

BluMeter U Series

Designed for Domestic and Commercial Use
Ultrasonic Smart Water Meter



Available Sizes
DN15 | DN20 | DN25 | DN32 | DN40

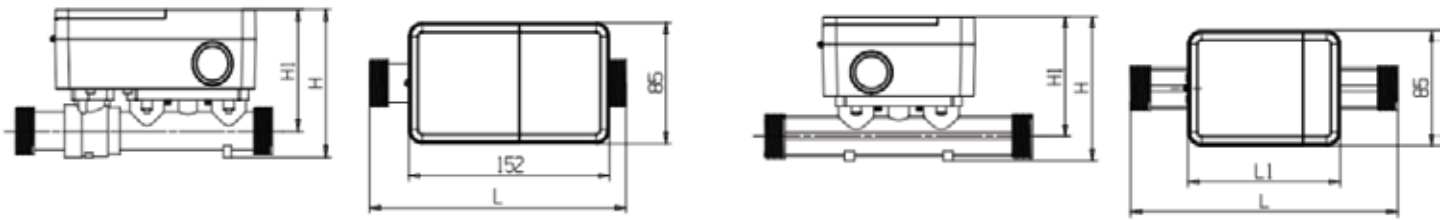
Measure Every Drop. Master Your Network.

BluMeter U-Series is a static ultrasonic water meter designed for domestic and commercial cold potable water applications, delivering reliable and accurate measurement even under challenging network conditions.

With an extended measuring range and high sensitivity at low flow, BluMeter U Series enables utilities to capture a wide range of consumption patterns, helping reduce non-revenue water and improve billing accuracy.

The meter utilizes advanced ultrasonic measurement technology with a fully solid-state design and no mechanical moving parts. This ensures excellent long-term stability, high resistance to interference, and consistent measurement accuracy throughout the meter's service life. As a result, maintenance requirements are minimized while operational reliability is maximized.

Meter Sizes:



BluMeter (without Valve)

Nominal Diameter	Length (mm)	Width (mm)	Height H1 (mm)	Height H (mm)	Connection Thread
DN15	165	85	85	100	G ^{3/4} B
DN20	195	85	88	106	G1B
DN25	225	85	88	110	G1 ^{1/4} B
DN32	260	85	90	121	G1 ^{1/2} B
DN40	300	85	94	127	G2B

BluMeter (with Valve)

Nominal Diameter	Length (mm)	Width (mm)	Height H1 (mm)	Height H (mm)	Connection Thread
DN15	165	85	83	98	G ^{3/4} B
DN20	195	85	86	104	G1B
DN25	225	85	86	106	G1 ^{1/4} B

Designed for Challenging Environments

- Resistant to particles and debris in water pipelines
- Handles pressure fluctuations and hydraulic shocks
- Withstands vibration and magnetic interference
- Suitable for outdoor installations with UV exposure
- Designed to tolerate temporary flooding conditions

Precision In Every Flow. Intelligence In Every Meter

BluMeter U-Series incorporates advanced ultrasonic measurement technology to deliver highly accurate performance across a wide measuring range, with exceptional sensitivity at low flow conditions. This enables precise measurement even for very small consumption levels, supporting drip detection and improving the capture of previously unmeasured water usage. The solid-state design eliminates mechanical moving parts, ensuring long-term stability, consistent accuracy, and an extended service life with minimal maintenance requirements. Flexible installation is supported in any orientation without the need for straight pipe sections, while optimized electronics provide strong resistance to electromagnetic interference for reliable operation in demanding environments.

Designed for modern smart water networks, BluMeter U Series also integrates a comprehensive set of monitoring and security functions to enhance operational visibility and network protection. The meter supports bidirectional measurement and incorporates advanced tamper and displacement detection through sensors. Built-in event logging and abnormal consumption alarms allow utilities to quickly identify potential leaks or irregular usage patterns. In addition, the meter supports infrared local configuration and multiple IoT communication options, enabling seamless integration into AMI infrastructures and supporting efficient, data-driven water management.

Technical Specification:

Standards and Approvals

- EN 145154:2007
- OIML R49
- ISO EN 4064:2014
- MID

Specification

- Measuring range up to R800
- Accuracy Class 2
- Maximum admissible pressure: 1.6 MPa
- Pressure loss class: Δp_{63}
- Protection class: IP68 suitable for outdoor installations
- Temperature class: T30 (default) / T50 (option)
- Electromagnetic compatibility: E2
- Climate Class: O
- Mechanical Environmental Class: M
- Max Input Voltage: 30V
- Max Input Current: 27mA
- Pulse Width: 500 – 50ms
- Pulse Frequency: up to 10Hz
- Max Voltage Drop: 27/2 V/mA
- Max Current Drop: 30/5 $\mu\text{A/V}$
- Operating Temperature: -10°C to 60°C
- Storage Temperature: -10°C to 75°C
- Medium Temperature: 0°C to 90°C

