MiNi-24G-Zigbee

24GHz Radar Presence and Motion Sensor

Product Manual (Tuya Zigbee Version)

Installation Manual

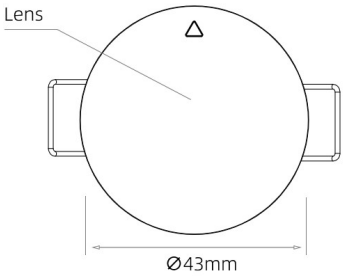
造作 CREATROL

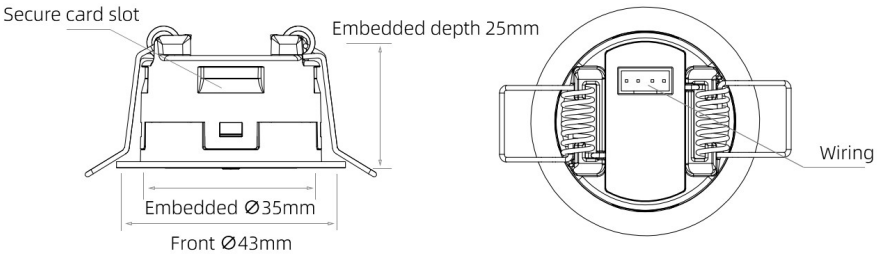
CREATROL

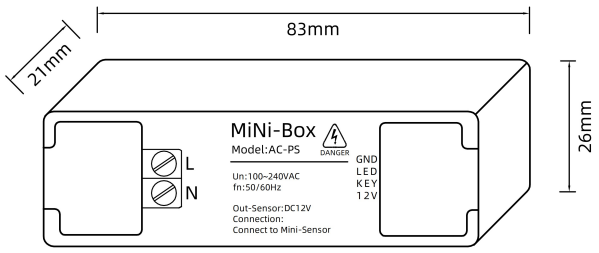
CONTENTS

Appearance

Product outer diameter 43mm, depth 25mm, hole diameter 35mm . Ceiling depth ≥10cm, embedded installation.







Default Parameters

No.	Function	Default Value
1	Delay	1 Second
2	Illuminance	On
3	Detection Distance	450 Centimeters
4	Sensitivity	50%
5	Detection Mode	Motion + Presence
6	Indicator Light	On

Detection Principle

24Ghz FMCW frequency modulation continuous wave radar can detect the expansion of chest and abdomen during breathing, so as to accurately detect the static, micro-motion and moving state of the living body.

Application

Home

Bathroom | Hallway/Aisle/Staircase | Bedroom | Cloakroom

Accurately detect breathing presence, light on when people come, automatically turn off lights when leaving, and keep lights on in static state

Intelligent lighting control based on ambient light changes

Office

Office | Conference Room | Shared Workstation

Lights on and office equipment on when people are present, lights off and office equipment off when people leave

Save energy and improve efficiency

Hotel

Guest Room | Bathroom | Corridor/Staircase

Assist in determining whether there is someone in the room or not, save energy

consumption and improve human efficiency

Accurately detect breathing presence to help achieve a more intelligent check-in experience

School/Library Energy Saving

Classroom | Reading room | Study room

Accurately detect breathing presence, turn on/off lights/equipment when someone is present, and turn off lights/equipment when no one is present

Can achieve precise energy saving

Elderly care and medical care

Room | Bathroom | Corridor/Stairs

Accurately detect breathing presence to assist in anomaly monitoring

The light is on when people are present, and it turns off automatically when people leave, saving energy and improving efficiency

Smart Parking

Entrance & Exit | Driveway | Parking Space

Accurate breathing presence detection, lights turn on when a car arrives, and automatically turn off after the person leaves the car

Intelligent lighting control based on ambient light changes for precise energy saving

Smart Security

Residential Community | Office Park | Building

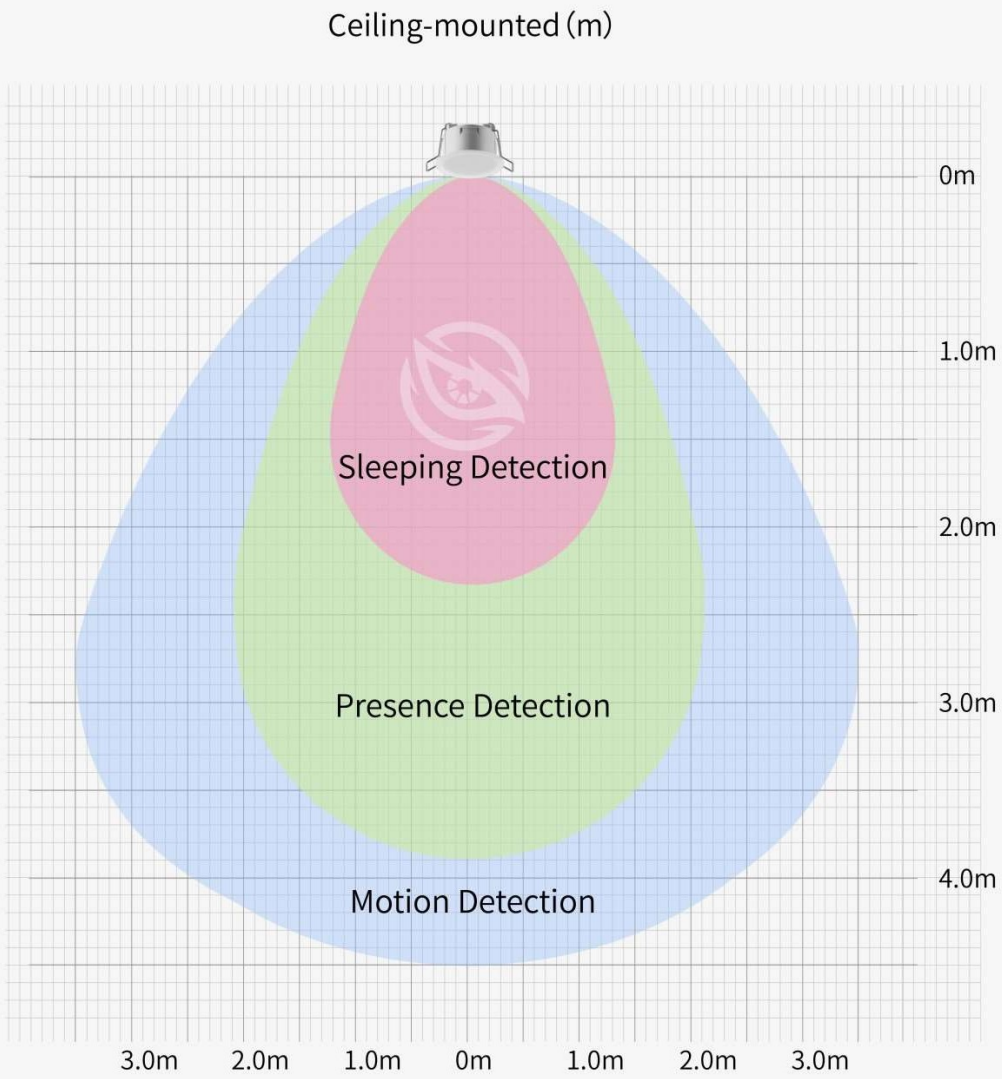
All-weather operation, accurate detection, intelligent tracking

