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WenzhiloT MTG075-ZB-RL-5.8G

WenzhiloT Zigbee 5.8GHz MmWave Radar Presence Sensor User Manual

Model: MTG075-ZB-RL-5.8G

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of your WenzhiloT Zigbee 5.8GHz MmWave Radar Presence Sensor. This device is designed to accurately detect human presence, including static and micro-movements, within its detection area, enabling smart automation in your home or office environment. Please read this manual thoroughly before use to ensure proper functionality and safety.

2. Product Overview

The WenzhiloT Zigbee 5.8GHz MmWave Radar Presence Sensor utilizes advanced millimeter-wave radar technology to detect human presence with high accuracy. It distinguishes between human presence, static states, micro-movements, and general movement. The sensor integrates with the Tuya Smart Life ecosystem via a Zigbee hub and offers an optional 16A relay function for direct control of lighting or other devices.



Figure 2.1: WenzhiIoT Zigbee 5.8GHz MmWave Radar Presence Sensor. The image shows the circular sensor and a basic wiring diagram indicating connections for Line (L), Neutral (N), and an optional light bulb.

Key Features:

- **Human Presence Detection:** Detects human presence, static states, micro-movements, and general movement using mmWave Radar.
- **Illuminance Monitoring:** Integrated illuminance sensor for smart scene linkage with lighting.
- **16A Relay Function:** Allows direct control of connected devices (e.g., lights) with three configurable modes.
- **Multiple Installation Methods:** Supports both ceiling and wall mounting using double-sided adhesive or expansion screws.
- **Configurable Parameters:** Eight common parameter settings and five control parameter settings available via the Tuya Smart APP.
- **Zigbee Connectivity:** Requires a Tuya Zigbee gateway for smart home integration.



Figure 2.2: The sensor's ability to detect various human states, including sleeping, talking, lying down, and blinking, highlighting its accuracy in presence detection.

3. Safety Information

- Ensure power is disconnected before installation or maintenance to prevent electric shock.
- Installation should be performed by a qualified electrician if you are unsure about electrical wiring.
- Do not expose the device to water or extreme temperatures.
- Use the device within the specified voltage range (85-265V AC).
- Keep out of reach of children.

4. Package Contents

- WenzhiIoT Zigbee 5.8GHz MmWave Radar Presence Sensor (Circular)
- Double-sided tape
- Expansion screws
- User Manual (this document)

5. Setup

This sensor requires a Tuya Zigbee gateway (hub) to function within a smart home system. Ensure your Zigbee hub is set up and connected to the Tuya Smart Life APP before proceeding with sensor installation and pairing.

Pairing with Tuya Zigbee Hub:

1. Power on the sensor after installation.
2. Open the Tuya Smart or Smart Life APP.
3. Add a new device and select your Zigbee gateway.
4. Follow the in-app instructions to put the sensor into pairing mode (usually by pressing a reset button or cycling power).
5. Once detected, add the sensor to your smart home network.

6. Installation

The sensor supports two primary installation methods: ceiling mount and wall mount.

