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› BENEXMART Tuya Zigbee Smart Ultrasonic Water Meter User Manual (Model 214C)

BENEXMART 214C

BENEXMART Tuya Zigbee Smart Ultrasonic Water Meter

MODEL: 214C

User Manual

1. Introduction

This manual provides instructions for the installation, setup, operation, and maintenance of your BENEXMART Tuya Zigbee Smart Ultrasonic Water Meter. This device is designed for precise measurement of cold water consumption, offering smart features like remote control and data monitoring via the Tuya app. It integrates with the Tuya Zigbee ecosystem for enhanced home automation.



Image: Front view of the BENEXMART Tuya Zigbee Smart Ultrasonic Water Meter, displaying the digital screen and product information.

2. Product Features

- **Precise Water Measurement:** Accurately measures water consumption, calculates water bills, and monitors pipe pressure. Data visualization simplifies water usage tracking and network quality assessment.
- **Configurable Data Upload:** The meter automatically uploads data to the Tuya app every 12 hours by default. This interval can be customized within the app to 1, 2, 4, 6, 8, 12, or 24 hours after connecting to a Tuya Gateway.
- **Comprehensive Data Display:** The Tuya Cloud Platform processes and stores water consumption data. Users can access hourly consumption details for the past 7 days and daily consumption for the past year via the app dashboard or Paas system.
- **Remote Valve Control:** Users can remotely control the meter's integrated valve through the app or Paas system. This feature is particularly useful for devices installed in outdoor or remote locations, allowing convenient operation from home.
- **Valve Alarm System:** In case of detected abnormalities, the water meter actively reports alarm information to

the Tuya app. The app then pushes notifications to the user, prompting timely action. Certain abnormal alarms also support configurable automatic valve actions.

3. Package Contents

Verify that all items are present in the package:

- 1x BENEXMART Tuya Zigbee Smart Ultrasonic Water Meter (Model 214C)
- 2x Brass Connectors (matching selected pipe size)
- 2x Sealing O-rings



Image: The smart water meter along with its brass connectors and sealing rings, as typically included in the package.

4. Installation

The BENEXMART Smart Ultrasonic Water Meter is designed for installation in water supply lines. Ensure the correct meter size (DN15, DN20, or DN25) is selected to match your existing piping system. Professional installation by a qualified plumber is highly recommended to ensure proper sealing, correct orientation, and optimal functionality.

- **Pipe Compatibility:** The meter is available in DN15 (1/2"), DN20 (3/4"), and DN25 (1") sizes. Select the appropriate variant for your installation.
- **Orientation:** Install the meter according to the flow direction arrow indicated on the device body.
- **Sealing:** Use the provided O-rings and ensure all connections are watertight to prevent leaks.
- **Location:** Install in a location protected from extreme weather conditions and direct sunlight, yet accessible for maintenance.

Product Detail

Zigbee Ultrasonic Water Meter With Valve Control
is available in DN15 , DN20 and DN25

