EUROMET

Ultrasonic Water Meters

SNZ-xx-UW

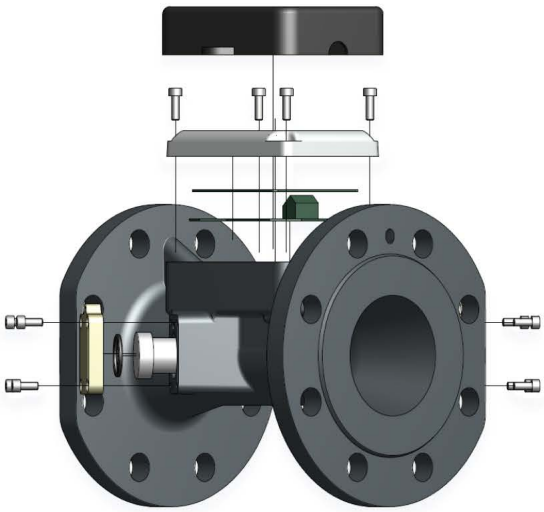
Industrial Ultrasonic Water Meters

Professional Solution for Network Management and High Consumption

The Euromet SNZ-UW series (DN50 - DN250) consists of high-capacity flanged water meters designed for water distribution networks, industrial facilities, and irrigation lines. Utilizing advanced ultrasonic "transit-time" technology, these meters provide precise bi-directional measurement and minimize network losses

Key Features:

- High Flow Capacity: Stable measurement performance for flow rates (Q3) up to 630 m^3/h.
- Minimal Pressure Loss: The full-bore design minimizes pressure drop (max 0.63 bar), reducing energy costs for pumping.
- Ratio **R400**
- Robust Design: Durable construction with IP68 protection, suitable for harsh industrial environments and submerged pits.
- Advanced Data Communication: Comprehensive support for wired and wireless protocols (**M-Bus, Wireless M-Bus (WMbus), LoRa, LoRaWAN, and GPRS/4G/5G etc.**) for seamless integration into AMR/ AMI systems.
- Reliable Billing: MID certified accuracy with secure, non-resettable data logging and tamper-proof sealing.



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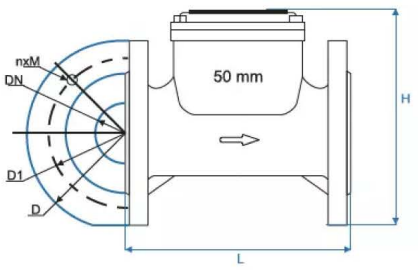
SNZ-xx-UW

Data Sheet	SNZ-50-UW	SNZ-65-UW	SNZ-80-UW	SNZ-100-UW	SNZ-125-UW	SNZ-150-UW	SNZ-200-UW	SNZ-250-UW
Diameter - mm	DN50	DN65	DN80	DN100	DN125	DN150	DN200	DN250
Overload flowrate Q_4	≤ 31,25	≤ 50	≤ 78,75	≤ 125	≤ 200	≤ 312,5	≥ 500	≥ 787,5
Permanent flowrate Q_3	≤ 25	≤ 40	≤ 63	≤ 100	≤ 160	≤ 250	≥ 400	≥ 630
Transitional flowrate Q_2	≥ 0,10	≥ 0,16	≥ 0,252	≥ 0,40	≥ 0,64	≥ 1,00	≥ 1,60	≥ 2,52
Minimum flowrate Q_1	≥ 0,0625	≥ 0,010	≥ 0,0157	≥ 0,25	≥ 0,40	≥ 0,625	≥ 1,00	≥ 1,575
Measuring range (R) Q_3/Q_1	≤ 400							
Accuracy Class	2							
Temperature class T	T30 / T50							
Water pressure class Bar	MAP 16							
Horizontal length mm	200	200	225	250	250	300	350	450
Pressure loss class Bar	ΔP 63							
Flow profile sensivity class	U0 D0							
Orientation	H (Horizontal) / V (Vertical)							

Dimensions



Size	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150	DN 200	DN 250
L	200	200	225	250	250	300	350	450
H	252	262	279,5	289,5	303	332,5	389	442,5
D	165	185	200	220	250	285	340	405
D1	125	145	160	180	210	240	295	355
nxM	4xM16	4xM16	8xM16	8xM16	8xM16	8xM20	12xM20	12xM24

