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Blindsmart 214C

Blindsmart Zigbee Smart Water Meter with Shutoff Valve & LCD Display

Model: 214C (1/2 inch, DN15)
Brand: Blindsmart

1. Introduction

This manual provides essential information for the installation, operation, and maintenance of your Blindsmart Zigbee Smart Water Meter with Shutoff Valve and LCD Display. This device is designed to monitor water consumption, flow rate, and pipe temperature, offering remote control capabilities and leak detection through a connected Zigbee hub.

Please read this manual thoroughly before installation and use to ensure proper function and safety.

2. Product Overview

Key Features:

- **All-in-One Smart Water Monitor:** Combines precise Class 2 accuracy flow measurement with a built-in remote control valve.
- **LCD Screen Display:** Monitor total consumption, flow rate, and pipe temperature directly on the device.
- **Battery-Powered:** Features a large 9000mAh built-in lithium battery, eliminating the need for external power outlets.
- **Flexible Smart Home Integration:** Seamlessly connects to Tuya Zigbee Hub for full app control and integrates with Home Assistant via ZHA (add-on required).
- **Robust Design:** IP68 waterproof rating for harsh outdoor or wet indoor environments.
- **Proactive Alerts:** Set up alerts for abnormal flow to prevent water leaks and waste.
- **Detailed Data Tracking:** Tuya App stores consumption history (hourly for 7 days, daily for a year).

What's in the Box:



Image: The box contents include the main water meter unit, two adaptors, and two seal rings.

- Smart Water Meter Unit (Model 214C)
- Adaptors (x2)
- Seal Rings (x2)

3. Safety Information

- Ensure all water connections are properly sealed to prevent leaks.
- Turn off the main water supply before beginning installation.
- Professional installation is recommended for plumbing work.
- Do not expose the device to extreme temperatures outside its operating range.
- Keep the device away from direct sunlight for prolonged periods to prevent LCD damage.
- Handle the device carefully as it is a precision instrument.

4. Setup

4.1 Installation Guidelines

This ultrasonic water meter is a precision instrument. Please handle it carefully during installation.

1. Make sure the arrow on the meter points in the same direction as the water flow.
2. Leave enough space around it for future maintenance.
3. For accurate readings, ensure there are straight sections of pipe before and after the meter: at least 10 times the pipe diameter before the meter, and at least 5 times the pipe diameter after the meter.