Linkage alarm system to deter intruders

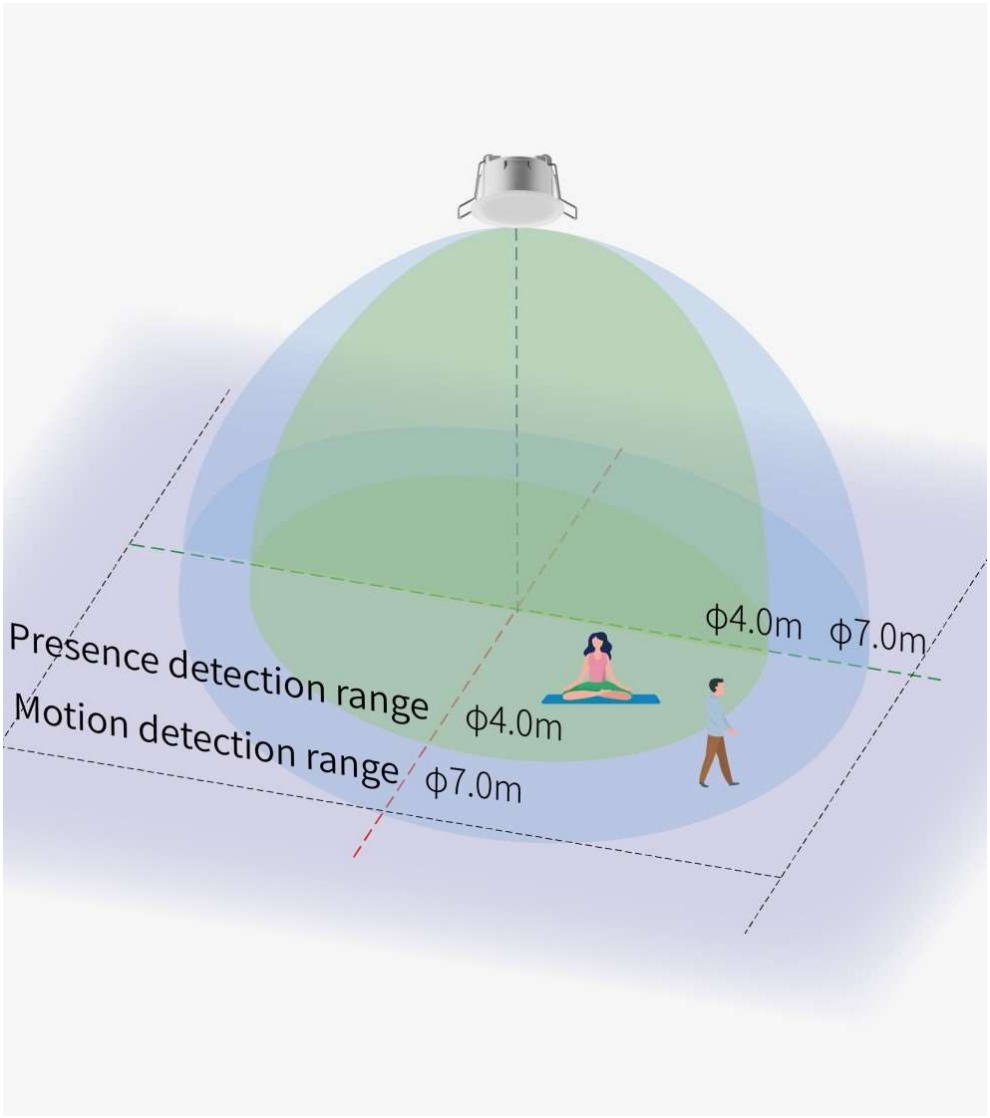
Specifications

Detection Mode		24 GHz mmWave radar FMCW Technology
Installation Height		2.0 ~ 4.0m
Detection Angle		360°
Detection Range		When the installation height is 2.5 ~ 3.5m ① Minor-motion and motion detection ≤ ϕ7.0m
Detection Distance		1.5 ~ 4.5m
Detection Sensitivity		0~100%
Illuminance Sensing		0~32000 Lux(Accuracy ±1%)
Delay Time		1~3600 seconds
Product Size		43mm*25mm
Hole Size		ϕ35mm Depth ≥10cm
Product Weight		18g
Operating Environment		Temperature -20~45℃ Humidity <95%
485 Output	Power Input	100~240VAC(0.5W)
	Power Output	DC12V(< 500mA)
MiNi Sensor	Power Input	DC12V(< 0.5W)
LED Indicator Light		① Flash for 3 seconds when receiving configuration command ② Always on when someone is detected, the brightness of the indicator light is automatically adjusted with the ambient illuminance ③ Can be set to off mode (not lit even when someone is detected)

