

MORAYELEC ME201R

MORAYELEC ME201R Wireless Water Tank Level Sensor User Manual

Model: ME201R | Brand: MORAYELEC

1. INTRODUCTION

The MORAYELEC ME201R is an advanced wireless ultrasonic liquid level sensor designed for accurate and convenient monitoring of water tank levels. It integrates with the Tuya Smart Life APP, providing real-time data, temperature indication, and fuel display directly to your smartphone. With its IP65 waterproof rating and robust wireless communication, it offers a reliable solution for remote tank monitoring in various environments.

2. SAFETY INFORMATION

- Ensure the power adapter is connected to a 100-240V AC power source.
- Do not submerge the gateway unit in water. The sensor unit is IP65 rated for outdoor use, but proper installation is crucial to maintain its integrity.
- Avoid placing the sensor or gateway near strong electromagnetic interference sources.
- Do not attempt to disassemble or repair the device yourself. Contact qualified personnel for assistance.
- Keep out of reach of children.

3. PACKAGE CONTENTS

Verify that all items listed below are included in your package:

- ME201R Ultrasonic Liquid Level Sensor
- ME201R Tank Level Gateway (Display Unit)
- Power Adapter (100-240V AC Input, 5V DC Output)
- USB-C Cable (for Gateway power)

- Mounting Hardware (screws, gasket)
- User Manual



Figure 3.1: Contents of the ME201R package.

4. KEY FEATURES

- **Long Measuring Distance:** Capable of measuring liquid levels from 10cm to 4m (4 to 157 inches) from the sensor.
- **Wireless Connectivity:** Features RF433MHz communication between the sensor and gateway (up to 500m no obstacle) and Wi-Fi (2.4G) between the gateway and router (up to 50m no obstacle).
- **Remote Monitoring:** Check tank levels from your smartphone anytime, anywhere via the Tuya Smart Life APP.
- **Alerts and Notifications:** Receive message alerts for full or low liquid levels, with customizable alarm thresholds via the app.
- **Multi-Tank Monitoring:** One app can monitor up to 10 sensors, allowing for easy management of multiple tanks.
- **Durable Design:** IP65 waterproof rating ensures suitability for most weather conditions.
- **Wide Operating Temperature:** Functions reliably in temperatures ranging from -10°C to +70°C.

- **Easy Installation:** Designed for straightforward installation on top of the tank using a provided nut.

5. SPECIFICATIONS

Feature	Detail
Model Number	ME201R
Brand	MORAYELEC
Measuring Distance	10cm to 4m (4 to 157 inches)
Sensor Technology	Ultrasonic Sensor
Sensor Power Input	5V DC (via adapter)
Gateway Power Input	5V/1A (via USB-C)
RF Frequency (Sensor to Gateway)	433MHz (Max 500m no obstacle)
Wi-Fi Frequency (Gateway to Router)	2.4G (Max 50m no obstacle)
Waterproof Rating	IP65 (Sensor)
Operating Temperature	-10°C to +70°C
Control Method	App, Remote
Product Dimensions	6.93"L x 4.33"W x 2.87"H
Item Weight	11.2 ounces