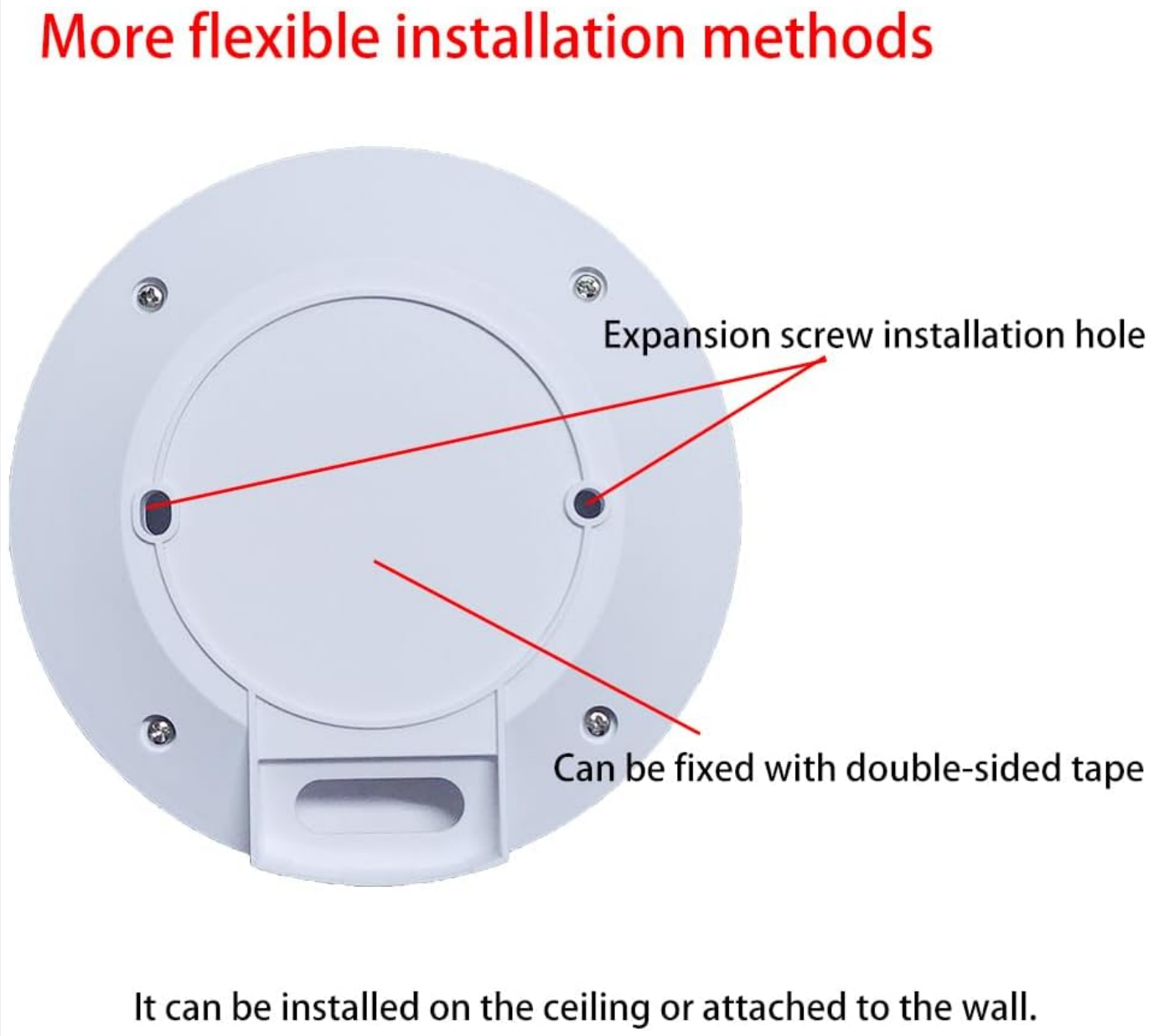


Figure 6.1: The back of the sensor indicating expansion screw installation holes and an area for double-sided tape, illustrating flexible mounting options.

Installation Steps:

1. **Choose Location:** Select a suitable location on the ceiling or wall, ensuring it covers the desired detection area. Avoid placing near large metal objects or sources of strong electromagnetic interference.
2. **Mounting with Screws:** If using expansion screws, mark the positions for the screw holes on the surface. Drill pilot holes, insert the expansion screws, and then secure the sensor using the provided screws.
3. **Mounting with Double-sided Tape:** For a less permanent installation, clean the mounting surface thoroughly. Apply the double-sided tape to the designated area on the back of the sensor and firmly press the sensor onto the desired surface.
4. **Connect Power:** Proceed to the wiring section to connect the sensor to an 85-265V AC power source.

7. Wiring

The sensor requires a direct connection to an 85-265V AC power supply. It also features an optional 16A relay for direct control of a light or other electrical load.



Figure 7.1: Detailed wiring diagram showing connections for Line (L), Neutral (N), and an optional light bulb. Input voltage is AC85-265V.

Wiring Instructions:

1. **Safety First:** Ensure the main power supply to the circuit is turned OFF at the breaker before beginning any wiring.
2. **Connect Neutral (N):** Connect the Neutral wire from your AC power supply to the 'N' terminal on the sensor.
3. **Connect Line (L):** Connect the Live/Line wire from your AC power supply to the 'L' terminal on the sensor.
4. **Optional Relay Connection:** If you intend to use the 16A relay to control a light or other device directly, connect one wire from the load (e.g., light bulb) to the 'N' terminal (or common neutral) and the other wire from the load to the 'Option' terminal on the sensor. The 'L' terminal will then supply power through the relay to the 'Option' terminal when activated.
5. **Secure Connections:** Ensure all wire connections are secure and properly insulated.
6. **Restore Power:** Once wiring is complete and verified, restore power to the circuit.

8. App Integration (Tuya Smart Life)

The WenzhiIoT Presence Sensor integrates with the Tuya Smart Life application, allowing for remote control, parameter adjustments, and smart scene creation.

