CALANDIS TS-FT002

CALANDIS® TS-FT002 Wireless Ultrasonic Tank Liquid Level Meter User Manual

Model: TS-FT002 | Brand: CALANDIS

1. Introduction

The CALANDIS TS-FT002 Wireless Ultrasonic Tank Liquid Level Meter is designed to monitor the water level and temperature of outdoor tanks from a remote location. The system consists of a transmitter unit, installed at the top of the water tank, and a receiver unit, which can be placed indoors up to 100 meters away (in free field conditions). This manual provides detailed instructions for the setup, operation, and maintenance of your device.

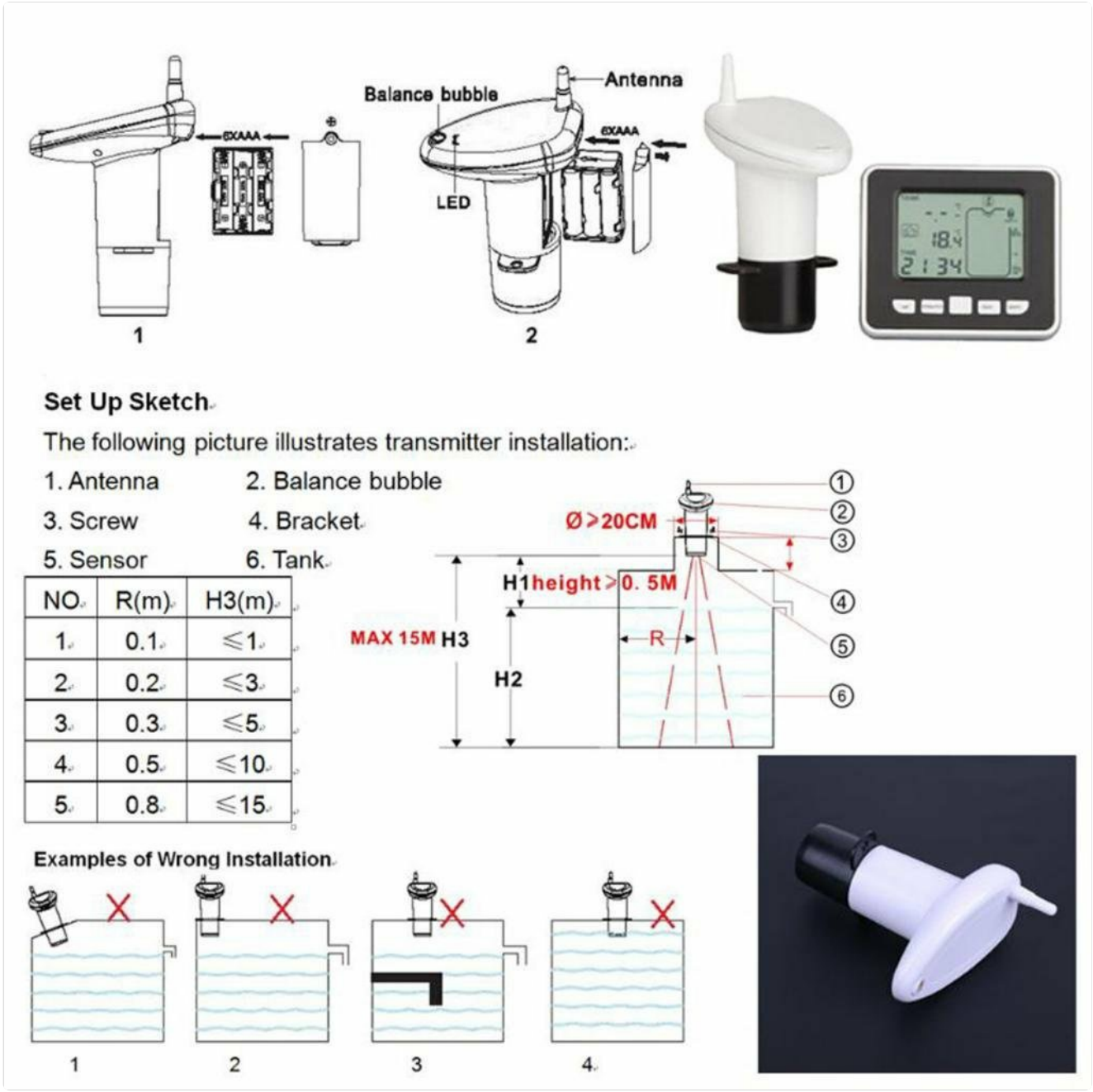


Image 1: CALANDIS TS-FT002 Wireless Ultrasonic Tank Liquid Level Meter (Receiver and Transmitter)

2. Key Features

- Wireless transmission range up to 100m (free field).
- Measures tank liquid level from 0.5m to 15m depth.
- Monitors both indoor room temperature and outdoor tank temperature.
- Water level displayed on a 10-element bar graph.
- Min/Max records for indoor and tank temperatures.
- Adjustable alarms for high/low water levels and tank empty alerts.
- Time display (12/24hr format) with alarm mode.
- Low battery indicator for both units.
- Receiver unit supports wall mount or free-standing placement.

3. Package Contents

Upon unboxing, please ensure all the following components are present:

- 1 x Wireless Ultrasonic Tank Liquid Level Meter Receiver Unit
- 1 x Wireless Ultrasonic Tank Liquid Level Meter Transmitter Unit

Note: Batteries are not included and must be purchased separately.

4. Setup

4.1. Transmitter Installation

The transmitter unit should be installed at the top of your water tank. Ensure the tank opening is at least 20cm in diameter for optimal performance. The ultrasonic sensor requires a minimum air gap of 0.5m from the water surface when the tank is full.



Image 2: Transmitter Installation Sketch and Examples of Wrong Installation

Refer to the diagram (Image 2) for proper installation. The table below provides guidance on the minimum distance (R) from the tank wall and the maximum height (H3) for accurate readings:

NO.	R(m)	H3(m)
1.	0.1	≤1.
2.	0.2	≤3.
3.	0.3	≤5.
4.	0.5	≤10.