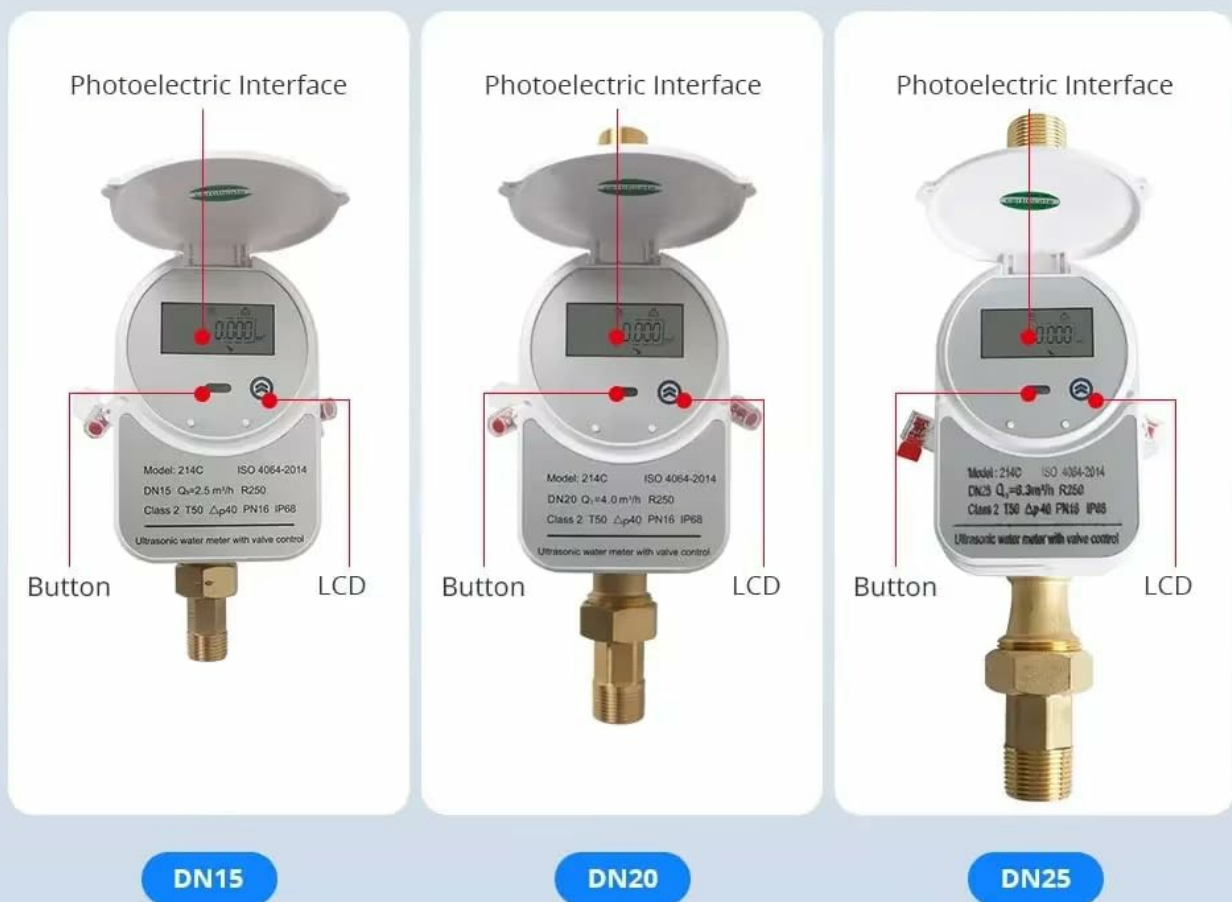


Image: Product detail illustrating the DN15, DN20, and DN25 variants of the water meter, showing their physical differences and common components like the LCD and button.

5. Setup and App Connection

This smart water meter operates within the Tuya Zigbee ecosystem and requires a Tuya Zigbee Hub (not included) to connect to the Tuya Smart application.

1. **Install Tuya Zigbee Hub:** Ensure your Tuya Zigbee Hub is properly installed and connected to your home network as per its own instruction manual.
2. **Open Tuya App:** Launch the Tuya Smart or Smart Life application on your smartphone.

3. **Add Device:** In the app, navigate to the 'Add Device' section. Select 'Gateway' or 'Zigbee Gateway' and follow the prompts to add your Tuya Zigbee Hub if it's not already added.
4. **Add Water Meter:** Once the hub is online, select the hub in the app, then choose 'Add sub-device' or 'Add device'. The app will search for nearby Zigbee devices.
5. **Pairing Mode:** Refer to the water meter's specific pairing instructions (often involves pressing a button on the meter for a few seconds) to put it into pairing mode.
6. **Confirm Connection:** Once detected, confirm the addition of the water meter in the app. You can then rename the device and assign it to a room.



Image: Visual representation of the Zigbee signal connection between the water meter and a Tuya Zigbee Hub, emphasizing the need for the hub.

6. Operation

The BENEXMART Smart Ultrasonic Water Meter provides comprehensive data monitoring and remote control capabilities through the Tuya app.