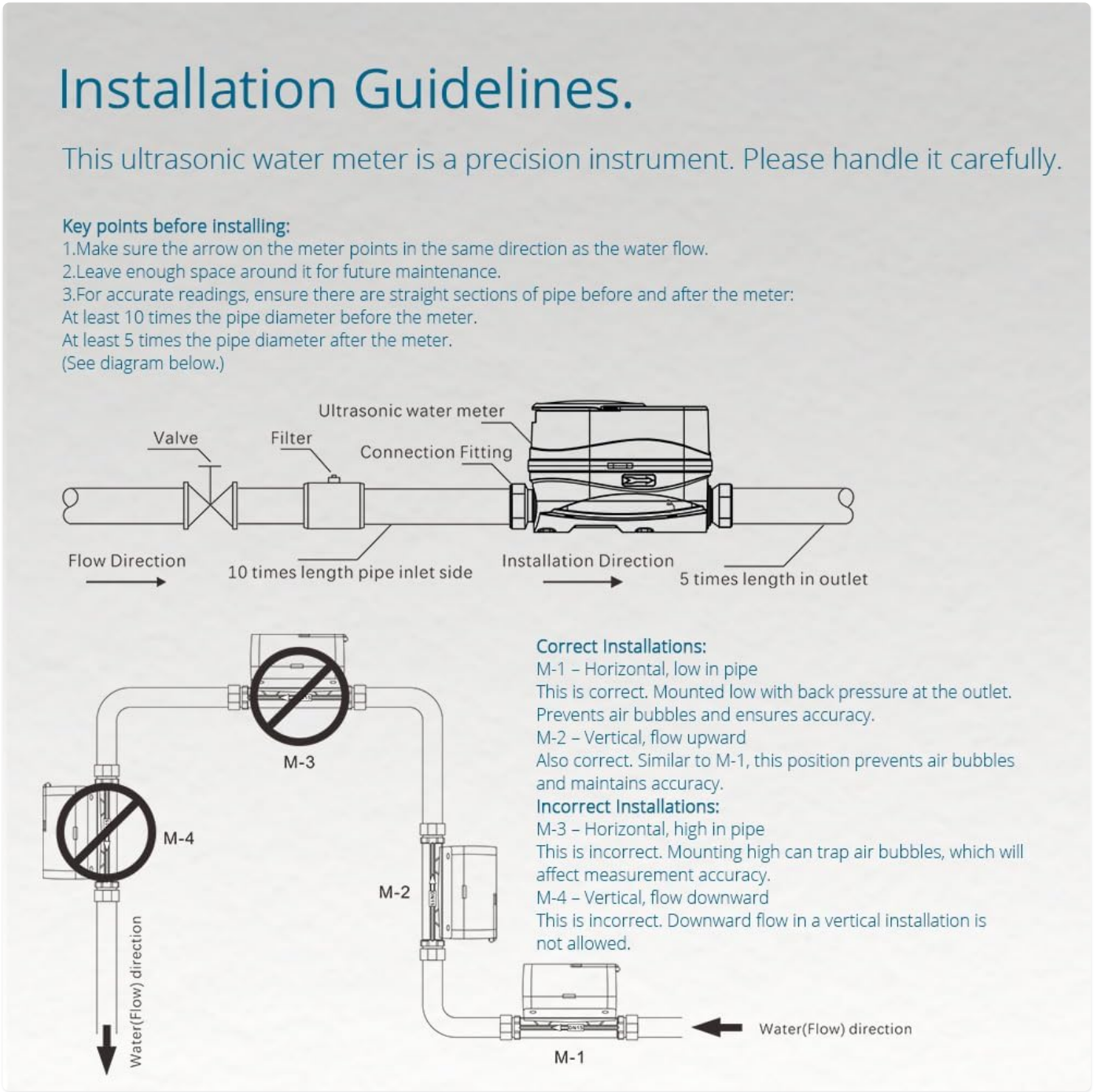


Image: Installation diagram illustrating flow direction, required pipe lengths, and acceptable/unacceptable mounting positions (horizontal low in pipe, vertical flow upward are correct; horizontal high in pipe, vertical flow downward are incorrect).

Correct Installations:

- **M-1 - Horizontal, low in pipe:** This is correct. Mounted low with back pressure at the outlet. Prevents air bubbles and ensures accuracy.

- **M-2 - Vertical, flow upward:** Also correct. Similar to M-1, this position prevents air bubbles and maintains accuracy.

Incorrect Installations:

- **M-3 - Horizontal, high in pipe:** This is incorrect. Mounting high can trap air bubbles, which will affect measurement accuracy.
- **M-4 - Vertical, flow downward:** This is incorrect. Downward flow in a vertical installation is not allowed.



Image: The smart water meter installed in a main water line, highlighting that it requires a Tuya Zigbee Hub and is battery-powered.

4.2 Connecting to a Zigbee Hub

The Blindsmart Smart Water Meter requires a Tuya Zigbee Hub to function with the Tuya Smart App. For Home Assistant integration, an additional add-on is necessary.

- **For Tuya Smart App:** Follow the instructions provided with your Tuya Zigbee Hub to add new Zigbee devices. The water meter should be discoverable once powered on.
- **For Home Assistant (via ZHA):** This integration requires an add-on. Please contact Blindsmart customer service to

obtain the necessary add-on and detailed instructions for Home Assistant integration.

5. Operating Instructions

5.1 LCD Display Functions

The integrated LCD screen provides real-time data directly on the device. Information displayed typically includes:

- Total water consumption (m³)
- Instantaneous flow rate (m³/h)
- Pipe temperature (°C)
- Battery level indicator

5.2 Tuya App Control

Once connected to your Tuya Zigbee Hub, the Tuya Smart App provides comprehensive control and monitoring features.