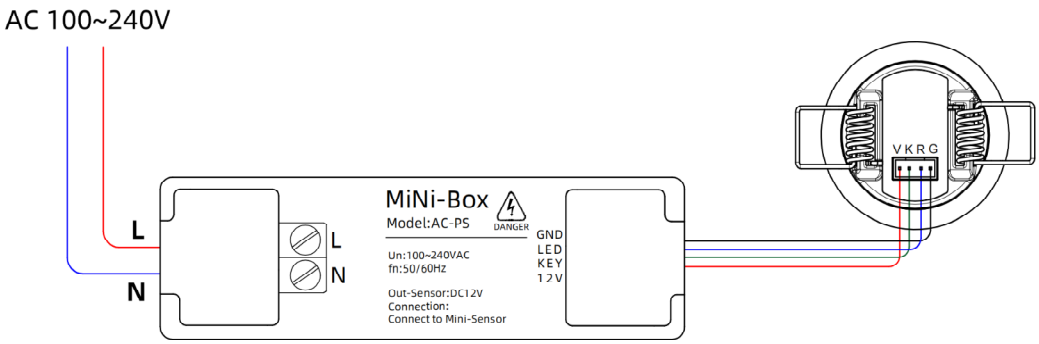
Detection Range



Detection Range



Wiring



Settings

APP Download

Tuya Smart

Smart Life

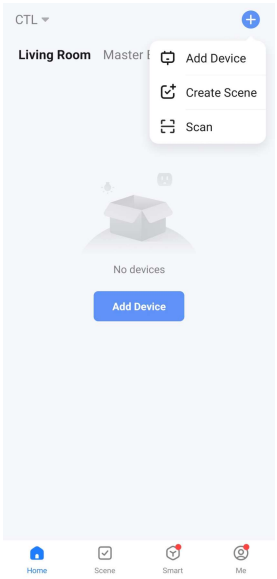
Scan the QR code to download

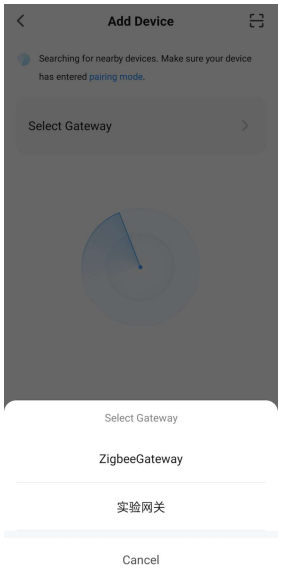
You can download by scanning this QR code, or directly search for the app name in the application market to download.

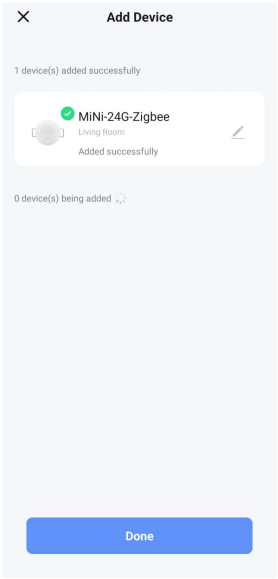
Device Networking

Connect the MiNi-Box to AC220V power, (remote control input *0#0#) wait for the indicator light to flash and enter pairing mode, then click to add device in the

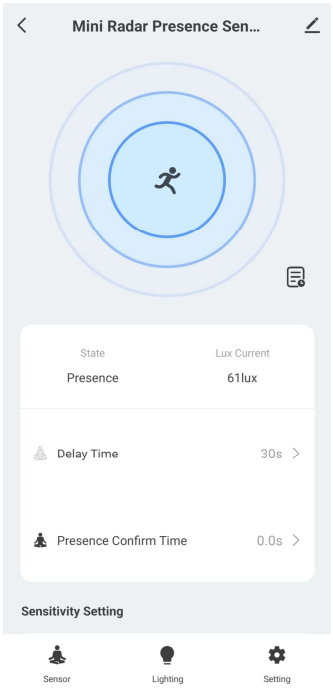
mobile APP and wait for the system to search for devices, finally click finish.

