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WenzhiloT MTG236-WF-RL-24G

WenzhiloT Smart Motion Sensor WiFi 24 GHz Radar MmWave Presence Sensor Instruction Manual

Model: MTG236-WF-RL-24G

1. Introduction

The WenzhiloT Smart Motion Sensor is an advanced 24 GHz mmWave radar-based device designed for precise human presence detection. This sensor can identify human presence, static states, micro-motions, and general movement within its detection area. It integrates with the Tuya Smart Life app for smart home automation and offers a 16A relay function for direct control of lighting or other devices. This manual provides detailed instructions for installation, operation, and configuration of your sensor.

2. Safety Information

- **Electrical Safety:** Installation involves electrical wiring. Ensure power is disconnected at the circuit breaker before installation. If you are unsure about electrical wiring, consult a qualified electrician.
- **Voltage:** This device operates on AC 85-265V. Verify your power supply matches this requirement.
- **Mounting:** Install the sensor securely in the ceiling according to the provided instructions to prevent it from falling.
- **Operating Environment:** Do not expose the device to extreme temperatures, humidity, or direct water. The upper temperature rating is 50 degrees Celsius.
- **Interference:** Avoid installing near strong electromagnetic fields or large metal objects that may interfere with radar detection.

3. Product Overview

3.1 Package Contents

- WenzhiloT Smart Motion Sensor (MTG236-WF-RL-24G)
- Instruction Manual
- USB cable (if applicable for specific models/accessories)

3.2 Key Features

- **Advanced MmWave Radar:** Detects human presence, static, micro-motion, and movement.
- **Ceiling Mount Design:** Discreet installation, powered directly by AC 85-265V.
- **Illuminance Monitoring:** Built-in light sensor for smart scene linkage with lighting.

- **16A Relay Function:** Direct control of connected lights or devices with three configurable modes.
- **Tuya Smart Life Integration:** Seamlessly connects to your smart home ecosystem for automation and remote control.
- **Customizable Parameters:** Multiple common and control parameter settings for various scenarios.

3.3 Sensor Components



Figure 1: WenzhiloT Ceiling Mount Presence Sensor with dimensions. Shows the indicator light, reset button, and mounting clips. Dimensions are approximately 75mm (2.95 inches) diameter and 61mm (2.4 inches) height, with an opening size of 60-65mm (2.36-2.56 inches).

4. Setup

4.1 Installation

1. **Power Off:** Before starting, ensure the main power supply to the installation area is turned off at the circuit breaker.
2. **Prepare Opening:** Create a circular opening in the ceiling with a diameter of 60-65mm (2.36-2.56 inches).
3. **Wiring:** Connect the AC 85-265V power supply wires to the sensor's input terminals (L and N). If using the relay function to control a light, connect the light's wires to the designated relay output terminals. Refer to the wiring diagram below.



Figure 2: Wiring diagram for the ceiling mount sensor. Shows live (L) and neutral (N) connections for power input, and optional connections for a light fixture to utilize the internal relay.

4. **Mounting:** Push the sensor into the ceiling opening. The spring clips will secure it in place, similar to a downlight.
5. **Power On:** Restore power at the circuit breaker. The sensor's indicator light should illuminate.

4.2 Connecting to Tuya Smart Life App

1. **Download App:** Download the 'Tuya Smart' or 'Smart Life' app from your mobile device's app store.
2. **Register/Login:** Create an account or log in to your existing account.
3. **Add Device:** In the app, tap '+' to add a new device. Select 'Sensor' or 'Presence Sensor' from the device list.
4. **Pairing Mode:** Follow the app's instructions to put the sensor into pairing mode. This usually involves pressing and holding the reset button on the sensor until the indicator light blinks rapidly.
5. **Connect to Wi-Fi:** Enter your Wi-Fi network credentials (2.4 GHz network required). The app will then search for and connect to the sensor.
6. **Rename Device:** Once connected, you can rename the sensor for easier identification within the app.

5. Operating Instructions

5.1 Detection Capabilities

The WenzhiIoT sensor utilizes 24 GHz mmWave radar technology to detect various states of human presence:

- **Human Presence:** Detects the presence of a person in the area.
- **Human Static:** Identifies a person who is stationary, such as sleeping or sitting still.
- **Human Micro Motion:** Detects subtle movements like breathing or slight shifts in position.
- **Human Movement:** Detects larger movements like walking or gesturing.

