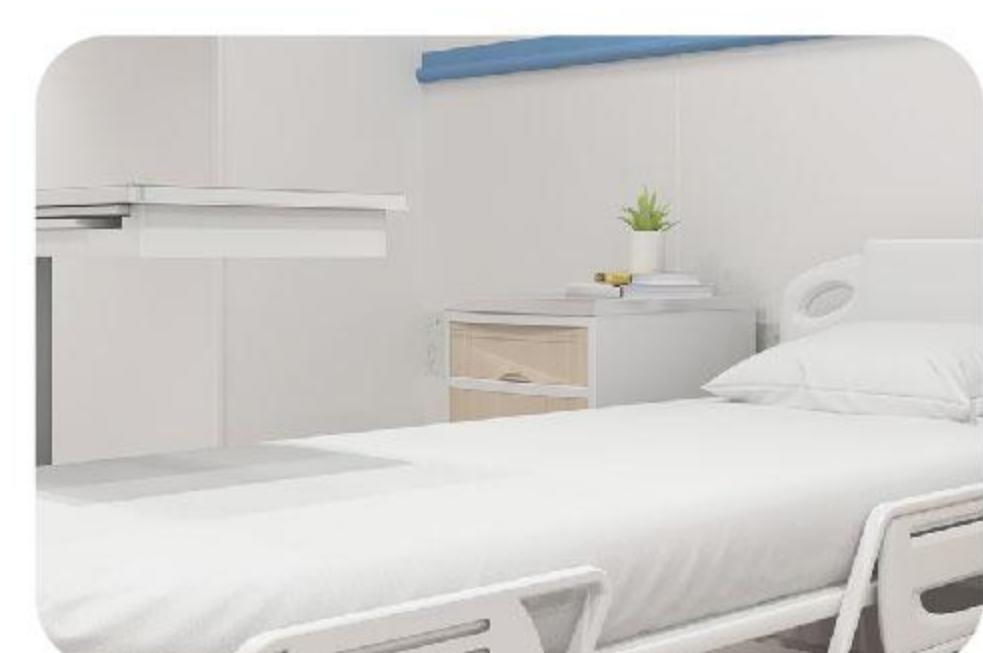
🔊 Application Scenarios