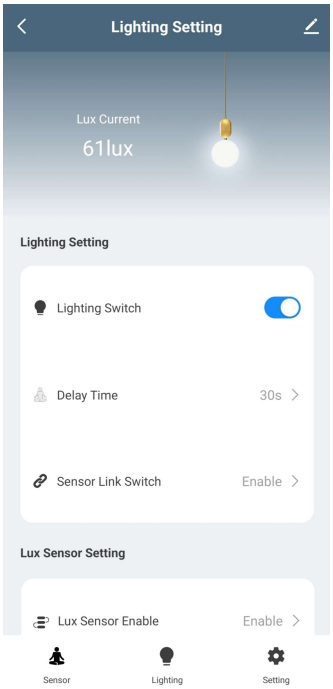


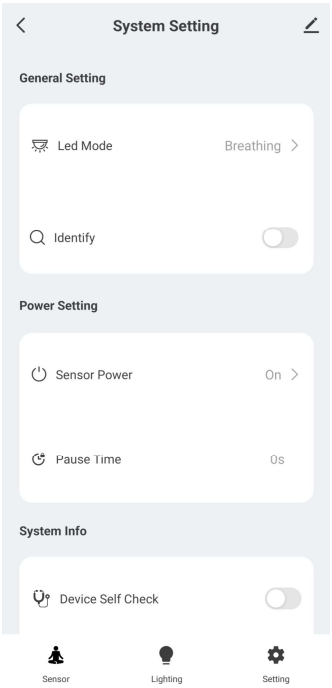




Interface Overview

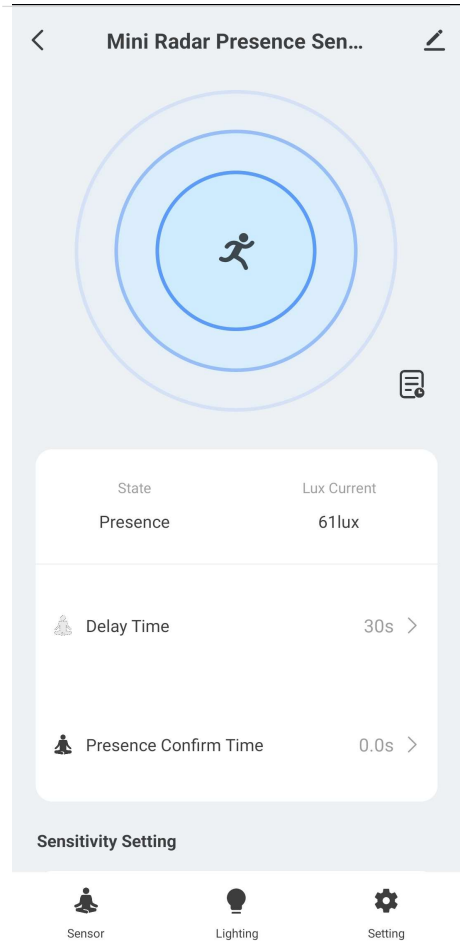


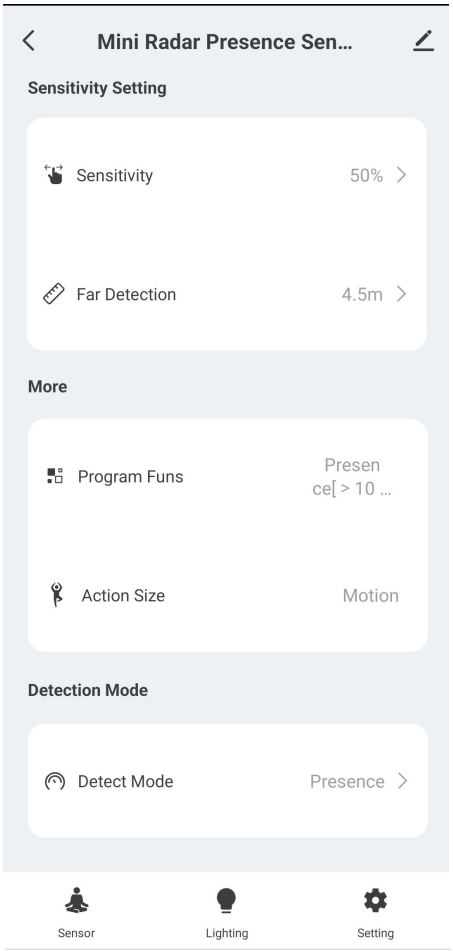




Settings Instructions

1. Sensor Parameter Settings





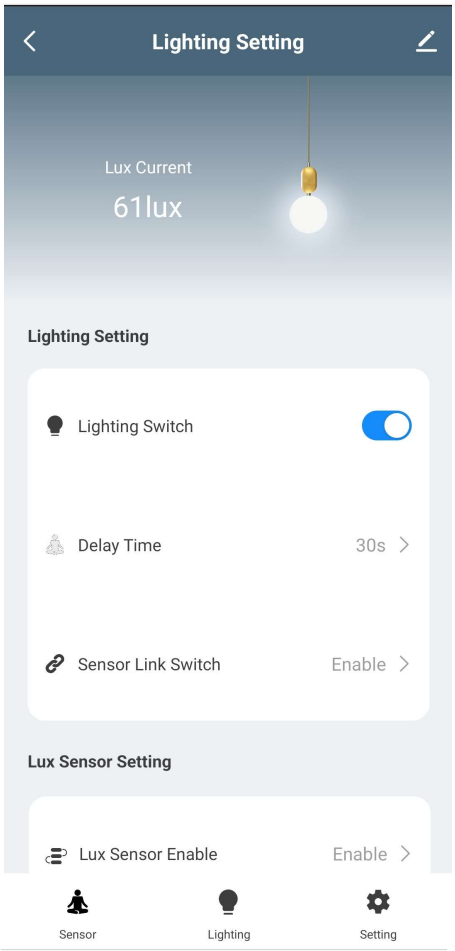
Glossary

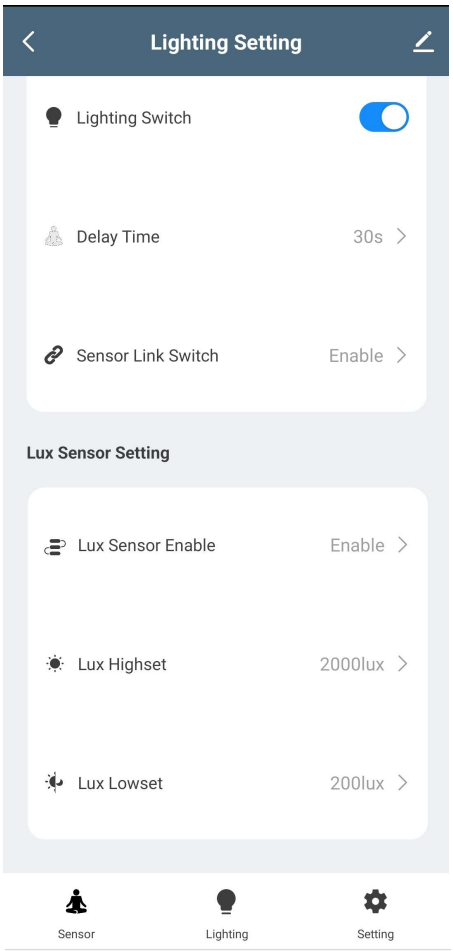
Presence Confirmation Time: How long after continuous detection of a person, the output status of presence.

Radar Detection Mode: Switch between presence and movement.

Settings Instructions

2. Lighting Parameter Settings





Glossary

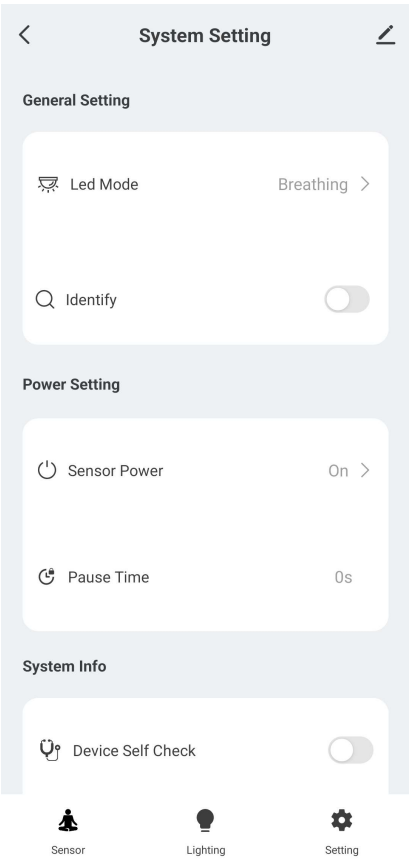
Light Switch: Can be manually turned on or off for automated lighting control

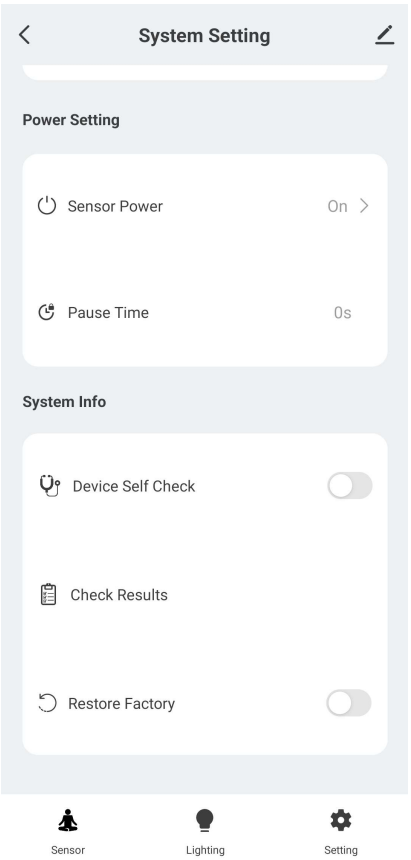
No-Person Delay Time: The time after which the lights automatically turn off when no one is detected