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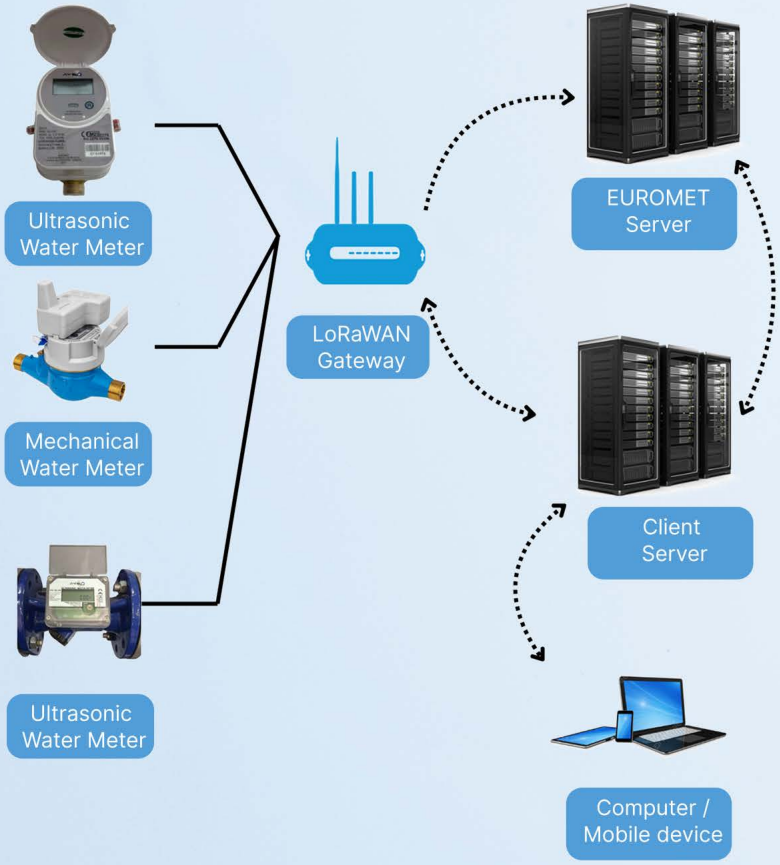
LoRaWAN-Based Smart Water Management Systems

Technology Overview: What is LoRaWAN?

LoRa (Long Range) is a wireless networking technique that uses radio frequency signals for data exchange.
Key Features: It provides both secure transmission and a very wide coverage area.
Advantage: Unlike Wi-Fi and Bluetooth technologies, it can transmit data for much longer periods and over longer distances; this feature allows the system to operate with significantly lower battery consumption.
System Components: LoRa communication technology consists of four main components: End device (meter), Gateway, Network Server, and Application Server.

System Architecture and Working Principle

Connection Structure: Mechanical and ultrasonic meters connect to the internet via the LoRaWAN Gateway, making them readable from anywhere.
Data Flow: This structure enables remote monitoring and control; meter data is collected and transferred to management units securely, uninterruptedly, and cost-effectively.
Software Infrastructure: The software used and developed in the system is entirely owned by EUROMET.



LoRaWAN-Based Smart Water Management Systems

Technical Gains and Efficiency Analysis

Measurement Accuracy: With the introduction of LoRaWAN technology, each meter can measure approximately 30 liters per hour more accurately than existing meters.
Loss/Leak Prevention: When multiplied by the number of subscribers, this difference in accuracy prevents millions of cubic meters of water loss and leakage.
Sustainability and Revenue: This system increases municipal revenues and ensures rational and sustainable water use.

Smart Management Platform and Usage Control

Centralized Monitoring: All meter data is collected at a single location, providing real-time monitoring.
Remote Valve Control: Water can be remotely turned on/off (valve control) in the event of subscribers in debt or in the event of leakage.
Leak Analysis: Instantaneous water losses in the network are detected and reported using the system's hourly, precise measurement data.

Ultrasonic and Mechanical Counter Technology

Ultrasonic Meters: These long-lasting devices have no moving parts, utilize precise sound waves, and are resistant to clogging and wear.
Mechanical Meters: These are economical solutions that combine a traditional structure with a LoRaWAN module, making it smarter.
Common Feature: Both models connect to the internet via a LoRaWAN Gateway, allowing them to be read from anywhere.

Return on Investment and Gains

Increased Revenue: The ability to measure approximately 30 liters more accurately per hour than current meters minimizes unbilled water (NWR).
Operational Savings: Reduces meter reading staff costs and eliminates human-related reading errors.
Resource Management: Sustainable environmental management is achieved by ensuring rational water use.

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