

Product data sheet

Iskrasonic®2000

Smart Ultrasonic Water Meter



Iskrasonic®2000 is the state-of-the-art ultrasonic water meter utilizing advanced dynamic ultrasonic technology that delivers accuracy even in challenging environments. The water meter is designed and manufactured to the highest quality standards for measurement of water consumption in residential and commercial applications enabling accurate measuring with long-term stability under difficult conditions.

Designed for integration into water supply systems, the meter supports cold water measurement up to 50°C and offers robust data communication capabilities it enables remote meter reading through modern LPWAN options such as NB-IoT, wM-Bus, and LoRaWAN, ensuring dependable performance and seamless integration into smart metering networks.

Approvals

- Meter Designed According to ISO 4064
- MID (EU 2014/32/EU)
- OIML R49
- OMS Compliance Certificate
- WRAS - Drinking Water Approval
- RED 2



**Consistent
Accuracy**



**Maintenance
Free Operation**



**Energy-Efficient
& Robust**

Features

- Outstanding ability to detect small flow rates beneficial to users' rational use and saving water resources.
- Maintenance Free with good reliability & long service life.
- Eliminates measuring deviations caused by sand, suspended particles or air pockets.
- Low power consumption and strong anti-interference ability.
- Supporting wM-Bus with the popular LPWAN technologies, i.e. NB-IoT, LoRaWAN



General Characteristics

General Technical Data	
Medium Temperature	+0.1 ... +50 °C
Ambient Operating Temperature	-10 ... +55 °C
Ambient storage temperature	°C -20 ... +60 (>35 °C max. 4 weeks)
Environmental class	O (Outdoors)
Mechanical environmental class	M2
Electromagnetic environmental class	E2
Pressure Rating MAP	bar 16
Battery	Nominal 3.65 VDC lithium
Battery lifetime*	Up to 13 years
Volume Range of display	0~999999.999 m ³
Protection Class	IP68
Communication Interfaces	Optical, wM-Bus, NB-IoT, LoRaWAN

* Depending on wireless signal strength, reporting transmission interval, telegram length, and operating temperature).

Connectivity options

Wireless M-Bus	
Working Mode	T1
Operating Frequency	434.475Mhz/ 868Mhz
Transmission Power	<14dBm

NB-IoT	
NB Frequency Band	B3/B5/B8/B20/ B28
Transmission power	23dBm±2.7dB
Network protocol characteristics	UDP
Data Encryption	AES-128
Data Transmission Interval	Once per day

LoRaWAN	
Frequency	865/868/915 MHz
Maximum transmission power	20dBm
Receiving Sensitivity	-137dBm
LoRaWAN Version	1.0.3 OTAA

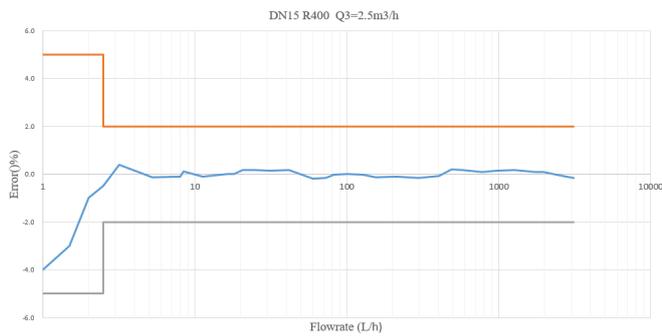
Materials

Part	Materials
Outer Case	Poly Carbonate + ABS
TEMP Sensor	Brass
Meter pipe	Brass
O-ring	Silicone rubber
Transducer	PPS+GF
Strainer	PPO
Flow tube	PPO
Reflector	stainless steel 304