Low Light Value Setting: When the ambient light level is below a certain Lux, sensing is enabled

Settings Instructions

3. Parameter Settings





Glossary

Find and Identify Device: Makes the corresponding sensor blink to confirm its location

Sensor Power Switch: Allows for turning the sensor on, off, resetting the state, and retaining the state

Pause Time Display: Countdown time for state reset and state retention. Not editable.

Device Self-Check: The device checks itself for faults, and the results are displayed in the self-check results section

Restore default parameters: Sensor reset to factory settings

Programming Example

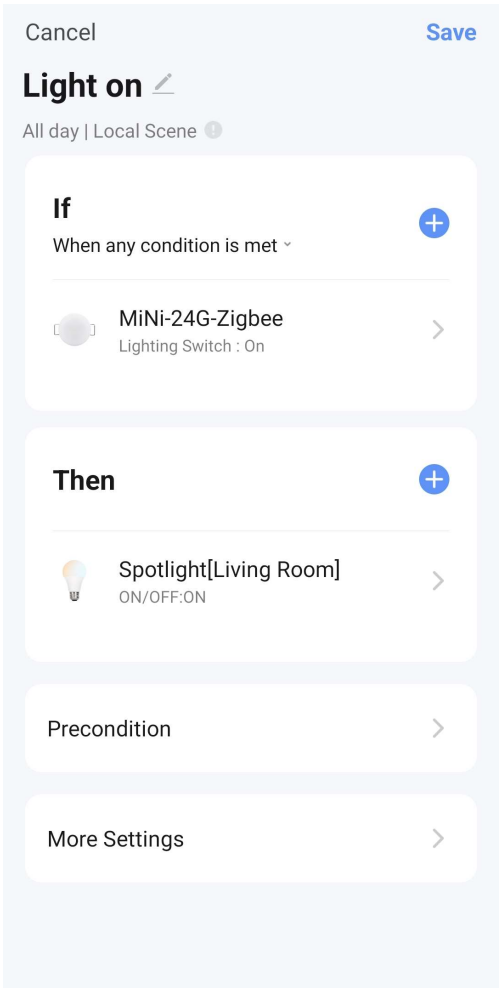
Induction Lighting

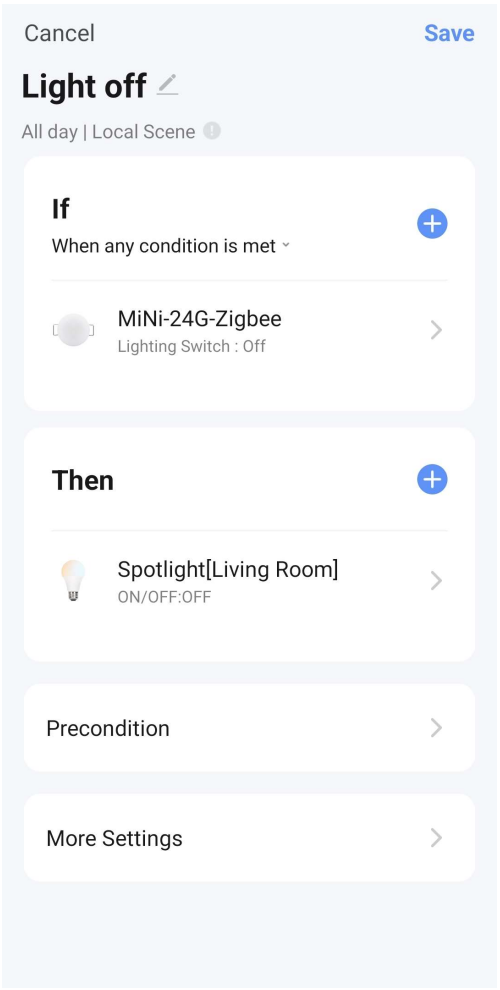
Use turning on/off lights as trigger conditions to program automatic on/off lighting

※ Light sensing enabled: When someone is detected and real-time illuminance < low illuminance value, execute turning on the light