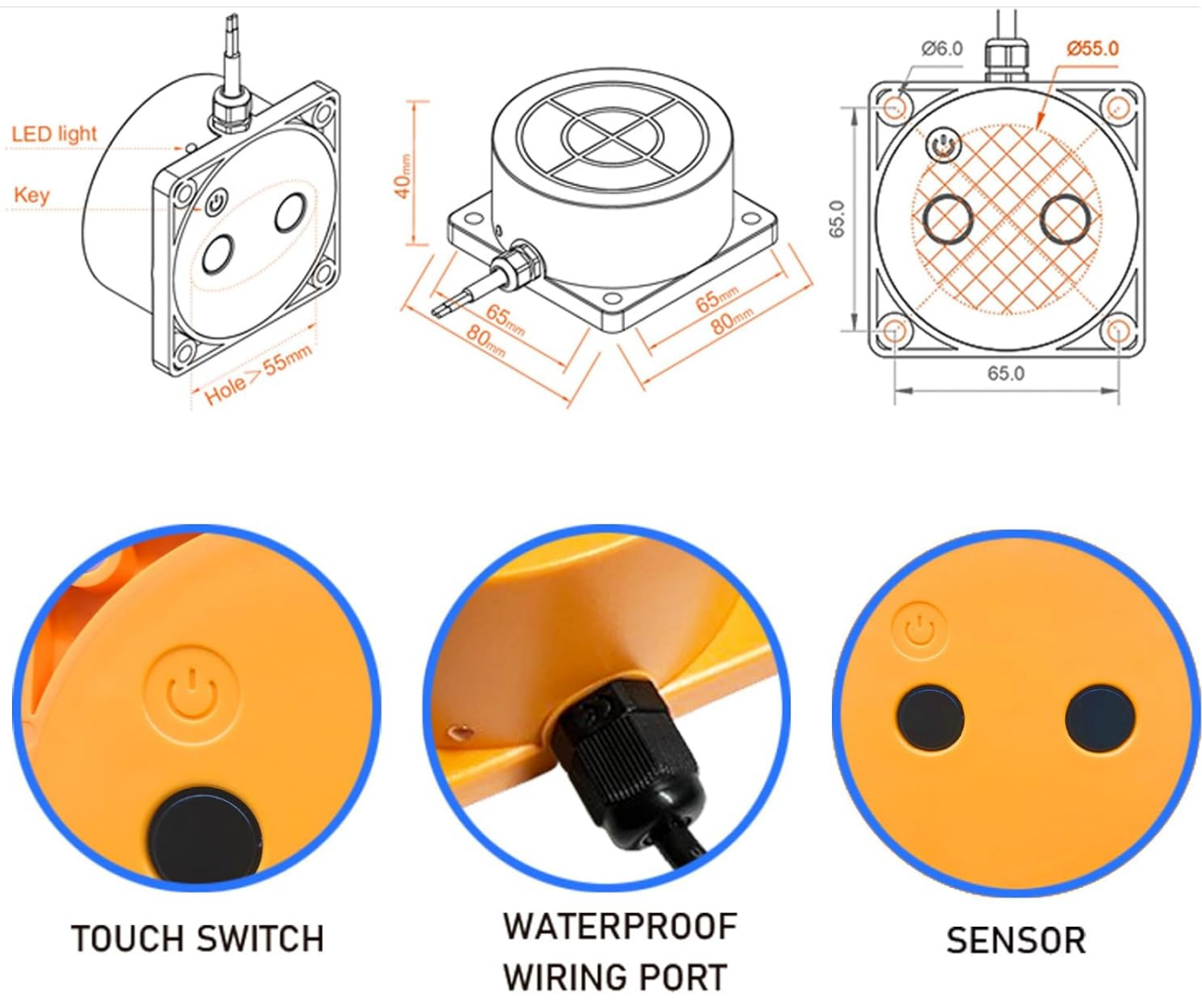


Figure 5.1: ME201R Sensor Dimensions and Components.

6. SETUP GUIDE

6.1 Sensor Installation

Proper installation of the ultrasonic sensor is critical for accurate readings. Follow these guidelines:

1. **Mounting Location:** Install the sensor on top of the tank. Ensure the mounting surface is flat and stable.
2. **Perpendicular Placement:** The sensor must be held perpendicular to the liquid surface for accurate measurement. Avoid angled installations.
3. **Avoid Water Inlet:** Install the sensor away from the water inlet to prevent pseudo-echoes caused by incoming water flow.
4. **Distance from Bulkhead:** The sensor installation cannot be too close to the tank's bulkhead or walls, as this can cause strong pseudo-echoes and inaccurate readings.
5. Use the provided nut and mounting hardware to secure the sensor firmly to the tank.