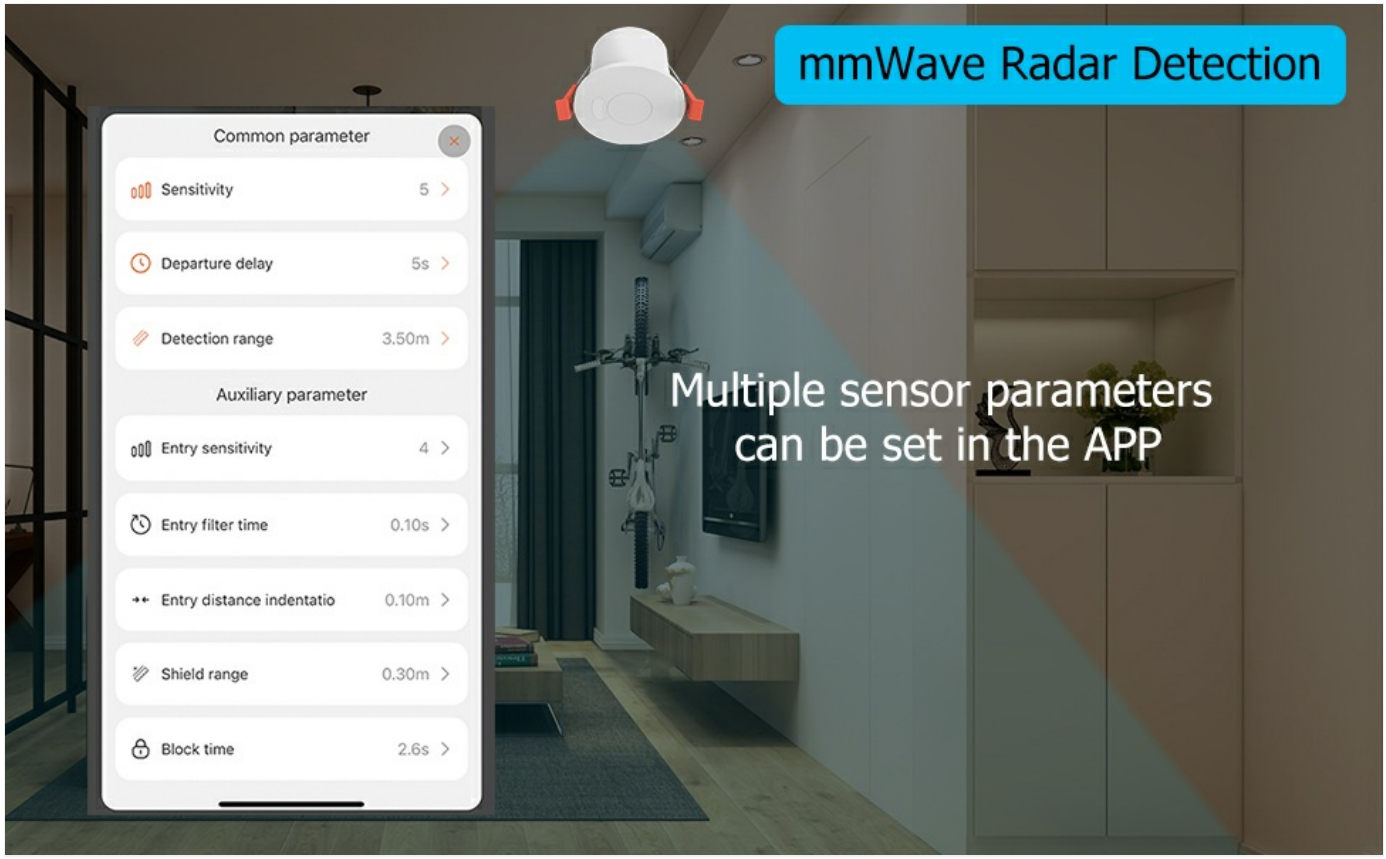


Figure 3: Examples of human presence detection scenarios, including sleeping, talking, lying down, and even subtle movements like blinking, demonstrating the sensor's accuracy.

5.2 App Settings and Parameter Configuration

The Tuya Smart Life app allows extensive customization of the sensor's behavior. Navigate to the sensor's device page in the app to access settings.