5.	0.8	≤15.

Examples of Wrong Installation: Avoid installations where the sensor is obstructed, too close to the tank wall, or submerged, as shown in the 'Examples of Wrong Installation' section of Image 2.

4.2. Receiver Setup

The receiver unit requires 2 x AA 1.5V batteries (not included). Open the battery compartment on the back of the unit and insert the batteries, observing the correct polarity.



Image 3: Receiver Unit Battery Compartment

Once batteries are installed, you can hang the receiver unit on a wall using the integrated hooks or pull out the stand on the back to place it on a flat surface such as a kitchen benchtop, table, or desk.



Image 4: Receiver Unit with Stand Extended

4.3. Powering the Device

The receiver unit requires 2 x AA 1.5V batteries. The outdoor transmitter unit requires 6 x AAA 1.5V batteries. Ensure all batteries are inserted correctly according to polarity markings. The low battery indicator will alert you when batteries need replacement.

5. Operating Instructions

5.1. Understanding the Display

The receiver unit features an LCD display that provides various information. Refer to the diagram below for a detailed explanation of each display element:



Image 5: LCD Display for Description

1. **Value display area:** Shows current readings.
2. **Tank temperature and water level icon:** Indicates the displayed value is for the tank.
3. **Water level unit:** Displays units for water level (e.g., meters, feet).
4. **Tank temperature unit (°C/°F):** Displays units for tank temperature.
5. **Outdoor low battery indicator:** Alerts when transmitter batteries are low.
6. **Alarm activation icon:** Indicates an active alarm.
7. **Min. and max. indicator icon:** Shows if min/max records are being viewed.
8. **Empty alert icon:** Indicates the tank is empty.
9. **RF signal indicator:** Shows wireless signal strength.
10. **Tank level high and low alarm indicator:** Alerts for high or low water levels.
11. **Water tank depth icon:** Represents the water level in the tank.
12. **Time alarm icon:** Indicates an active time alarm.
13. **Time and alarm value area:** Displays current time or alarm settings.

