Intelis Water V2

Smart Ultrasonic Water Meter

Our new Intelis smart water meter integrates communication intended for use in residential areas. Leveraging ultrasonic technology, it is engineered to maintain the highest level of accuracy over its entire lifetime, connect easily to several data collection systems and generate extensive data from the water network. Associating a low-to-no maintenance solid-state mechanism with field-tested robustness, the new Intelis smart water meter is setting the stage for new standards of metrology excellence in harsh environmental conditions and charting the course for more efficient Non-Revenue Water initiatives.

FEATURES AND BENEFITS

Connected now, connected tomorrow

Our new Intelis water meter is interoperable and uses open standards and non proprietary communication protocols to relay invaluable data from the field to Water operation centers. Connected today to your AMR system, it will evolve tomorrow with industry standards, next generation protocols or support your transition to AMI, growing alongside your business.

Keep your customer service in the know

The new Intelis meter helps keep your customer service abreast of happenings in the field. Providing timely notifications and alarms to your teams in charge of customer satisfaction, our new meter can be the starting point of an enhanced user experience with alarm capabilities signaling backflow, freezing pipes, or tampering attempts.

Ready for off-road adventures, All-Conditions billing

The new Intelis smart meter is built strong for a reason - fair billing matters everywhere. With extreme care spent on its design, our new meter is beyond robust and maintains the highest level of accuracy in the most challenging conditions. Time-tested with hard waters all around the Mediterranean sea, the meter's metrology is equally stable and reliable under extreme temperatures in the Middle East or exposed to intermittent water supply in Sub Saharan African regions.

MANAGING WATER WITH ITRON'S WATER END-TO-END SOLUTION

Smart metering for flexibility:
- Remote reading
- Precise billing
- Real-time alarms

Data collection for simplicity:
- Customer awareness
- Workforce management
- Network as a service

Advanced analytics for efficiency:
- Visibility to the health of distribution system
- Reduce real and apparent losses

FEATURES

- wM-Bus / LoRa / SigFox 868MHz
- NFC
- R1000 class2 / R500 class1
- Compatible with harsh condition (Pit, floodable area, direct sunligth, intermittent supply...)
- 22 years battery lifetime
- Robustness and accuracy

Low maintenance needs equals low maintenance costs

Exploiting the full potential of solid-state technology, the new Intelis water meter requires lower maintenance than mechanical water meters. Preserving its accuracy over time - thanks to its metrology principle - our new meter is a hassle-free piece of equipment that will help alleviate time and resources spent performing maintenance on your network.

Meter sizing done right (built-in & simple)

The new Intelis water meter combines the sharpness of solid-state metrology and the flexibility of open-standard communications to provide powerful insights to Utilities. Meter sizing data comes right out of our meter.

Associated with 3rd party or Itron's advanced analytics, our new meter is the stepping-stone of more efficient water conservation programs for Utilities.

ENVIRONNEMENTAL-ECO DESIGN

A life cycle assessment study has been carried out to ensure the proper design of the new Intelis smart meter. It can be easily recycled at the end of the product life, as it can be dismantled into separate components (batteries, circuit board, brass) that each have their own recycling circuits.

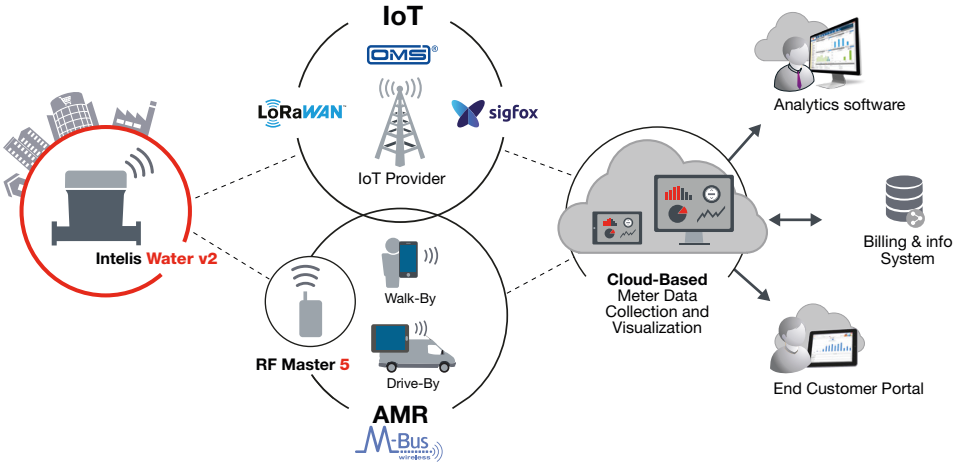
INTEROPERABLE WITH OPEN-STANDARDS (with out-of-the-box connectivity options)

IoT Networks (Sigfox® or LoRaWAN™)

Connect smart water meters to networks dedicated to the Internet of Things (IoT) using LoRaWAN™ or Sigfox® or OMSv4 technologies.