※ No one detected and delay ends, execute turning off the light

※ Can be turned off without light sensing





Programming Example

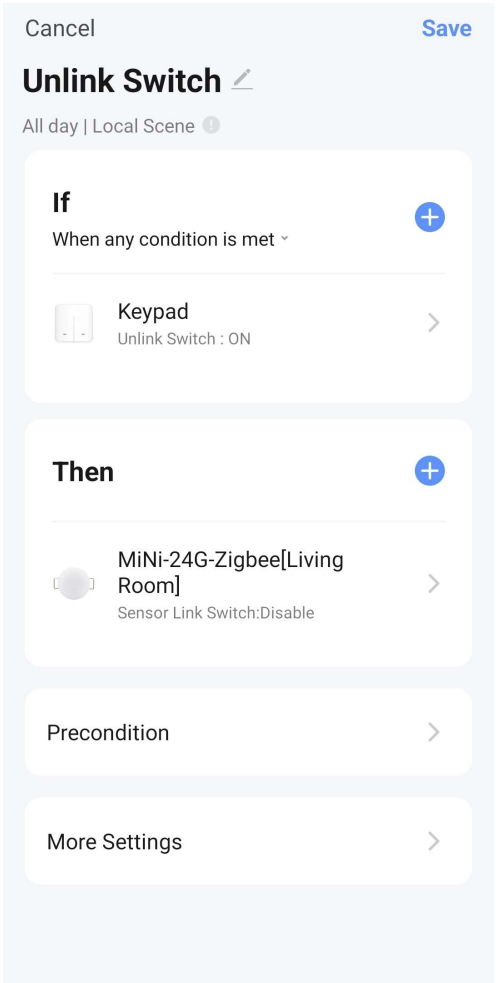
Panel Priority

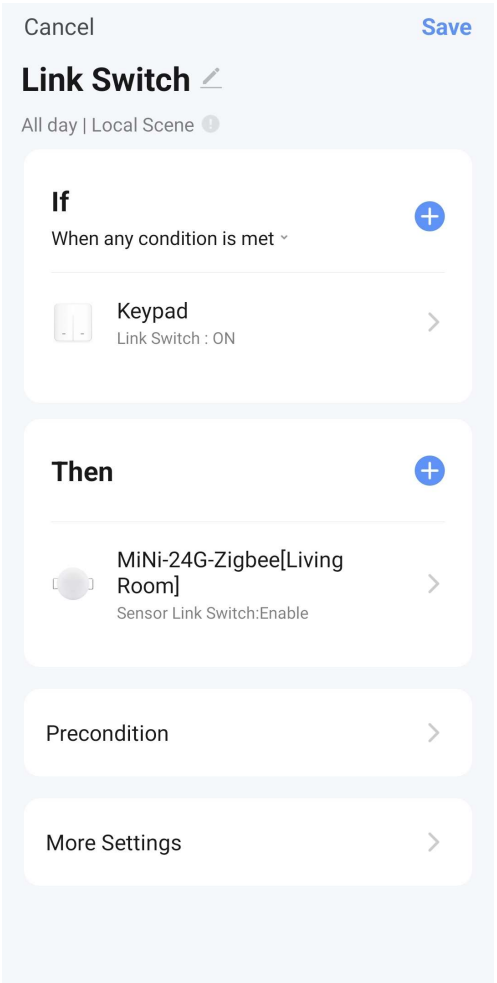
Use the panel as a trigger condition for programming

※ Panel trigger light non-linkage mode, sensor selects non-linkage light to execute turning off sensing

※ Panel trigger light linkage mode, sensor selects linkage light to execute turning on sensing

（Next time someone triggers and meets the conditions for turning on the light, execute turning on the light）





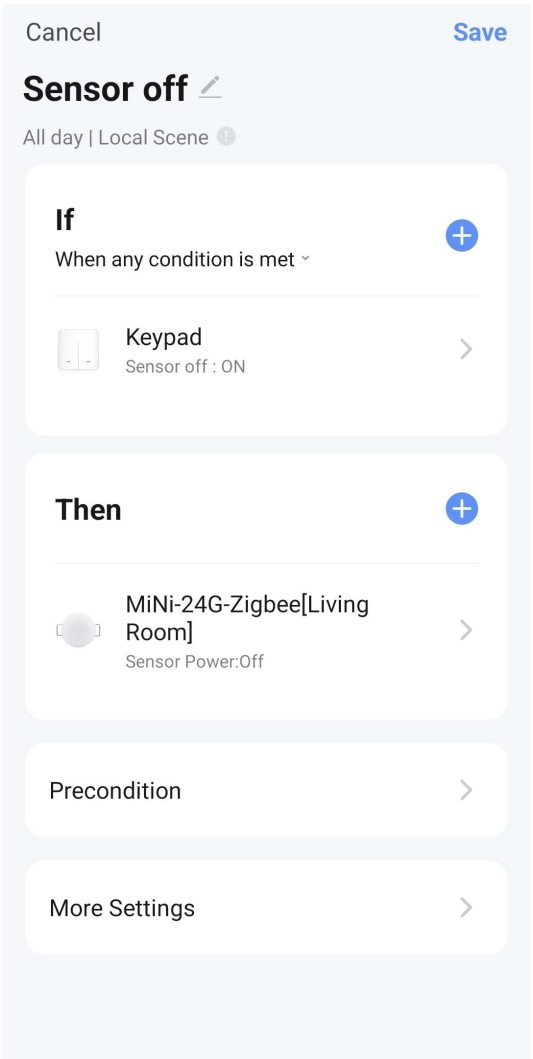
Programming Example

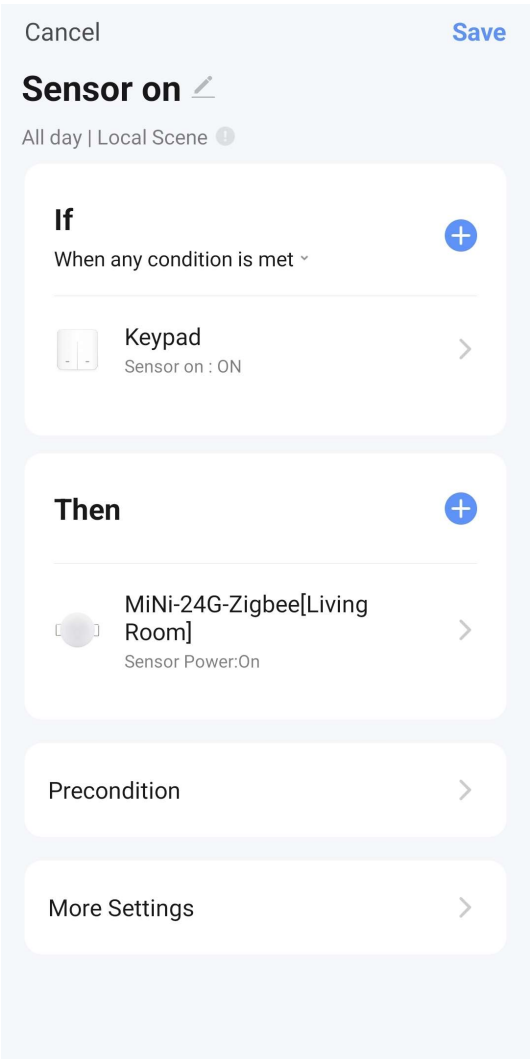
Sensor Power Switch

The operations of turning the sensor on and off, state reset, and state retention can be used for demonstration mode and other scenarios.

※ Panel triggers sensing shutdown mode, the sensor executes power off and state reset. You can also choose a time (10s, 30s, 60s), and it will automatically power on after the countdown ends.

※ Panel triggers sensing power on mode, the sensor executes power on.