14. **Indoor temperature value display area:** Shows current indoor temperature.
15. **Indoor temperature unit:** Displays units for indoor temperature.

5.2. Monitoring Water Level and Temperature

The receiver unit automatically updates the tank level every 30 seconds or 3 minutes, depending on the setting. The water level is represented by a 10-element bar graph, providing a quick visual reference. Both indoor and tank temperatures are displayed in Celsius or Fahrenheit, selectable via settings.

5.3. Setting Alarms

The device allows you to set alarms for specific water levels (high/low) and an empty tank alert. Consult the receiver unit's buttons (e.g., 'alarm' button) and on-screen prompts to configure these alerts. When an alarm condition is met, the corresponding icon will activate on the display, and an audible alert may sound.

5.4. Time and Min/Max Records

The receiver displays the current time in 12-hour or 24-hour format. A time alarm mode is also available. The unit stores minimum and maximum records for both indoor and tank temperatures, which can be reviewed using the appropriate buttons (e.g., 'max/min' button).

6. Maintenance

- **Cleaning:** Wipe the receiver and transmitter units with a soft, damp cloth. Do not use abrasive cleaners or immerse the units in water.
- **Battery Replacement:** Replace batteries in both the receiver (2 x AA) and transmitter (6 x AAA) units when the low battery indicator appears on the display. Ensure correct polarity during replacement.
- **Environmental Conditions:** While the transmitter is designed for outdoor use, protect it from extreme weather conditions if possible to prolong its lifespan.

7. Troubleshooting

Problem	Possible Cause	Solution
No display on receiver	Dead or incorrectly inserted batteries.	Check battery polarity; replace batteries.
No water level reading	Transmitter batteries low/dead; transmitter out of range; obstruction in tank; incorrect installation.	Replace transmitter batteries; move receiver closer; ensure clear path for ultrasonic waves; verify installation per Section 4.1.
Inaccurate readings	Incorrect tank depth setting; sensor obstruction; extreme temperature fluctuations.	Verify tank depth setting; clear any debris near sensor; allow unit to stabilize in new temperatures.
Weak or no RF signal	Distance too far; interference from other devices/structures.	Reduce distance between units; reposition units to avoid obstacles (e.g., thick walls, metal structures).

8. Specifications

Feature	Specification
Model Number	TS-FT002 (CLTIN60010005)
Transmission Range	Up to 100m (free field)
Tank Level/Depth Range	0.5m to 15m
Air Gap (Min.)	0.5m
Water Level Resolution	0.01m
Water Level Accuracy	+/-0.03m
Indoor Temperature Range	0°C to 60°C (32°F to 140°F)
Outdoor Temperature Range	-40°C to 60°C (-40°F to 140°F)
Temperature Accuracy	1°C
Receiver Power	2 x AA 1.5V batteries (not included)
Transmitter Power	6 x AAA 1.5V batteries (not included)
Receiver Dimensions (Approx.)	10.5 x 9.3 x 2.5 cm (4.13 x 3.66 x 0.98 inches)
Transmitter Dimensions (Approx.)	15.5 x 6.5 x 9.5 cm (0.98 x 2.56 x 3.74 inches)
Material	ABS PVC
Mounting Type	Wall Mount, Free Standing
Sensor Technology	Ultrasonic Sensor
Control Method	Touch

9. Warranty Information

This product is covered by a standard manufacturer's warranty against defects in materials and workmanship. Please retain your purchase receipt as proof of purchase. For specific warranty terms and conditions, refer to the documentation provided at the time of purchase or contact customer support.

10. Customer Support

For technical assistance, troubleshooting, or warranty inquiries, please contact CALANDIS customer support:

- **Email:** elyssiondesigns@creationist.in
- **Manufacturer:** Calandis
- **Country of Origin:** Hong Kong

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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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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.

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