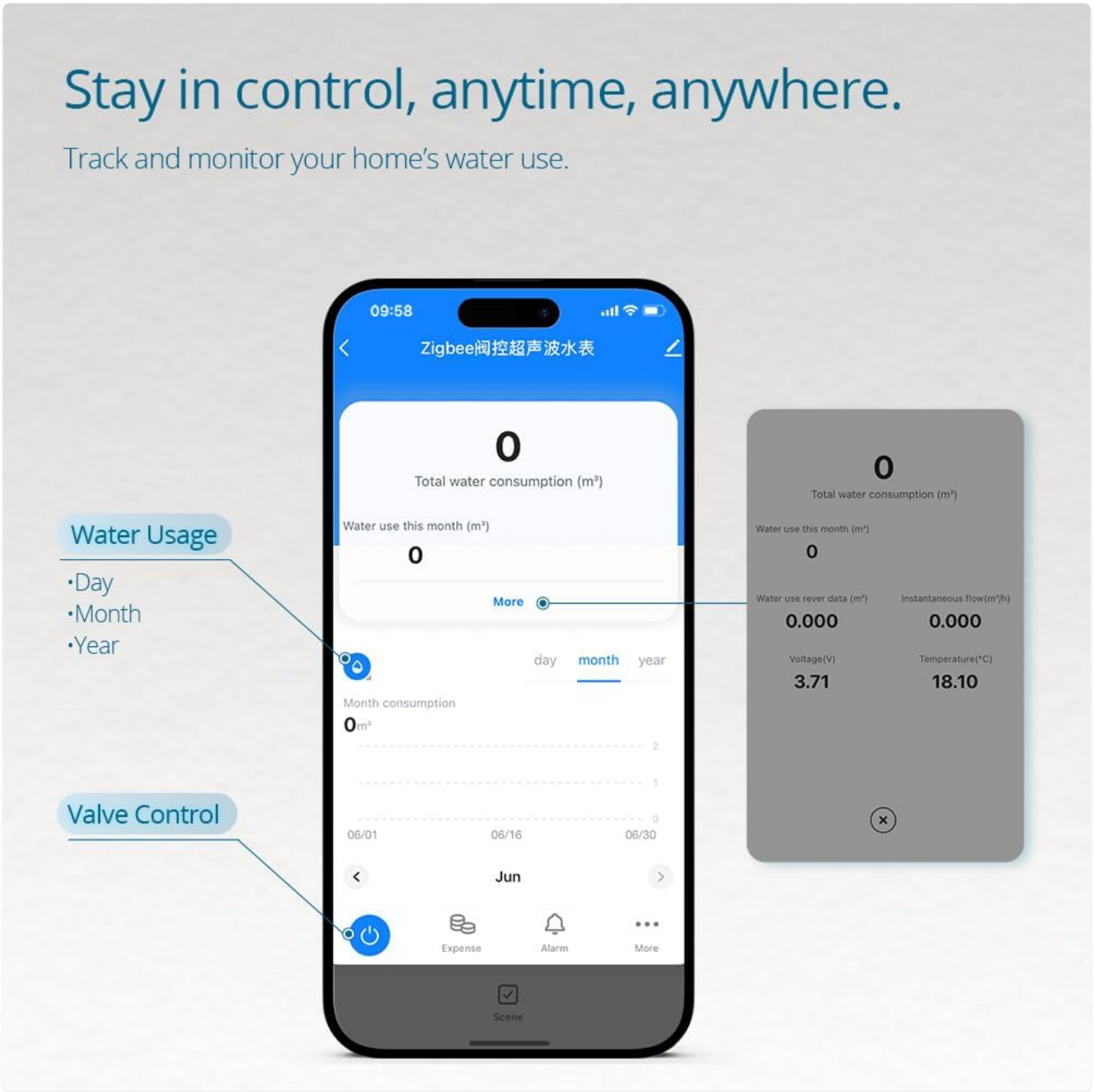


Image: The Tuya Smart App interface displaying total water consumption, daily/monthly/yearly usage, instantaneous flow, voltage, temperature, and a valve control button.