6.1. Data Monitoring

After successful setup, the water meter will begin measuring and uploading data to the Tuya app. You can view various metrics:

- **Total Water Consumption (m³):** Overall water usage.
- **Water Use This Month (m³):** Monthly consumption summary.
- **Daily/Monthly/Total Water Consumption:** Detailed historical data.
- **Instantaneous Flow (m³/h):** Real-time water flow rate.
- **Voltage (V) & Temperature (°C):** Operational parameters.

The app allows you to view hourly consumption for the past 7 days and daily consumption for the past year, providing a clear overview of your water usage patterns.

Water Quantity Measurement

You can view water consumption, water charges, pipeline pressure and other data in the Tuya APP

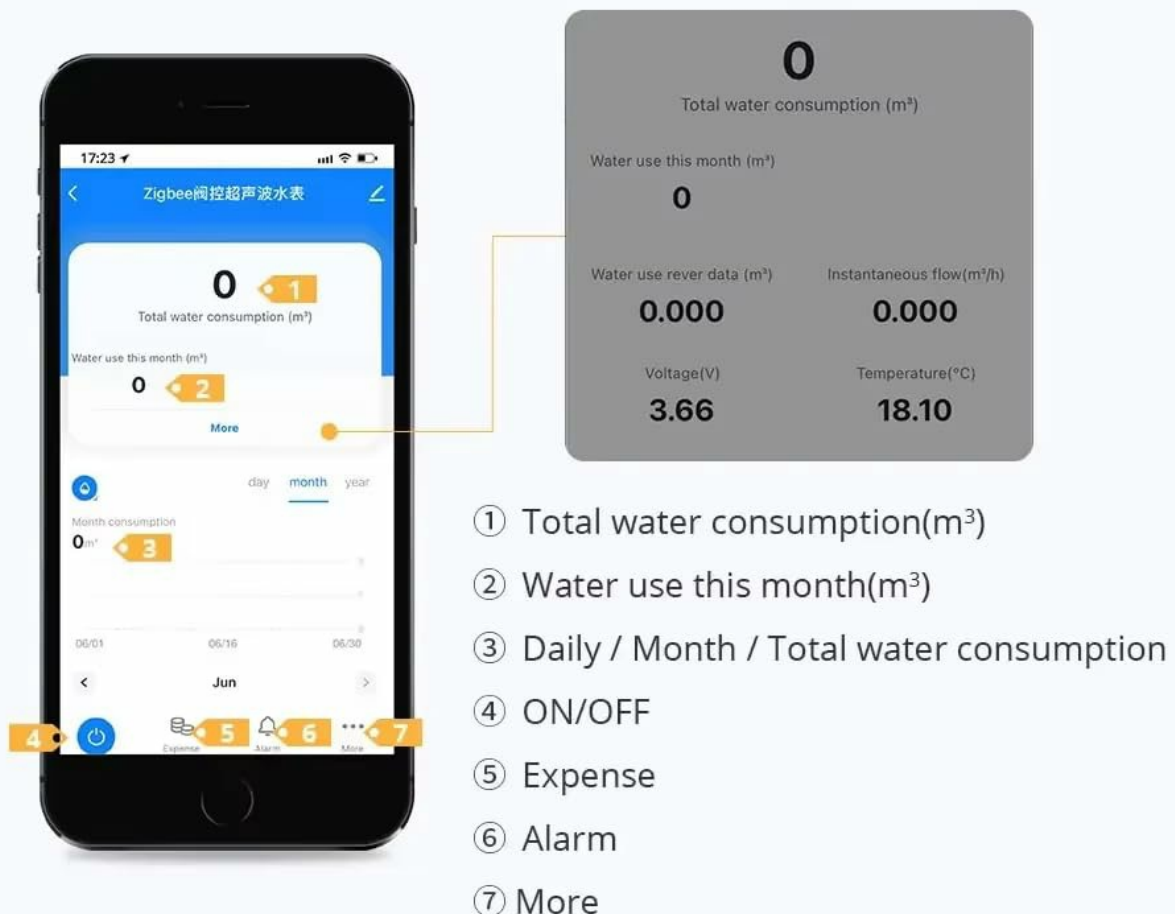


Image: Tuya app interface displaying various water consumption metrics and device status.