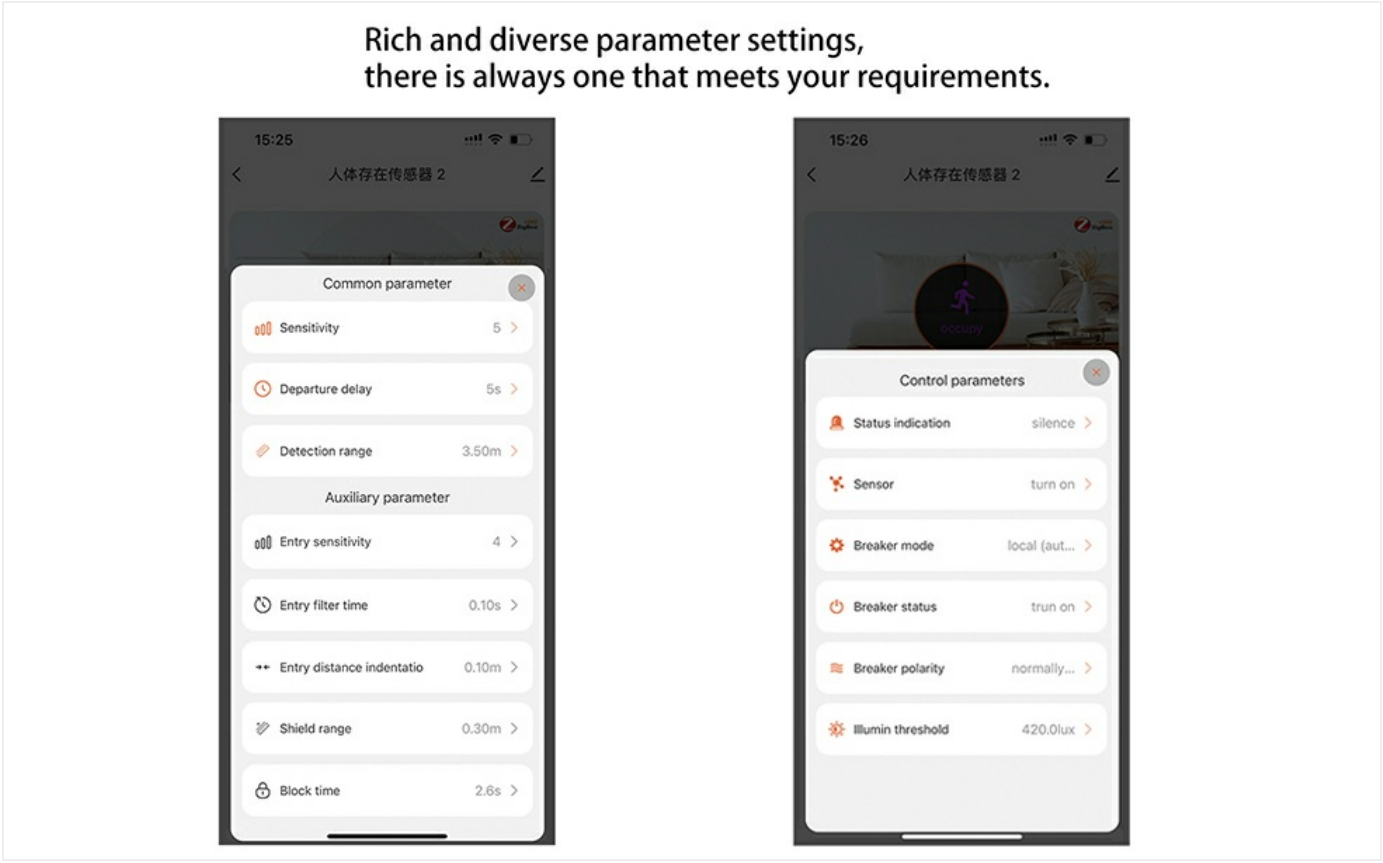


Figure 8.1: Example of the Tuya Smart Life App interface for managing sensor settings and viewing status.

Using the Tuya Smart Life APP:

1. **Access Sensor:** After successful pairing, the sensor will appear in your device list within the Tuya Smart Life APP. Tap on the sensor to access its control interface.
2. **View Status:** The app displays real-time status, including presence detection, illuminance levels, and relay status.
3. **Adjust Parameters:** Navigate to the settings section within the sensor interface to adjust various detection and control parameters (see Section 10).
4. **Create Smart Scenes:** Utilize the sensor's data (presence, illuminance) to create automated scenes with other smart devices. For example, turn on lights when presence is detected and illuminance is below a certain threshold.