Installation Method

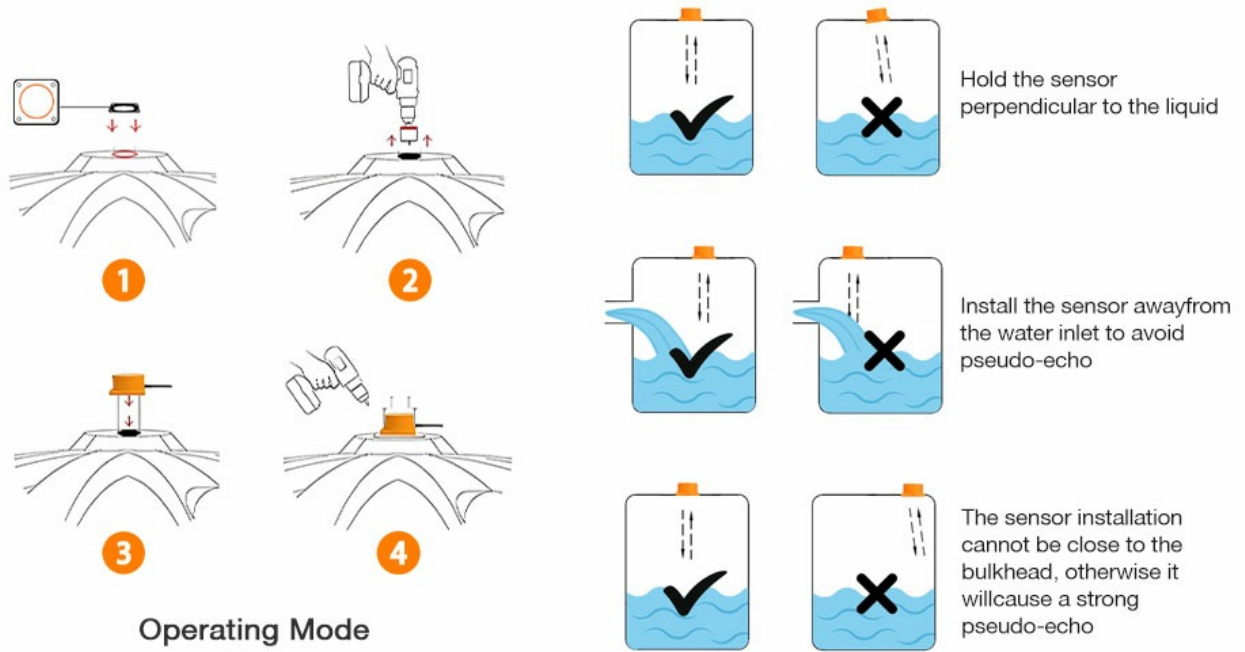


Figure 6.1: Sensor Installation Guidelines.



Figure 6.2: Examples of Sensor Installation on Various Tanks.

6.2 Powering On

1. Connect the sensor to its power adapter and plug it into a suitable power outlet.
2. Connect the gateway display unit using the provided USB-C cable and a USB power adapter (not supplied).
3. Once powered, the gateway will attempt to connect to the sensor via RF433MHz. The display will show readings if successful.

6.3 App Installation and Pairing

To enable remote monitoring and advanced features, install the Tuya Smart or Smart Life app on your smartphone and pair it with the gateway.

1. Download the **Tuya Smart** or **Smart Life** app from your device's app store (iOS App Store or Google Play Store).
2. Register or log in to your account.
3. On the app's home screen, tap "Add Device" or the "+" icon.
4. The app may automatically discover the device. If not, select "Liquid Level Monitor" from the sensor category

or search for it.

- Follow the on-screen prompts to connect the gateway to your 2.4GHz Wi-Fi network. Enter your Wi-Fi password when prompted.
- Once successfully paired, you can name the device and configure its parameters, such as "Installation Height" (depth to empty container bottom) and "Liquid Maximum Depth" (height to full liquid level).

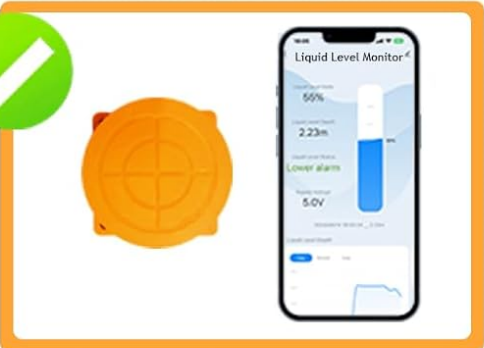
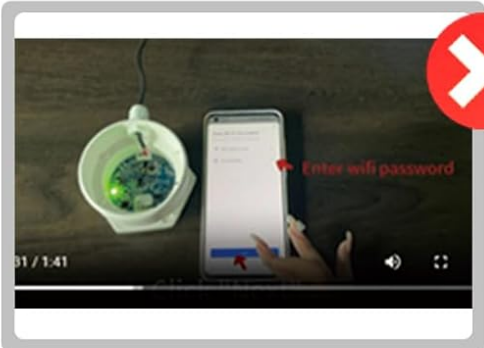
OURS		OTHERS	
			