- **Remote Monitoring:** View total water consumption, current flow rate, and pipe temperature from anywhere.
- **Valve Control:** Remotely open or close the integrated shutoff valve.
- **Data History:** Access detailed consumption history, including hourly data for 7 days and daily data for a year.
- **Custom Data Upload Intervals:** Adjust how frequently data is uploaded to the app (1-24 hours).

5.3 Alerts and Notifications

Configure smart threshold alarms within the Tuya App to receive notifications for abnormal water flow, helping to prevent leaks and waste.

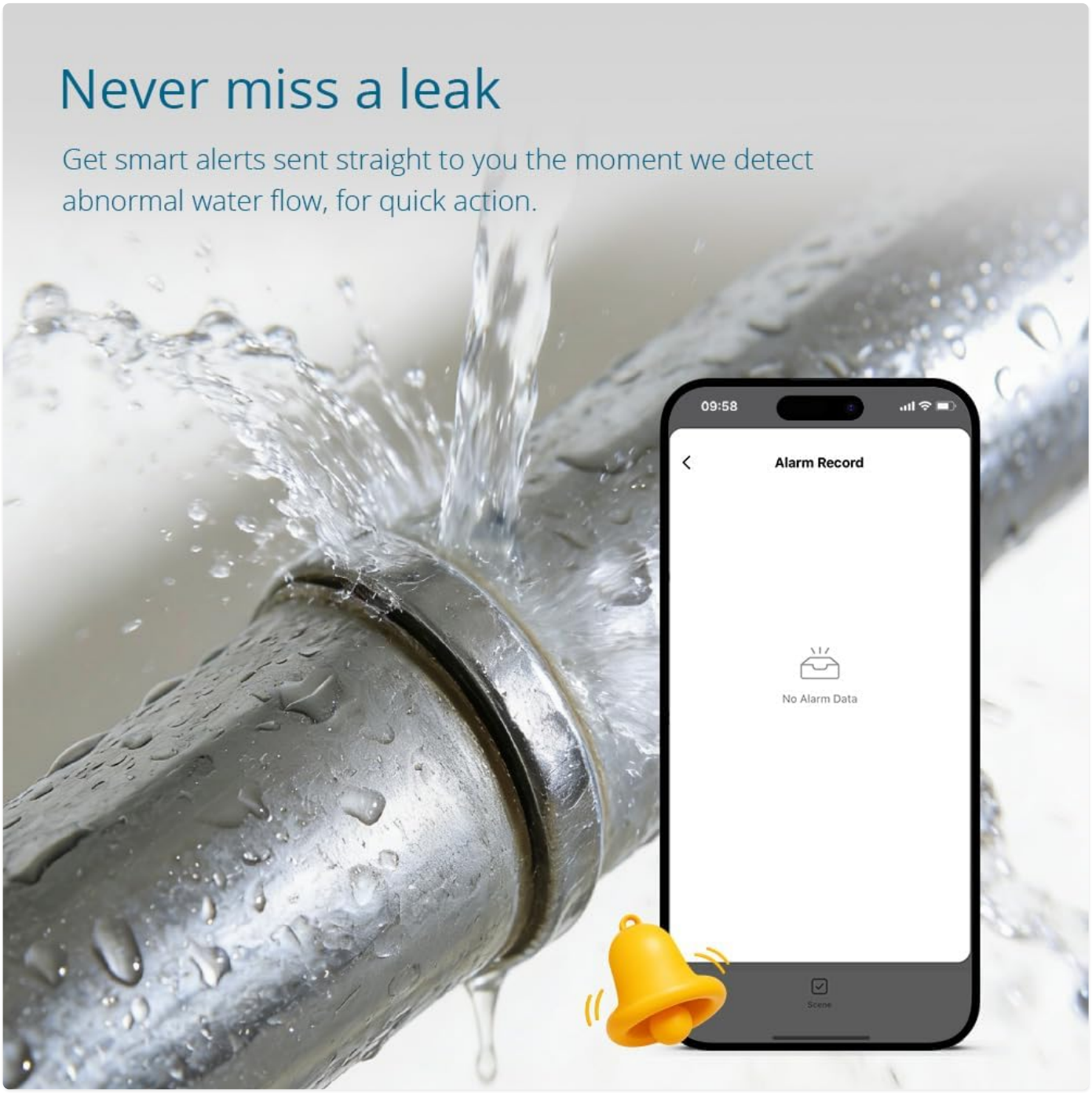


Image: A visual representation of the leak detection feature, showing a leaking pipe and a smartphone displaying an alarm record, indicating proactive alerts for abnormal water flow.