Automated Meter Reading (AMR)

Wirelessly collect data from meters either in walk-by or drive-by mode using Itron's RF Master 5. Eliminates the need for physical access to the meter.



EXTENDED DATA SET

Billing Index & Consumption Data Logging

Daily billing and custom billing functions along with precise consumption data logging up to 15min resolution

Flow Distribution

Precise monitoring of the distribution flow including periodic minimum and maximum values

Backflow / Reverse Flow

Detection and quantification of backflow to help assess water quality and/or sanitary risk

Alerts

Alarms are generated when important events are detected, such as:

- Leakage at customer side (continuous flow)
- Tamper attempt (dismantling)
- Blocked meter (zero consumption)
- Oversize/undersize
- Freeze risk

Diagnostics

Good system performance is ensured via monitoring of:

- Battery level
- Configuration settings
- Clock synchronization in LoRaWAN and wM-Bus

Technical Specifications

Nominal Diameter DN		mm / inches	15 ½"		20 ¾"	
In compliance with MID - (2014/32/EU)						
MID Accuracy Ratio (Q3/Q1) all positions			160 to 1000 class 2 & 160 to 500 class 1			
MID type Approval Number			LNE 37882			
Nominal Flow Rate	(Q3)	m³/h	1.6	2.5	2.5	4
Standard Production Ratio*	(Q3/Q1)		500	800	500	800
Minimum Flow Rate	(Q1)	l/h	3.2	3.125	5	5
Transitional Flow Rate	(Q2)	l/h	5	5	8	8
Overload Flow Rate	(Q4)	m³/h	2	3.125	3.125	5
Pressure Loss Class at Q3		bar	0.25	0.40	0.25	0.63
Real Pressure Loss Class at Q3		bar	0.16	0.38	0.17	0.44
Maximum Admissible Pressure	MAP	bar	0.1 / 16			
Sensitivity Class			U0D0 (Seal restriction, Elbow, Ball Valve)			
Water Operating Temperature	T	°C	+0.1 / +50			
Climatic Environment		°C	-25 / +70			

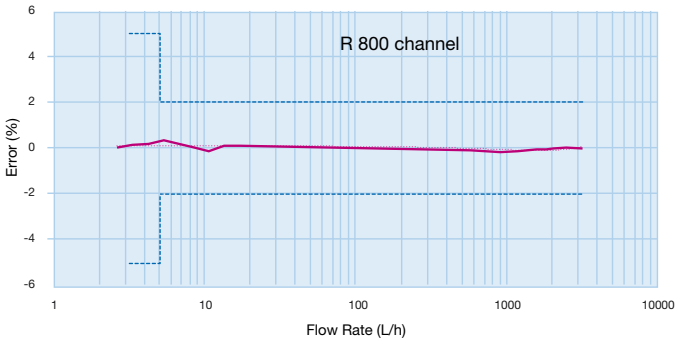
* Other Ratios available under specific request

Other Characteristics

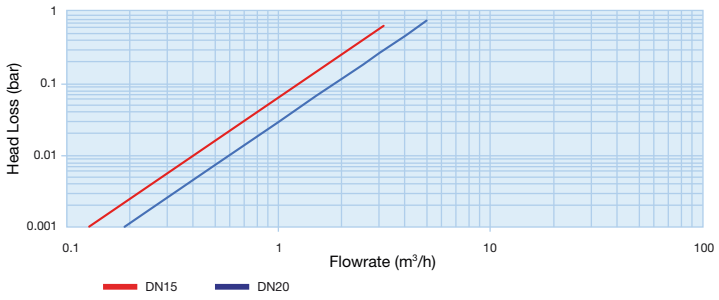
Indication Range*		m³	99999.999			
Minimum Scale Interval**		l	1			
Typical Starting Flow Rate		l/h	1	1	2	2
Testing Pressure		bar	25			
Maximum Accidental Water Temperature		°C	70 (<1h/week)			