9. Operating Instructions

The sensor continuously monitors its environment for human presence. Its operation is primarily configured through the Tuya Smart Life APP.

Detection Functionality:

- The 5.8GHz mmWave radar detects movement and static presence within its configured range.
- It can differentiate between various states such as a person sleeping, talking, or performing micro-movements.

Illumination Detection:

The integrated illuminance sensor measures ambient light intensity. This data can be used in the Tuya Smart Life APP to create smart automation rules, such as turning on lights only when presence is detected AND the room is dark.



Figure 9.1: An example of the sensor installed in a room, demonstrating its illumination detection capability for smart lighting control.

10. Relay Function

The sensor includes a 16A relay that can directly control an electrical load, such as a light. This eliminates the need for a separate smart switch in some scenarios.

Relay Modes (Configurable in APP):

- **Standard (Cloud Linkage):** The relay can be remotely controlled (turned ON/OFF) via the Tuya Smart Life APP.
- **Local (Automatic):** If human presence is detected, the relay will automatically turn ON. When presence is no longer detected, the relay will turn OFF after a configurable delay.
- **Not Support (Disable Relay):** The relay function is disabled. The sensor operates solely as a presence detection device, and its output is only available through the Zigbee network to the APP.

11. Parameter Settings

The Tuya Smart Life APP provides extensive options to customize the sensor's behavior to suit various usage scenarios.