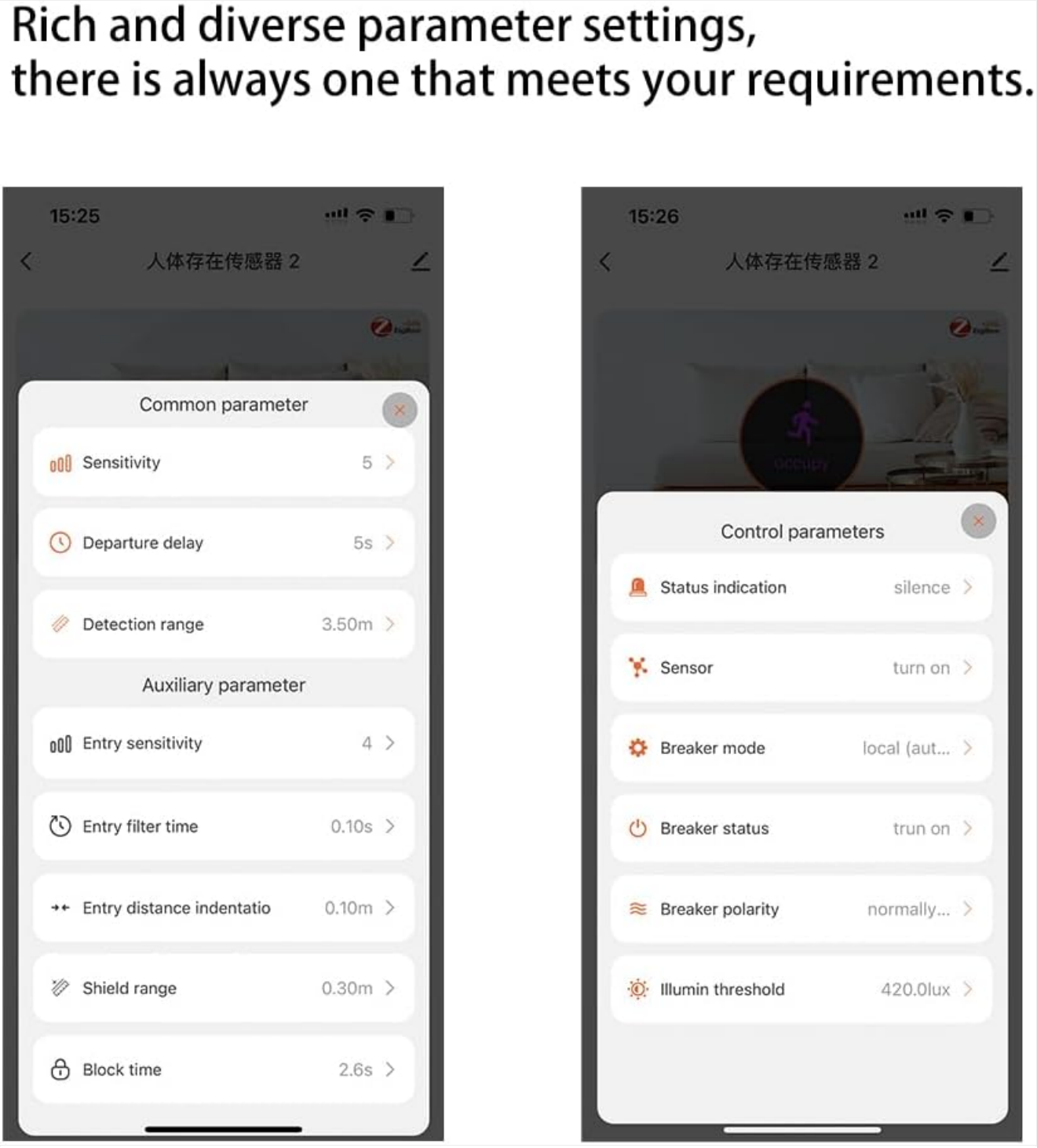


Figure 4: Screenshots from the Tuya Smart Life app displaying various common and control parameters that can be adjusted for the sensor, such as sensitivity, detection range, and relay modes.