Performance Characteristics

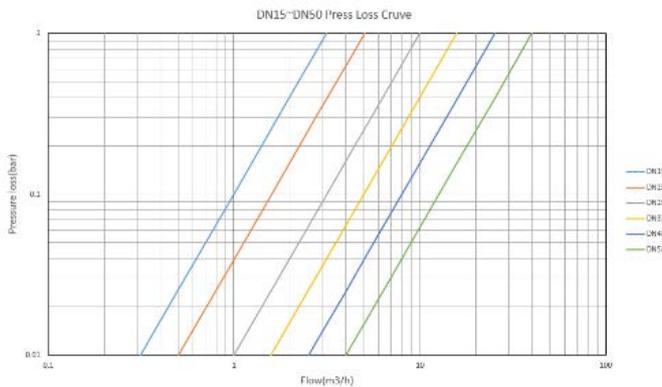
Typical Accuracy Curve

Measuring Accuracy Class 2



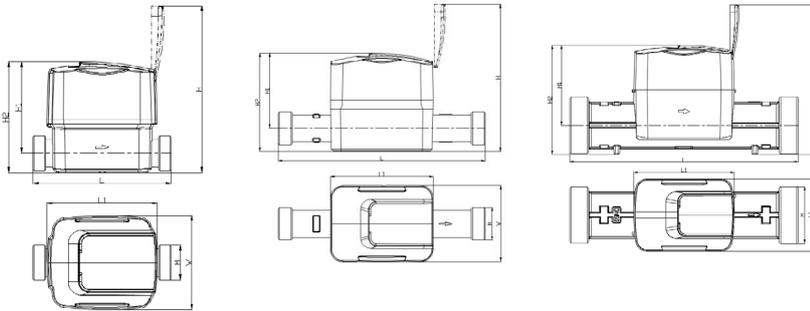
Head Loss Diagram

Pressure Loss ΔP_{40}



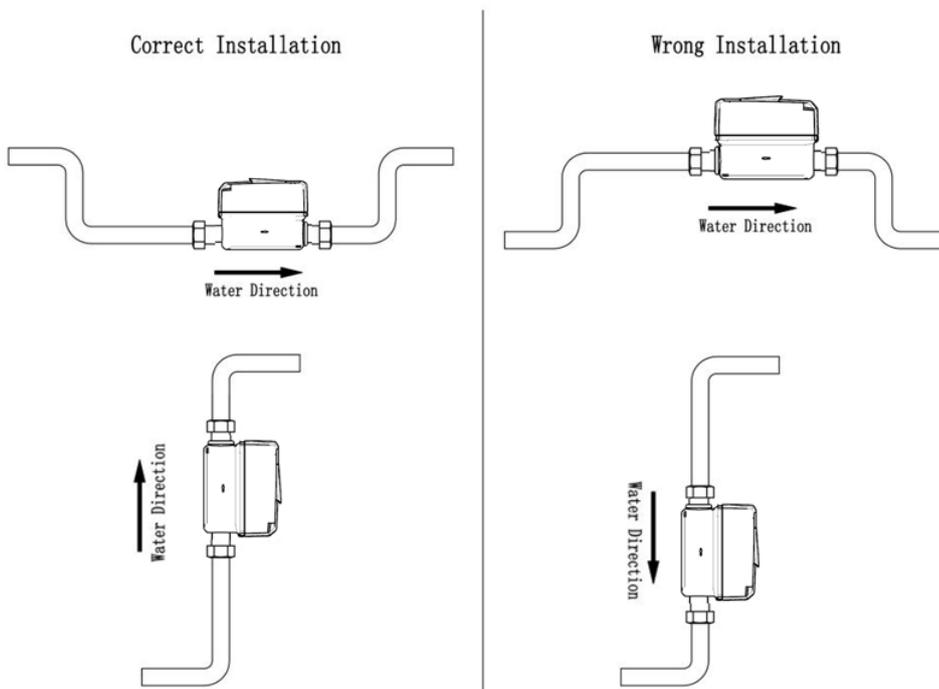
Meter Dimensions

Nominal Diameter (DN)	Overall Length L(mm)	Counter Length L1(mm)	Counter Width W(mm)	Total Height H(mm)	Total Height H1(mm)	Overall Height H2(mm)	Connection Thread M
15	110/115/145/165/170	104	90	157.7	85.6	104.3	G3/4
20	130/165/190	104	90	159	86.6	105.5	G1
25	160/175/260	132	96	176.4	93	122.8	G1¼
32	160/260	132	96	176.4	95.3	122.8	G1½
40	200/300	132	96	184.5	99.3	130.9	G2
50	300	132	96	198.6	106.6	145	G2½



Installation Recommendations

Make sure the spool piece is full of water, avoid bubble generating.



Alarms and Events

Iskrasonic®2000 is equipped with an integrated alarm system that enhances operational awareness and responsiveness. Alarms are both visually displayed on the meter's LCD screen and transmitted via multiple communication interfaces, ensuring timely notification to users and backend systems.

- Empty pipe: no water detected in the pipe.
- Leakage: a continuous flow has been detected above a set threshold (set in terms of time & volume).
- Overconsumption/Burst: exponential volume detected above a set threshold (set in terms of time & volume).
- Reverse Flow: flow in opposite direction above a set threshold (set in terms of time or volume).
- Blocked Meter: the meter does not register flow for a set threshold (set in terms of time).
- Ambient Temperature: ambient temperature too high or too low.
- Water Temperature: water temperature too high or too low.
- Low Battery Level Alarm.

Display Characteristics

Iskrasonic®2000 is equipped with a large, easy-to-read display that presents key parameters such as total volume, flow rate, and intuitive information codes. The meter features a range of intelligent info codes and alarms, each indicating specific operating conditions. When an info code is active, the corresponding symbol is displayed. These codes provide accurate and actionable insights for operational optimization.

1	Indicate Forward flow
2	Indicate Reverse flow
3	Warning: Empty pipe, Reverse Flow, Temperature out of range
4	Fault: Wireless communication fault, Measuring chip breakdown
5	Wireless communication active
6	Flow rate too low (<Q1)
7	Low battery
8	Verification Mode
9	Temperature unit
10	Flowrate unit
11	Decimal digits