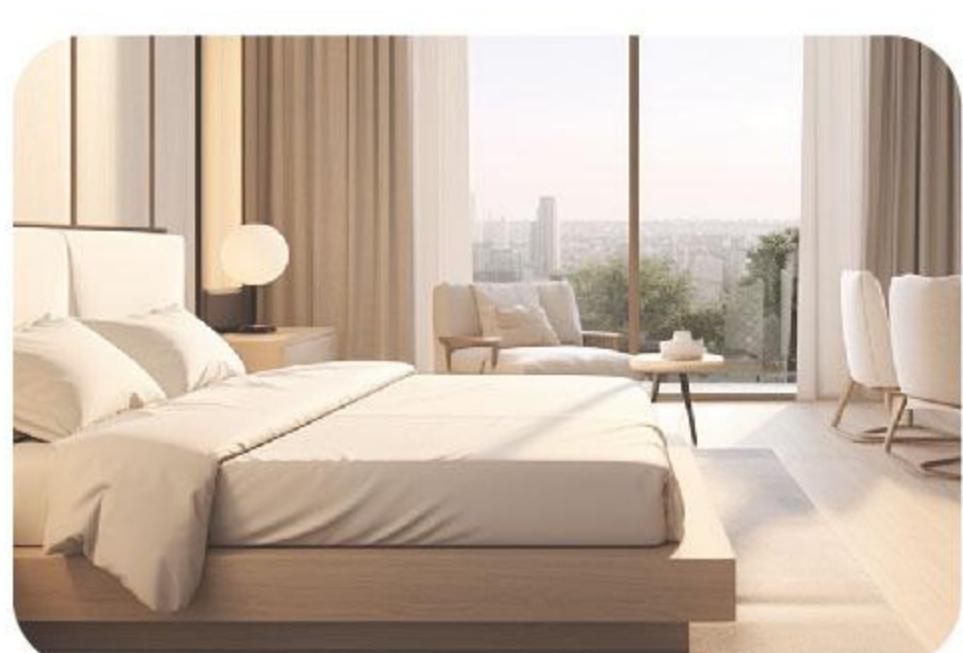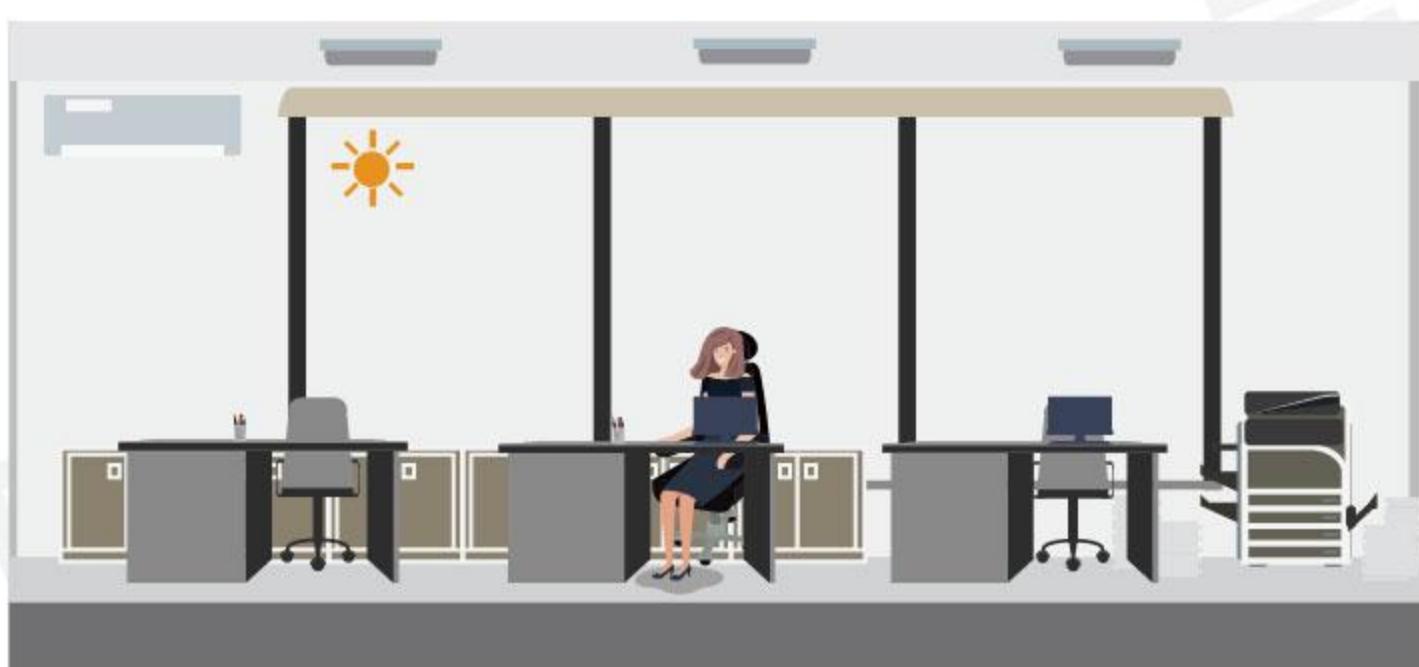
Smart home