Nominal Diameter DN (mm)	15	20	25	32	40
Overall Length L (mm)	170 / 165 / 115 / 110	190 / 165 / 130	260	260	300
Dynamic Q3/Q1 (R)	800	800	800	800	800
Overload Flow Rate Q4 (m ³ /h)	3.125	5	12.5	12.5	20
Transitional Flow Rate Q2 (l/h)	5	8	20	20	32
Minimum Flow Rate Q1 (l/h)	3.13	5	12.5	12.5	20
Starting Flow Rate (l/h)	1.4	2.5	5	5	8.7
Pressure Loss at Q3 (bar)	0.46	0.4	0.48	0.33	0.2
Pressure Loss at Q4 (bar)	0.72	0.63	0.75	0.51	0.31
Maximum Flow Rate Q _{hgh} (m ³ /h)	4.37	7	17.5	17.5	28
Flow Coefficient K _v (m ³ /h)	3.69	6.32	14.43	17.41	36.0

Reliable Measurement Performance

- Dripping Ultrasonic measurement technology with no mechanical moving parts
- Maintains stable accuracy throughout the meter's service life
- Long-life battery designed for extended operational lifetime: up to 17 years
- Data energy storage up to 1024 daily values, +32 monthly values

Smart Monitoring. Connected Water Management.

BluMeter U-Series is designed for modern smart water networks and AMI deployments, providing a comprehensive set of monitoring, diagnostic, and communication capabilities. The meter supports bidirectional measurement and integrates advanced tamper and displacement detection through embedded Hall sensors and acceleration sensors, helping utilities protect metering assets and detect potential interference.

Built-in event logging and abnormal consumption alarms provide valuable operational insight, enabling early detection of leaks, irregular consumption patterns, or potential system issues. The meter supports local configuration through an infrared interface as well as multiple IoT communication technologies, allowing seamless integration into AMR and AMI infrastructures. This connectivity enables utilities to collect detailed consumption data, improve network visibility, and support more efficient, data-driven water management.

Functionality

Function	Description
Cumulative volume	Record total consumption volume
Instantaneous flow rate	Measure current flow rate
Air in pipe	Air detected in the pipe
Displacement alarm	Movement of water meter after installation
Event log	Record abnormal events and time of occurrence
Battery alarm	Meter battery under-voltage alarm
Peak flow	Record the highest flow rate of the day
Minimum flow	Record the lowest flow rate of the day
Time of use	Record the meter's operating time since activation
Tamper alarm	Triggered when the meter case is forced open

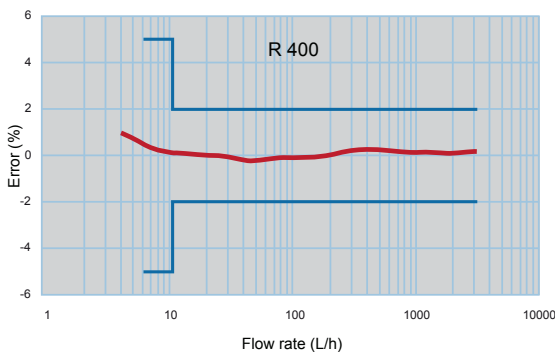
Events & Alarms

- Dripping and constant flow alarms
- Reverse flow alarm
- Battery undervoltage alarm
- Abnormal consumption / overload flow indicators
- Displacement/tampering alarm
- Event log with time of occurrence
- Monthly / daily / hourly data storage (profile dependent)
- Event log with time of occurrence

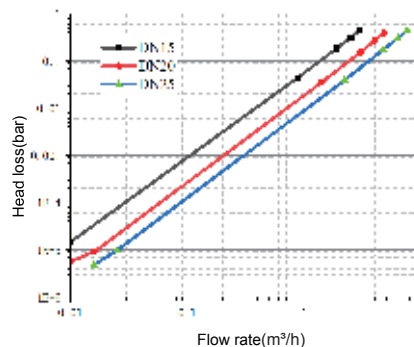
Consistent accuracy across the full measuring range

- Minimal deviation at both low and high flow rates
- Highly accurate measurement results
- Proven repeatability and reliable performance
- Minimizes measurement losses, ensuring more accurate billing and improved revenue protection

Typical accuracy curve $Q_3 = 2.5 \text{ m}^3/\text{h}$



Head loss



Communication

- NB-IoT connectivity for direct cellular IoT integration – Global Bands supported
- LoRAWAN support for long-range low-power utility networks – 868MHz
- Wireless M-Bus for standardized smart metering communication – 868MHz
- Wired M-Bus interface for reliable fixed network integration – 2400 baud, cable length 1.5m
- Infrared optical interface for local configuration and maintenance – as per IEC standard
- Designed for seamless integration into smart water management platforms

EDMP

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