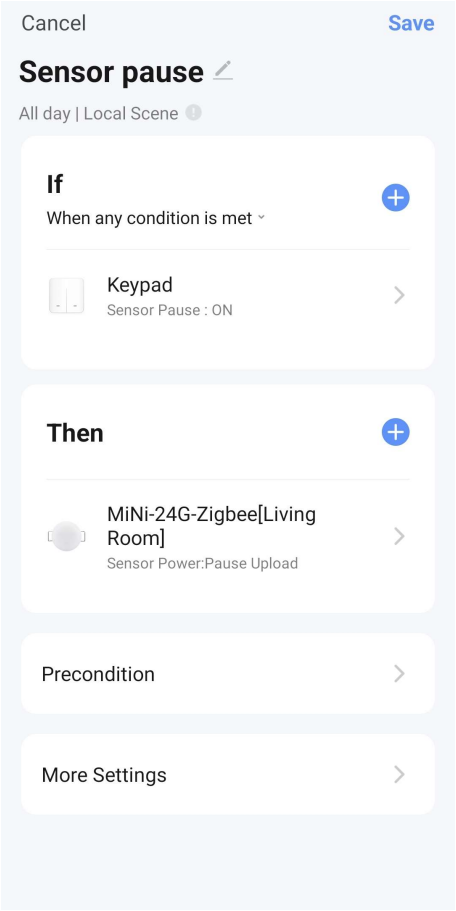


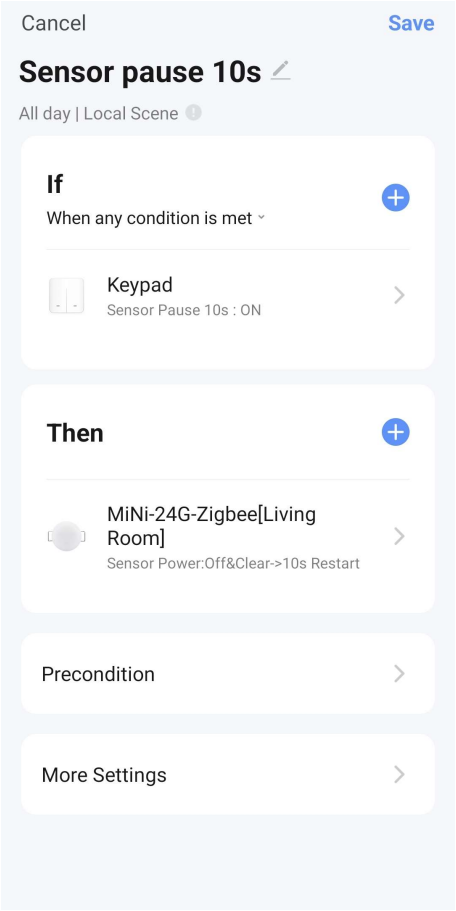
Programming Example

Sensor Power Switch

The operations of turning the sensor on and off, state reset, and state retention can be used for demonstration mode and other scenarios.

※ Panel triggers sensing pause mode, the sensor executes state retention (state, illumination). You can also choose a time (10s, 30s, 60s, 3min, 5min, 10min, 15min, 30min, 1h), and it will resume detection after the countdown ends.



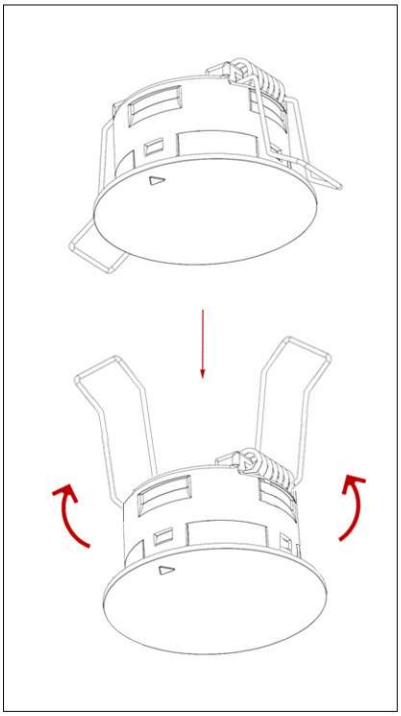


Note: The sensor's state reset and state retention countdown time will be displayed in the sensor → Settings → Pause Time display.

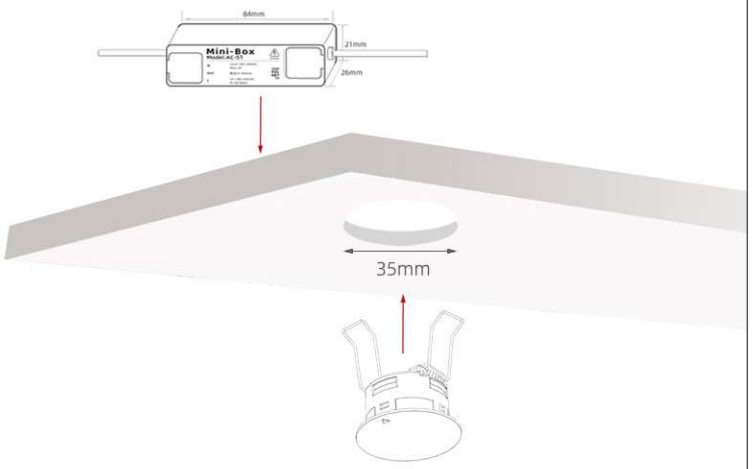
The countdown refreshes once every second within 60 seconds, refreshes once every two seconds within 1 to 3 minutes, refreshes once every 5 seconds within 3 to 30 minutes, and refreshes once every 10 seconds within 30 minutes to 1 hour.

Installation

General Ceiling Mounted Procedure



①After connecting the MiNi BOX,place it on the ceiling,
ensuring the distance from the sensor does not exceed 50cm.

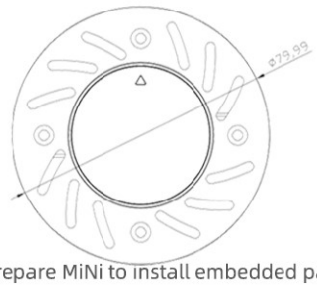


②Lift the springs on both sides of the MiNi sensor.

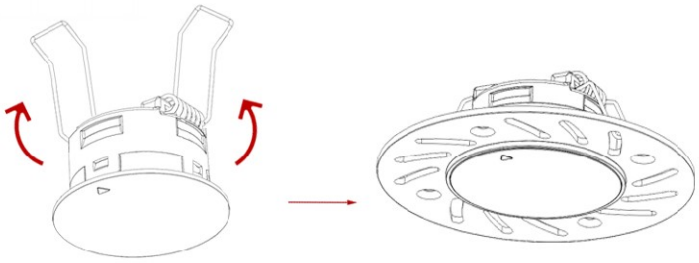
③Put the MiNi sensor into the reserved hold position,
and the spring return is fixed.