6. Maintenance

6.1 Battery Management

The water meter is powered by a 9000mAh built-in lithium battery. This battery is designed for long-term operation without external power. Monitor the battery level via the LCD display or the Tuya App. When the battery is low, the device will indicate this, and the battery should be replaced by a qualified technician or by following specific instructions from Blindsmart customer service.

6.2 Waterproof Rating

The device has an IP68 waterproof rating, meaning it is protected against continuous immersion in water under specified conditions. This makes it suitable for outdoor or wet indoor environments. However, avoid intentional submersion or high-pressure water jets directly on the device.

7. Troubleshooting

- **Device not connecting to Zigbee Hub:** Ensure the hub is powered on and within range. Try re-pairing the device according to your hub's instructions. Check battery level.
- **Inaccurate readings:** Verify that the installation guidelines (especially pipe length before and after the meter, and orientation) have been followed correctly. Ensure no air bubbles are trapped in the system.
- **Valve not responding:** Check the device's battery level. Ensure the device is connected to the Zigbee hub and has a stable connection.
- **No data in Tuya App:** Confirm the device is successfully paired with the Tuya Zigbee Hub. Check the data upload interval settings in the app.
- **Leak alerts not received:** Ensure alert thresholds are configured correctly in the Tuya App and that app notifications are enabled on your smartphone.

If issues persist, please contact Blindsmart customer support for further assistance.

8. Specifications

Product Parameter

1/2 inch, DN15



Product Model	**Diameter**
214C	DN15
Q_3(m³/h)	**Q3/Q1**
2.5	250
Pressure Loss	**Accuracy Class**
△p40	Class 2
Temperature	**Power**
T50	DC3.6V Lithium Battery
Protection	**Installation**
IP68	Horizontal or Vertical

Maximum Working PresTemperature
1.0Mpa

3/4 inch, DN20



Product Model	**Diameter**
214C	DN20
Q_3(m³/h)	**Q3/Q1**
4	250
Pressure Loss	**Accuracy Class**
△p40	Class 2
Temperature	**Power**
T50	DC3.6V Lithium Battery
Protection	**Installation**
IP68	Horizontal or Vertical

Maximum Working PresTemperature
1.0Mpa

1 inch, DN25



Product Model	**Diameter**
214C	DN25
Q_3(m³/h)	**Q3/Q1**
6.3	250
Pressure Loss	**Accuracy Class**
△p40	Class 2
Temperature	**Power**
T50	DC3.6V Lithium Battery
Protection	**Installation**
IP68	Horizontal or Vertical

Maximum Working PresTemperature
1.0Mpa

*Manual measurement with a tolerance of 1-3 mm

Image: A table detailing product parameters for different sizes (1/2 inch, 3/4 inch, 1 inch), including diameter, flow rate, pressure loss, accuracy class, temperature, power, protection, installation, and maximum working pressure/temperature.

Specification	Detail
Brand	Blindsmart
Model Number	214C
Size	1/2 inch, DN15
Power Source	Battery Powered (9000mAh Lithium Battery included)
Compatible Devices	Tuya Smart, Home Assistant (via ZHA add-on)
Control Method	App
Sensor Technology	Zigbee Sensor

Smart Home Compatibility	Smart Home Compatible
Product Dimensions (L x W x H)	5.59" x 3.86" x 4.01"
Item Weight	3.3 Pounds
Protection Rating	IP68

9. Warranty and Support

Blindsmart products are designed for reliability and performance. For warranty information, technical support, or service inquiries, please refer to the contact information provided with your purchase or visit the official Blindsmart website.

Please retain your proof of purchase for warranty claims.

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Question

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