TOUCH SWITCH NO NEED TO DISASSEMBLE, CONVENIENT SWITCH		ORIGINAL DISASSEMBLY SWITCH DISASSEMBLY IS TROUBLESOME AND PRONE TO WATER INGRESS	
			
MOBILE PHONE CONTROL WIFI ULTRASONIC COVERAGE, MOBILE REMOTE MONITORING		OLD STYLE CLICK BUTTON UNABLE TO DETECT WATER LEVEL, UNABLE TO REMOTELY CONTROL	
			
SMALL SIZE, ULTRASONIC TESTING THE MATERIAL IS LIGHTWEIGHT, DURABLE, LIGHTWEIGHT, AND EASY TO INSTALL		LARGE VOLUME AND WEIGHT EASY TO RUST, DIFFICULT TO INSTALL, LARGE VOLUME AND WEIGHT	

Figure 6.3: App Pairing Process.

7. OPERATING INSTRUCTIONS

7.1 Understanding the Display

The gateway display unit provides immediate information about your tank's status:

- Liquid Level Indicator:** A bar graph showing the percentage of liquid in the tank.

- **Digital Readout:** Displays the exact liquid level depth (in meters) and temperature (in Celsius).
- **Signal Indicators:** Lights indicating sensor connection, Wi-Fi status, and alarm status.
- **Battery Level:** Indicates the power status of the sensor.



Figure 7.1: Gateway Display and App Interface.

7.2 Remote Monitoring via App

The Tuya Smart Life app allows you to monitor your tank from anywhere:

- Open the app and select your ME201R device.
- View real-time liquid level ratio, depth, status (Normal, Full, Low), supply voltage, and historical data graphs (Day, Month, Year).