Common Parameter Settings:

- **Sensitivity:** Adjusts the sensor's responsiveness to motion.
- **Departure Delay:** Sets the time before the sensor reports 'no presence' after detection ceases.
- **Detection Range:** Configures the maximum distance for detection. (Maximum range is 10 meters).
- **Entry Sensitivity:** Fine-tunes sensitivity for initial entry detection.
- **Entry Filter Time:** Sets a delay to filter out brief, insignificant entries.
- **Entry Distance Indentation:** Adjusts the effective detection boundary.
- **Shield Range:** Defines an area where detection is ignored.
- **Block Time:** Sets a period during which the sensor will not re-trigger after an event.

Control Parameter Settings:

- **Status Indication:** Controls the behavior of the indicator light.
- **Sensor:** Enables or disables the detection function.
- **Breaker Mode (Relay Mode):** Configures the 16A relay function.
- **Breaker Status:** Shows the current state of the relay.
- **Breaker Polarity:** Sets the relay's default state (normally open/closed).
- **Illumin Threshold:** Sets the ambient light level at which smart actions (e.g., turning on lights) are triggered.

5.3 16A Relay Function

The sensor includes a 16A relay, allowing it to directly control connected electrical loads, such as lights. Three relay modes can be configured in the 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 no presence is detected (after the departure delay), it will turn OFF.
- **Not Support (Disable Relay):** The relay function is disabled. The device acts solely as a presence sensor, sending detection data to the app without controlling a connected load.