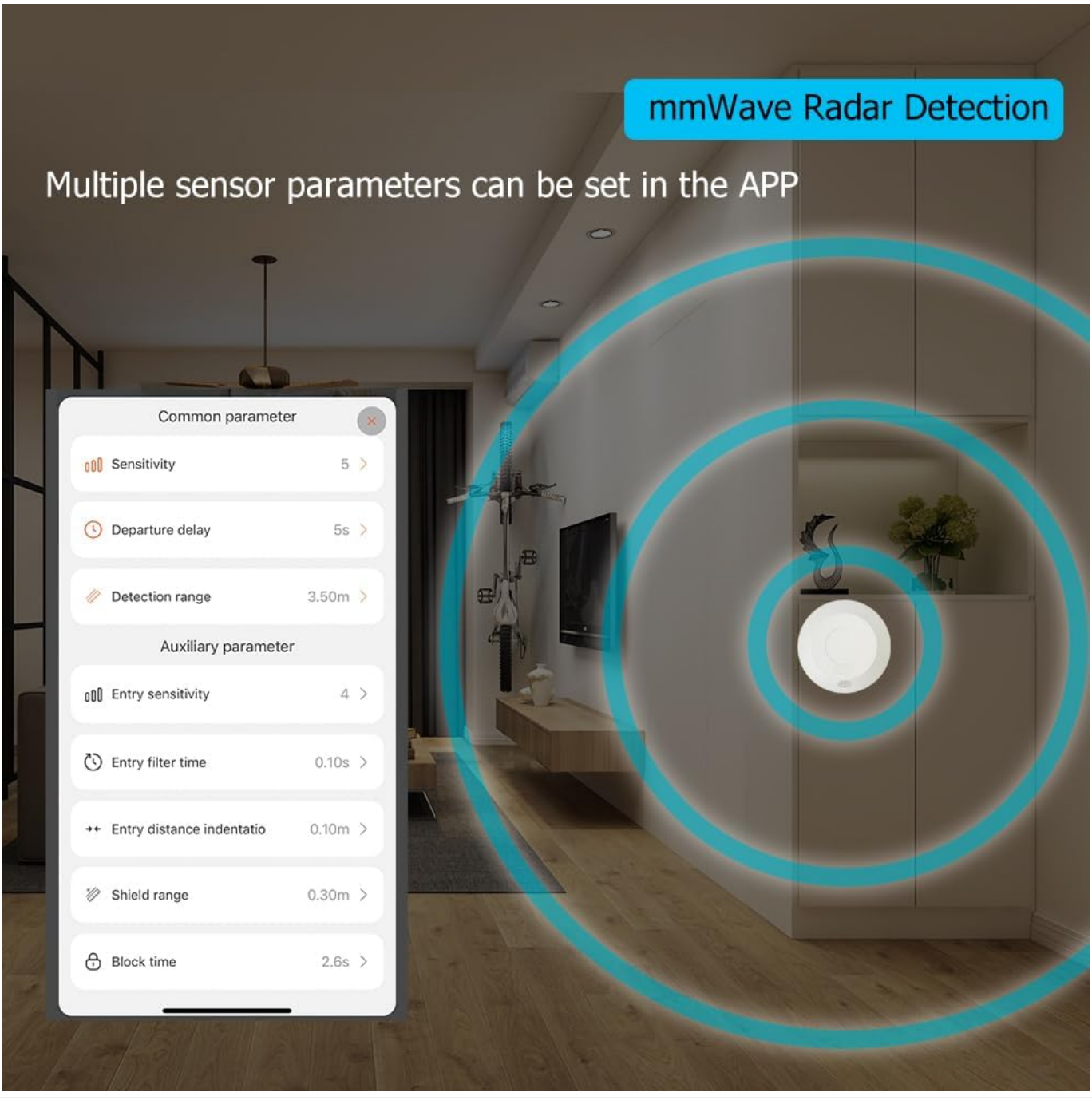


Figure 11.1: Screenshot of the Tuya Smart Life App displaying common parameter settings for the sensor, including sensitivity, departure delay, and detection range.

Common Parameter Settings (8 types):

- **Sensitivity:** Adjusts the sensor's responsiveness to movement.
- **Departure Delay:** Sets the time before the sensor reports 'no presence' after detection ceases.
- **Detection Range:** Configures the maximum distance for presence detection.
- **Entry Sensitivity:** Adjusts sensitivity for initial entry detection.
- **Entry Filter Time:** Sets a delay to filter out brief, insignificant entries.
- **Entry Distance Indentation:** Defines a zone where entry detection is modified.
- **Shield Range:** Configures a minimum distance within which detection is ignored.
- **Block Time:** Sets a period during which the sensor will not re-trigger after an event.

Control Parameter Settings (5 types):

- **Status Indication:** Controls visual indicators on the sensor.
- **Sensor:** Enables or disables the presence detection function.
- **Breaker Mode:** Selects the operating mode for the 16A relay (Standard, Local, Not Support).
- **Breaker Status:** Displays the current status of the relay.
- **Illuminance Threshold:** Sets the ambient light level at which smart scenes or relay actions are triggered.

12. Maintenance

- **Cleaning:** Wipe the sensor's surface with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Firmware Updates:** Periodically check the Tuya Smart Life APP for available firmware updates to ensure optimal performance and access to new features.
- **Environmental Conditions:** Ensure the sensor is not exposed to excessive dust, moisture, or extreme temperatures, which can affect its performance and lifespan.

13. Troubleshooting

Problem	Possible Cause	Solution
Sensor not detecting presence	Incorrect sensitivity settings Obstruction in detection area Sensor placed too high/low Power issue	Adjust 'Sensitivity' and 'Detection Range' in the APP. Ensure clear line of sight for radar. Refer to installation guidelines for optimal height. Check power connection.
Sensor constantly detects presence (false positives)	High sensitivity Environmental interference (e.g., fan, curtains) Incorrect 'Shield Range' or 'Entry Distance Indentation'	Reduce 'Sensitivity' in the APP. Relocate sensor away from moving objects or adjust 'Block Time'. Adjust 'Shield Range' and 'Entry Distance Indentation' as needed.
Relay not activating/deactivating	Incorrect 'Breaker Mode' setting Wiring issue Load exceeds 16A rating	Verify 'Breaker Mode' is set to 'Local' or 'Standard' in the APP. Check wiring connections (Section 7). Ensure the connected load does not exceed 16A.

Problem	Possible Cause	Solution
Sensor not connecting to Tuya Smart Life APP	No Zigbee hub present or connected Sensor not in pairing mode Weak Zigbee signal	Ensure a Tuya Zigbee hub is online and connected. Follow pairing instructions (Section 5) to re-enter pairing mode. Move sensor closer to the Zigbee hub or use a Zigbee repeater.

14. Specifications

Feature	Specification
Brand	WenzhiIoT
Model Number	MTG075-ZB-RL-5.8G
Color	Circular
Power Source	Corded Electric (AC 85-265V)
Frequency	5.8 GHz (MmWave Radar)
Maximum Detection Range	10 Meters
Mounting Type	Ceiling Mount, Wall Mount
Relay Output	16A
Compatible Devices	Tuya Zigbee gateway, Smart home devices
Smart Home Compatibility	Tuya Smart Life (via Zigbee hub)
Item Dimensions (D x W x H)	4.57"D x 4.57"W x 1.3"H

15. Warranty and Support

For warranty information and technical support, please refer to the documentation provided with your purchase or contact WenzhiIoT customer service through the retailer where the product was purchased. Keep your proof of purchase for warranty claims.

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