Smart light

Smart business

Medical and health care

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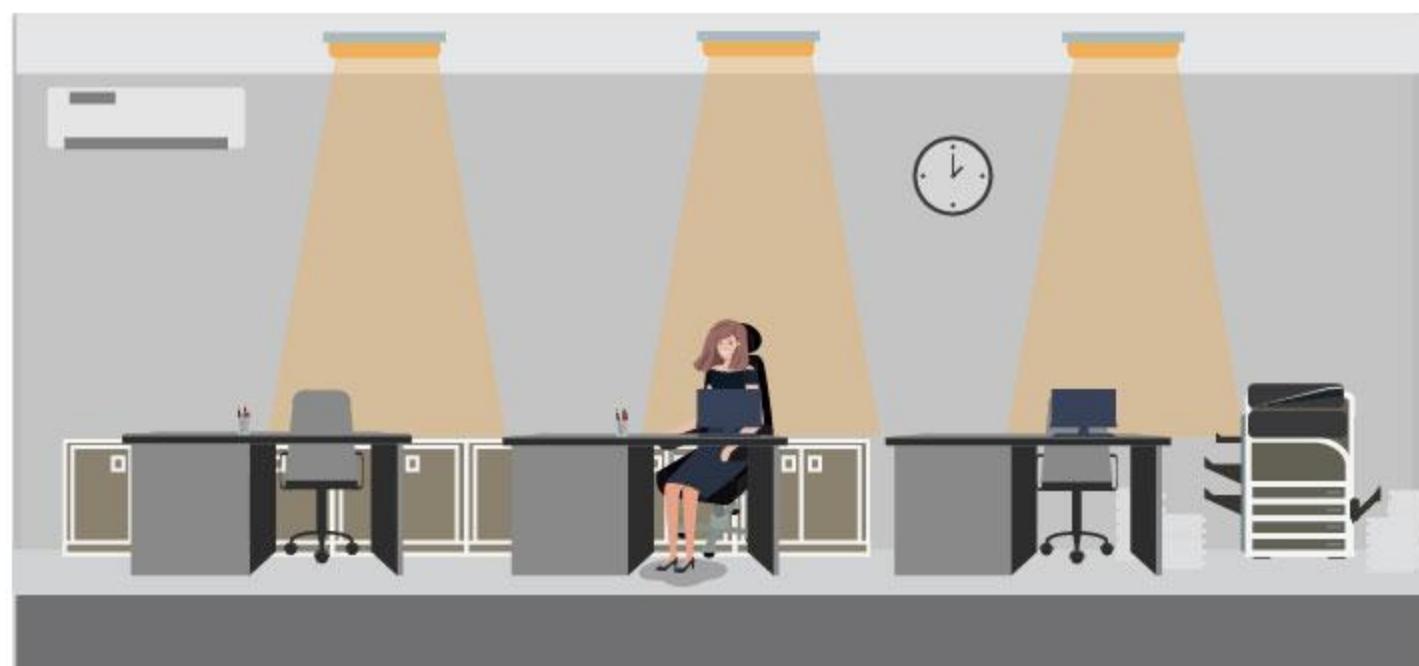
When the ambient light is not sufficient, the sensor detects a moving object and the light comes on automatically.

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.

⌇ TUYA ZigBee Device Enrollment Guidelines

Tuya ZigBee triggers the sensor to enter the distribution network status in three ways:

1. The device has not been connected to the network before and is powered on for the first time. After initialization is completed, a distribution network command will be issued to put the device into distribution network mode. At this time, the indicator light will flash for 3 minutes

2. Pressing and holding the network button on the product cover for at least 3 seconds, and the indicator light will enter flash mode for 3 minutes.

3. Using the remote control's TEST 2S to trigger the distribution network and the indicator light will flash for 3 minutes.

📶 APP Network Access Operation Guide

APP Access Guide:

1. Logging in to your account and enter the main interface of the Tuya Smart APP. Selecting an existing Tuya ZigBee gateway and go to the gateway homepage. If it is a multi-mode gateway, selecting the ZigBee device list option and click "Add Device" below. (Page 1)
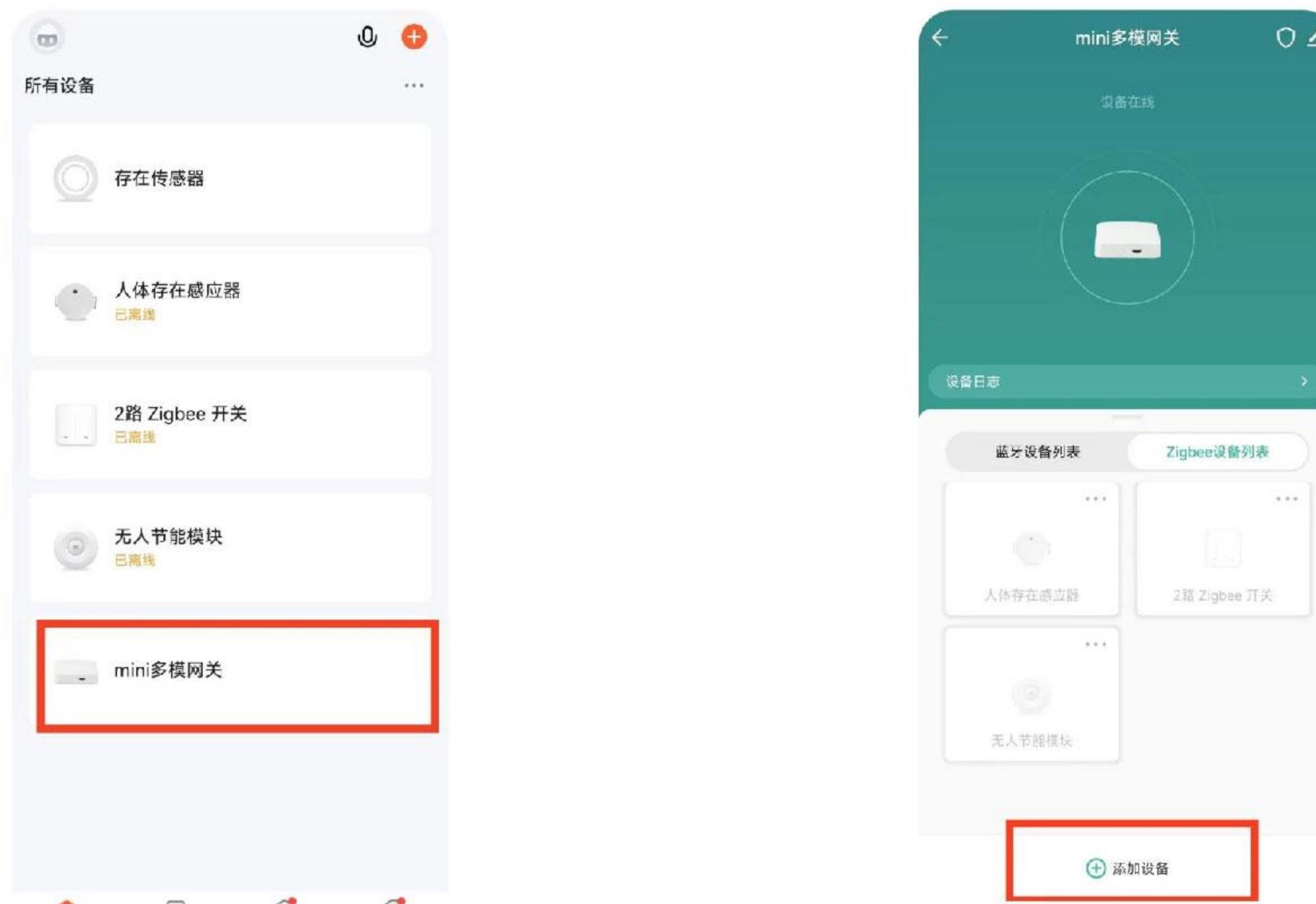
Page 1

2. After clicking "Add Device", enter the search device interface. When a device in the distribution network is found, it will display that a device has been successfully added. Clicking "Finish" to indicate that the device has been successfully connected to the network and clicking the corresponding sensor to enter the parameter settings page. (Page 2)

Page 2

📶 Product Naming Rules

ED	Frequency Band	Product Categories	Product Subdivision	Product Number	Delay Time	Serial number
ED	C	2	5	3	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			

📶 Configuration Version Description

【Hardware】:

【Software】:

📶 History Revision Record

Versions	Time	Description	Note
V1.0	2024-4-12	first edition	–

☏ 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, avoiding 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 Co., Ltd is committed to providing customers with high-quality and better experience radar sensors. Product version updates and iterations will not be notified separately.