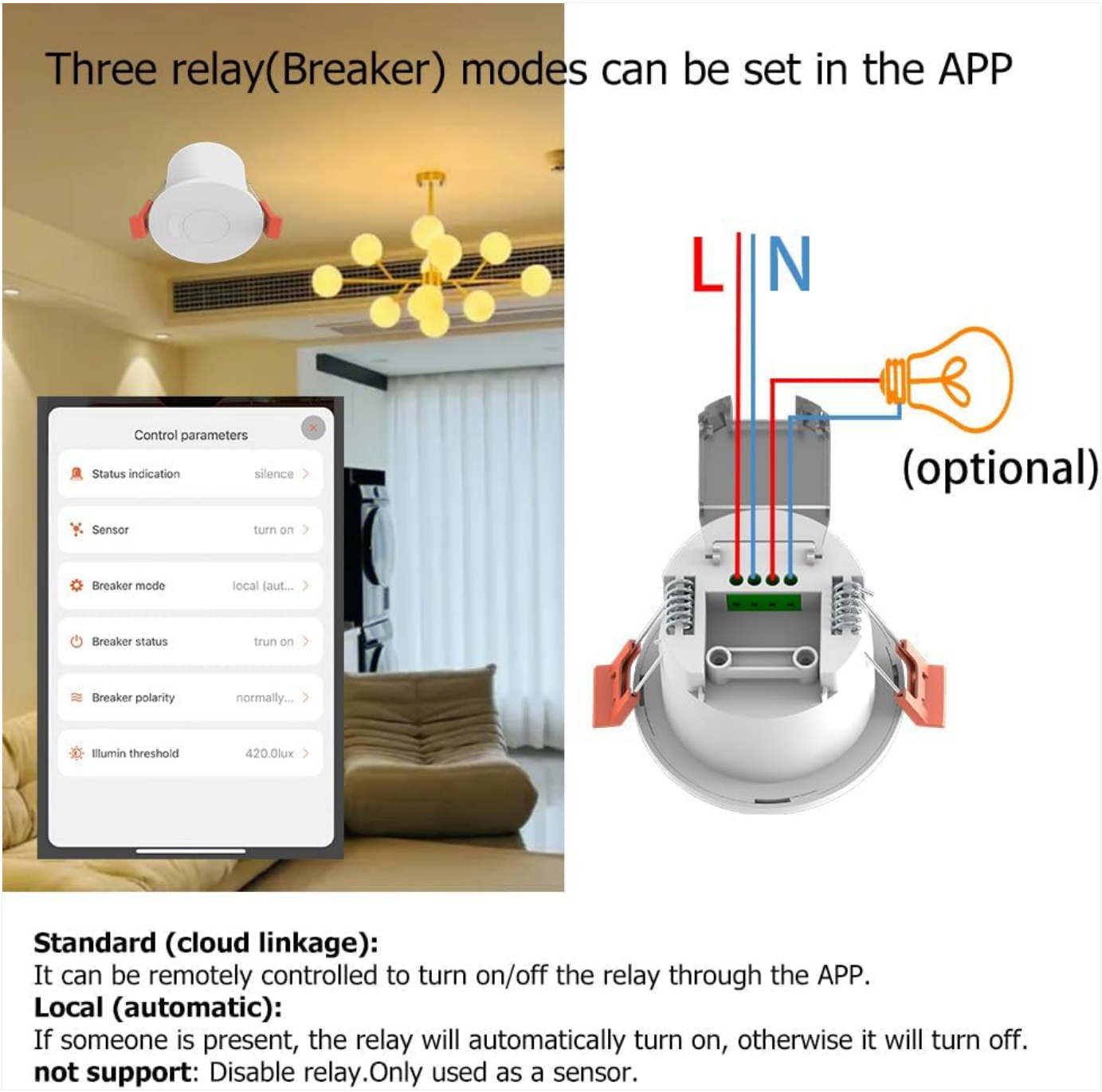


Figure 5: Explanation of the three relay modes (Standard, Local, Not Support) and their operational behavior, alongside a wiring diagram for connecting a light.

5.4 Smart Scene Linkage with Illuminance Detection

The integrated illuminance monitor allows the sensor to participate in smart home automation scenarios. You can set up rules in the Tuya Smart Life app to trigger actions based on ambient light levels and presence detection.

- **Automatic Lighting:** For example, if presence is detected and the illuminance level falls below a set threshold (e.g., 420 lux), the sensor can automatically turn on connected lights or trigger other smart lights in your home.
- **Energy Saving:** Lights can be configured to turn off when sufficient natural light is available, even if presence is detected.



Figure 6: The sensor's illumination detection function in a living space, demonstrating its ability to monitor ambient light for smart automation.

6. Maintenance

- **Cleaning:** Gently 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.
- **Connection Check:** If the sensor loses connection, verify your Wi-Fi network is operational and the sensor has power. Re-pairing may be necessary.

7. Troubleshooting

7.1 Common Issues and Solutions

- **Sensor Not Detecting Presence:**

- Check power supply to the sensor.
- Verify detection range and sensitivity settings in the app.
- Ensure no large obstructions are blocking the sensor's field of view.
- Confirm the sensor is not in 'Shield Range' or 'Block Time' mode.

- **Sensor Disconnects from Wi-Fi:**
  - Ensure your Wi-Fi router is working and the signal strength is adequate at the sensor's location.
  - Confirm your Wi-Fi network is 2.4 GHz.
  - Restart the sensor by cycling its power.
  - If issues persist, try re-pairing the sensor with the Tuya Smart Life app.
- **Relay Function Not Working:**
  - Check the wiring connections to the light/device.
  - Verify the 'Breaker Mode' setting in the app is set to 'Standard' or 'Local'.
  - Ensure the sensor is detecting presence if in 'Local' mode.
- **Illuminance Linkage Not Triggering:**
  - Check the 'Illumin Threshold' setting in the app.
  - Verify the smart scene rules configured in the Tuya Smart Life app are correct.
  - Ensure the sensor is detecting presence if it's part of the scene's conditions.

8. Specifications

Brand	WenzhiIoT
Model Number	MTG236-WF-RL-24G
Color	Ceiling
Power Source	Corded Electric (AC 85-265V)
Frequency	24 GHz (MmWave Radar)
Maximum Range	10 Meters
Mounting Type	Ceiling Mount
Item Dimensions (D x W x H)	3.94"D x 3.94"W x 1.57"H (approx. 100mm x 100mm x 40mm)
Upper Temperature Rating	50 Degrees Celsius
Smart Home Compatibility	Tuya Smart Life Compatible
Compatible Devices	Light, Smart Home Hubs
Battery Description	Battery not included (device is corded electric)

9. Warranty and Support

WenzhiIoT products are designed for reliability and performance. For warranty information, please refer to the documentation included with your purchase or contact WenzhiIoT customer support.

9.1 Customer Support

If you encounter any issues or have questions regarding your WenzhiIoT Smart Motion Sensor, please contact our customer

support team. You can typically find contact information on the WenzhiloT official website or through your purchase platform.

- **Online Support:** Visit the WenzhiloT Store on Amazon for product information and support resources.
- **Email Support:** Refer to your product packaging or the WenzhiloT website for the customer support email address.

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Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

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Details

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