* Comma configurable under specific request - ** 0.001 liter in test mode

TYPICAL ACCURACY CURVE Q3=2,5 M³/H



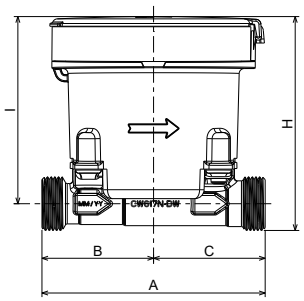
HEAD LOSS

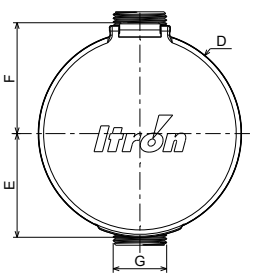


Dimensions

Nominal Diameter	mm	15							20		
A	mm	105*	110	115	134*	165	170	115	105*	130	190
G	inches	G ¾ B						G ⅞ B x ¾ B	G 1 B		
B	mm	52.5	55						52.5	65	
C	mm	52.5	55	60	79	110	115	60	52.5	65	125
D	mm	ø 100									
E	mm	51									
F	mm	54.5									
H	mm	105.2							123.6		
H (w/o Lid))	mm	101.2							119.6		
I	mm	92							94.7		
I (w/o Lid))	mm	88							90.7		
Weight (2 batteries)	gr	667	674	679	698	731	737	695	729	766	845
Weight (3 batteries)	gr	690,3	697,3	702,3	698	721,3	760,3	718,3	752,3	789,3	868,3

* Bodies version on demand (L105 - 134 DN15 & L105 DN20)

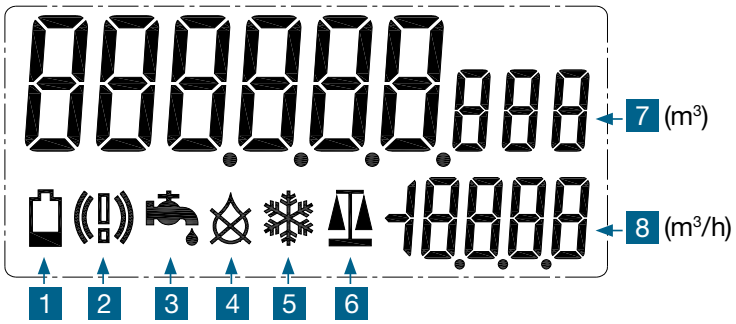




MULTIFONCTIONAL DISPLAY

» Easy to read display

» Visual Alarms



1 Battery Level Indicator

2 System Alarm Indicator

3 Leakage Indicator

4 Air in pipe Indicator

5 Freezing Indicator

6 Test mode Indicator

7 Main Index Indicator 8/9 digits

8 Flowrate Unit Indicator

Local Reading

Connectivity Specifications

Radio Frequency Features	
Protocol	wM-Bus T2, C2 / LoRaWAN™ / Sigfox®
Modulation	FSK, BPSK (Sigfox®), CSS (LoRa®)
Frequency carrier	868 MHz ISM Band
Radiated power	< 25 mW
Functional Specifications	
Protection / Relative Humidity	IP 68* / 0 to 100% humidity - Floodable
Environmental condition	Indoor / outdoor (Pit, Direct sunlight...) / Intermittent water supply
Operating temperature	-10°C / +55C
Accidental temperature	-20°C / +70°C
* IPX8: Under 2 meters during 2 months @ 50°C water temperature	
Battery Features	
Battery lifetime	15 years (2 cells)- 22 years (3 cells)*
Power source	Lithium batteries
* Depends on connectivity mode and reporting interval. / Environmental condition	

Connectivity Certifications

» LoRaWAN R1.0.2

» Sigfox V2.10.0

COMPLIANCE

» Compliant with Directive 2014/53/EU on RF Spectrum usage

» MID, ISO4064, R-49

» ACS, KTW, W270, WRAS

» RoHs, WEEE2, CE

» IP68 certified according to EN 60529

» Compliant with 2002/95/EC on non usage of hazardous substances in electrical and

» electronic equipment

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