6.2. Remote Valve Control

The integrated valve can be controlled remotely via the Tuya app or Paas system. This allows you to open or close the water supply connected to the meter from anywhere, providing convenience and control, especially for installations in less accessible areas.

6.3. LCD Display Icons

The meter's LCD panel displays various icons indicating its status and measurement data:

LCD Icon	Meaning
	Normal water flow
	Valve open
	Pipe burst
	Reverse water flow
	Leakage
	Reserved position
	Alarm warning
TEST	Test Mode
	Balance checking
m³/h	Cubic meter per hour
	Cumulative working hours
°C	Water temperature
	Low battery
	Charging (prepaid mode)
	Valve close
	Full screen

Data Display

Operation on the panel of the ultrasonic water meter allows you to check the measurement data



LCD Icons	Meaning
	Normal water flow
	Valve open
	Pipe burst
	Reverse water flow
	Leakage
	Reserved position
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TEST	Test Mode
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	Valve close
	Full screen

Image: The water meter's LCD display, with a corresponding table explaining the meaning of each icon.

7. Maintenance

The BENEXMART Smart Ultrasonic Water Meter is designed for minimal maintenance. Follow these general guidelines:

- **Regular Inspection:** Periodically check the meter and its connections for any visible signs of damage, leaks, or corrosion.
- **Cleaning:** Keep the exterior of the meter clean and free from dust or debris. Use a soft, damp cloth for cleaning; do not use harsh chemicals or abrasive materials.
- **Battery:** The meter is typically powered by an internal battery. If a low battery indicator appears on the LCD or in the app, consult the manufacturer for battery replacement options. Do not attempt to replace the battery yourself unless explicitly instructed.
- **No User-Serviceable Parts:** Do not attempt to open or repair the meter yourself. Unauthorized tampering may void the warranty and could lead to malfunction or damage.

8. Troubleshooting

If you encounter issues with your BENEXMART Smart Ultrasonic Water Meter, consider the following:

- **No Data in App:**

- Ensure the Tuya Zigbee Hub is online and properly connected to your network.
- Verify the water meter is successfully paired with the Zigbee Hub in the Tuya app.
- Check the data upload interval setting in the app. Data is not real-time by default.
- Confirm the meter has power (check for LCD display activity).

- **Valve Not Responding:**

- Check the meter's battery status in the app. Low battery may affect valve operation.
- Ensure the Zigbee connection between the meter and hub is stable.
- Verify your internet connection for remote control functionality.

- **Alarm Notifications:**

- If the app receives an alarm (e.g., pipe burst, leakage, reverse flow), investigate the cause immediately.
- Some alarms may trigger automatic valve closure; check the physical valve position.

- **Physical Leaks:** If you observe any physical water leaks around the meter, immediately shut off the main water supply and contact a qualified plumber for inspection and repair.

For persistent issues, contact BENEXMART customer support or your retailer.

9. Specifications

Feature	Specification
Model	214C
Measurement Type	Ultrasonic Cold Water Meter
Connectivity	Tuya Zigbee (requires Zigbee Hub)
Valve Function	Integrated, Remote Control
Supported Pipe Sizes	DN15 (1/2"), DN20 (3/4"), DN25 (1")
ISO Standard	ISO 4064-2014
Accuracy Class	Class 2
Temperature Class	T50
Pressure Class	PN16
Protection Class	IP68
Manufacturer	BENEXMART

10. Safety Information

- Read all instructions carefully before installation and use.

- Installation should be performed by qualified personnel in accordance with local plumbing and electrical codes.
- Do not expose the device to extreme temperatures, direct flame, or corrosive substances.
- Ensure the water supply is turned off before attempting any installation or maintenance.
- Keep the device out of reach of children.
- Do not attempt to modify or disassemble the meter. This may cause damage, void the warranty, and pose safety risks.

11. Warranty and Support

For detailed warranty information, technical support, and customer service, please refer to the official BENEXMART website or contact your authorized retailer. Keep your purchase receipt as proof of purchase for warranty claims.