Installation

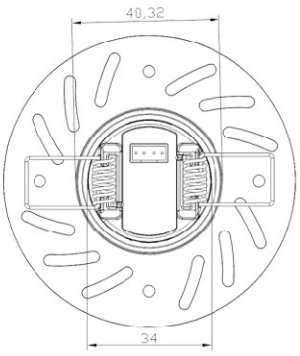
Procedure for Ceiling Mounting (Without a Border)



①Prepare MiNi to install embedded parts
It is necessary to install the accessories in the hole position in advance during the construction of the ceiling

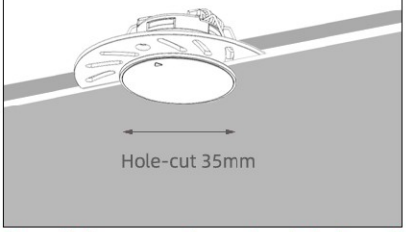


②Lift the spring of the MiNi sensor through the embedded part in the ceiling

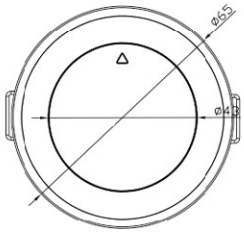


③Spring return fixation

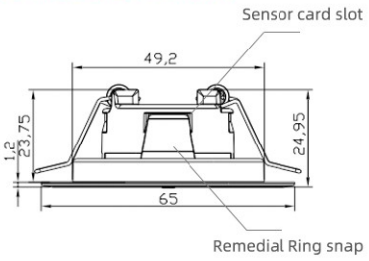
④Complete the borderless installation



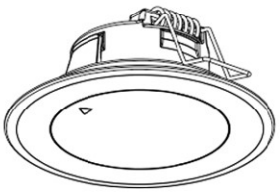
Note: If the reserved opening hole for ceiling installation is too large, you can use a remedial ring for installation, and combine the card slot on the side of the MiNi sensor with the snap of the remedial ring to confirm that the stability will not fall off . Then you can continue to install it on the ceiling normally.



Creatrol MiNi Remedial Ring



Attach the Remediation Ring to the Sensor



Continue with the Installation

Installation

Installation Instructions

Installation Environment Requirements

To ensure the correct operation and detection accuracy of this product, please install according to the following environmental requirements. Operating in unsuitable environments may interfere with detection results:

Dynamic Interference Objects : Please avoid having continuously moving non-human objects in the sensing area, such as animals, continuously swinging curtains, or large potted plants directly facing the wind.

Strong Reflective Materials : There should be no large areas of strong reflectors in the sensing area, as strong reflections directly facing the millimeter-wave radar sensor may cause interference.

Installation Location : Avoid installing this product in metal junction boxes, on metal surfaces, mirrored ceilings, or in water ripple ceilings, as these large reflective surfaces may cause self-excitation and false alarms.

Packaging and Installation

1. When using sharp tools to open the packaging box, please pay attention to safety to avoid injuring the product or yourself.

2. After unpacking, please check promptly whether the product and accessories are complete.

3. To prevent suffocation of infants or children, packaging materials should be destroyed immediately after unpacking or placed out of reach of children.

4. Do not discard packaging materials casually; they should be disposed of properly according to local sanitation department regulations.

Electrical Safety

1. Before wiring, please ensure that the power is turned off.

2. Please strictly follow the wiring diagram and requirements for wiring operations.

3. Handle with care during installation to avoid colliding with the circuit board components, and prevent the device from falling or the casing from deforming or breaking.

Installation

4. All line voltages and main cables must use cables certified by national certification or professional testing agencies.

5. Appropriate short-circuit and overload protection must be provided in the distribution cabinet, and ensure that the voltage does not exceed the specifications stated in the product manual.

Installation Distance and Stability

1. When installing multiple millimeter-wave radar sensors, the distance between them should be no less than 4 meters to avoid mutual interference.

2. Ensure that the sensor installation position is secure and stable to avoid any movement of the device itself, as this may affect the accuracy of detection results.

3. Ensure that there are no moving or vibrating objects behind the radar, as the penetration of radio frequency may also detect nearby moving objects.

4. Ensure that the radar antenna is facing the detection area and that there are no obstructions around it to facilitate the propagation and reception of the waveform.

Product Specifications and Changes

If there are changes to the product design specifications, no further notice will be given. The actual product may differ slightly from the illustrations.

Disclaimer

Please strictly adhere to the installation guidelines above. The company is not responsible for any interference or performance issues caused by improper installation. Ensure that all installation steps and environmental requirements are properly executed to guarantee optimal performance and accuracy of the device. If you have any questions or encounter issues during the installation process, it is recommended to contact us for assistance promptly.

Maintenance

Clean the exterior of the detector

Regularly: When the surface of the detector's lens is dirty or obstructed.

Cleaning materials: Soft cloth - wipe with clean water that does not contain any chemical agents.

- Note!

Do not use products containing chlorine, abrasive materials, or alcohol to remove particularly noticeable dirt.

1. Clean the top cover of the body with a cloth soaked in water.
2. Wipe with a dry cloth after cleaning.

Disposal and Waste

- Important Notice!

Do not dispose of discarded components or any other product materials carelessly in the environment.

Seek assistance from a waste recycling company for disposal.

Fault Treatment

Fault	Cause	Solution
LED indicator light is not lit	Incorrect supply voltage (Disconnected, low voltage)	Check the power supply and voltage according to the specification sheet.
	LED light is set to off state	Set the LED light to on state
No one in the detection area, the indicator light will also light up	There are moving objects in the area(swinging curtains, rotating fans. etc)	Remove the moving objects or change the position of the sensor.
	The person does not leave the detection zone completely	The person leaves the detection area, and wait for the time delay ends.
	Detection distance is too large	Adjust the detection distance by according to the settings table
	The wiring is wrong	Please connect the wires in the correct way.
LED indicator light is on, But no signal output	The person does not leave the detection zone completely	The person leaves the detection area, and wait for the time delay ends.
	Illumination value set too low	Detect light values, turn off or adjust light values

Warranty

Warranty Period

The device enjoys a 2-year warranty period from the original purchase date.

Repair Method

During the warranty period, free replacement of the device for faults not caused by human factors.

The replaced device enjoys the remaining warranty period of the original 2 years.

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