Sensor Status Interface

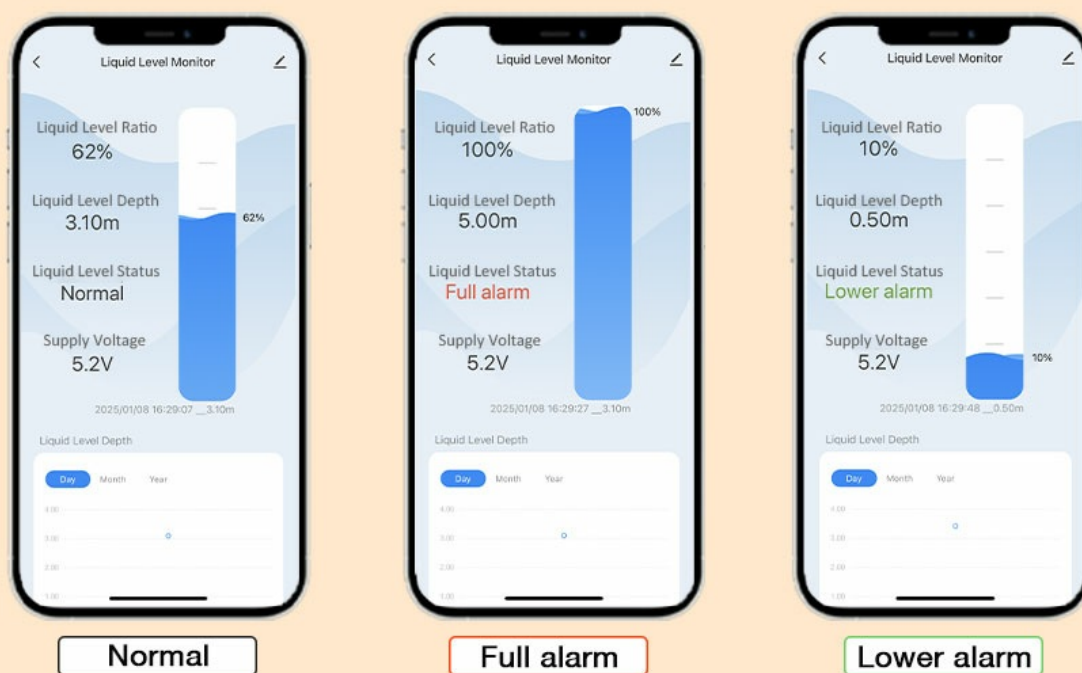


Figure 7.2: App Sensor Status Interface (Normal, Full Alarm, Low Alarm).

7.3 Alerts and Notifications

Configure alerts to be notified of critical tank levels:

- In the app settings for your device, set the desired "Max" percentage for a full alarm and "Min" percentage for a low alarm.
- When the liquid level reaches these thresholds, you will receive push notifications on your smartphone.
- The gateway display will also beep to indicate an alarm condition. Press the button on the gateway to silence the audible alarm.

7.4 Multi-Tank Monitoring

The Tuya Smart Life app supports monitoring multiple ME201R sensors:

- Repeat the "App Installation and Pairing" steps (Section 6.3) for each additional ME201R sensor and gateway unit.
- All connected devices will appear in your app, allowing you to easily switch between and monitor up to 10 tanks from a single interface.

8. MAINTENANCE

- **Cleaning:** Periodically clean the sensor surface to ensure accurate readings. Use a soft, damp cloth. Do not use abrasive cleaners or solvents.
- **Sensor Placement:** Regularly check the sensor's mounting to ensure it remains perpendicular to the liquid surface and is not obstructed.
- **Power Connections:** Ensure all power connections are secure and free from damage.
- **Firmware Updates:** Check the Tuya Smart Life app periodically for any available firmware updates for your device to ensure optimal performance and new features.

9. TROUBLESHOOTING

- **No Reading on Gateway/App:**

- Ensure both the sensor and gateway are powered on.
- Check the RF433MHz signal indicator on the gateway; if it's not lit, the sensor and gateway might be too far apart or have obstacles. Reduce distance or clear obstructions.
- Verify the sensor is correctly installed and not obstructed.

- **Inaccurate Readings:**

- Re-check sensor installation according to Section 6.1 (perpendicular, away from inlet, not near bulkhead).
- Ensure the sensor surface is clean and free from debris.
- Verify the "Installation Height" and "Liquid Maximum Depth" settings in the app are correct for your tank.

- **Gateway Not Connecting to Wi-Fi:**

- Ensure your Wi-Fi network is 2.4GHz. The device does not support 5GHz Wi-Fi.
- Check Wi-Fi signal strength at the gateway's location. Move the gateway closer to the router if necessary.
- Verify the Wi-Fi password entered in the app is correct.
- Restart your Wi-Fi router and the gateway unit.

- **No App Notifications:**

- Ensure notifications are enabled for the Tuya Smart Life app in your phone's system settings.
- Verify that the alarm thresholds (Max/Min) are correctly set in the app.
- Check if the gateway is connected to Wi-Fi and has internet access.

10. WARRANTY

MORAYELEC provides a **1-year warranty** for the ME201R Wireless Water Tank Level Sensor. This warranty covers defects in materials and workmanship under normal use. For warranty claims or service, please retain your proof of purchase and contact MORAYELEC customer support.

11. CUSTOMER SUPPORT

For technical assistance, troubleshooting, or any inquiries regarding your MORAYELEC ME201R, please refer to the contact information provided on the product packaging or the official MORAYELEC website. Our dedicated support team is available to assist you.

ASK A QUESTION ABOUT THIS MANUAL

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.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

Answered questions about this manual

Can the units be changed from metric to imperial (inches and Fahrenheit) on the MORAYELEC ME201R level sensor?

Based on the MORAYELEC ME201R manual, the gateway display unit defaults to showing the liquid level depth in meters and the temperature in Celsius. While the manual mentions that the sensor is capable of...

[Read full answer](#)