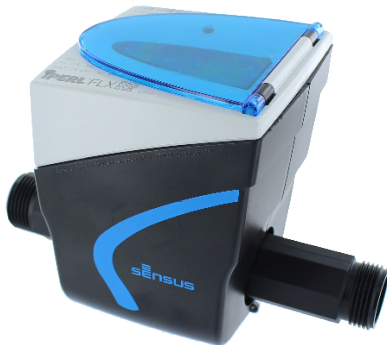


iPERL® FLX 400 MHz

Static electromagnetic meter with remanent magnetic technology and integrated FlexNet radio (FLX)



Intelligent technology meets water management

Whether internet, telephony or electricity - intelligent network communications are all around us and offer almost unlimited possibilities. So why not apply the same principle to one of our most important resources - water.

Worldwide, water networks need to keep pace with the development of intelligent network communications to ensure they are up to date with demand-driven automation and load management that is standard in the smart grid.

Using a fixed AMI communications network (such as Sensus FlexNet™), iPERL® FLX can help identify potential issues, such as leakages in the network, enabling you to address them quickly. This saves your business time, money, improves targeting of field crews, and increases customer service levels.

TYPE APPROVAL

EU design examination certificate **DE-12-MI001-PTB010** based on the following regulations (guidelines, standards, normative documents)

- 2014/32/EU (MID)
 - OIML R49
 - EN 14154-4
 - ISO 4064
 - EN 14268
 - WELMEC
- 2014/53/EU (RED)
 - EN 301 489
 - EN 300 220
 - EN 60950
 - EN 62479

Certificates

- OIML Certificate of Conformity

Certificate of compliance for potable drinking water

- KTW/DVGW (D)
- WRAS (UK)
- ACS (F)
- KIWA (NL)
- Hydrocheck (B)

iPERL® FLX 400 MHz

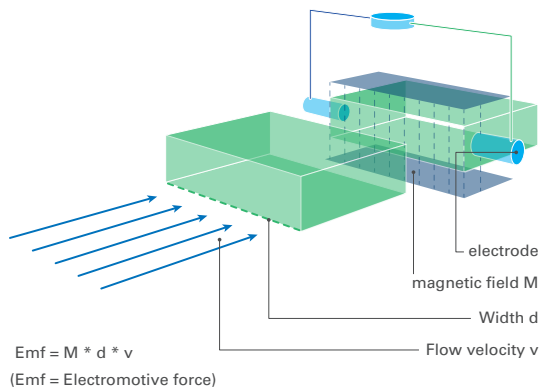
Static electromagnetic meter with remanent magnetic technology and integrated FlexNet radio (FLX)

Always accurate - the concept of iPERL® FLX

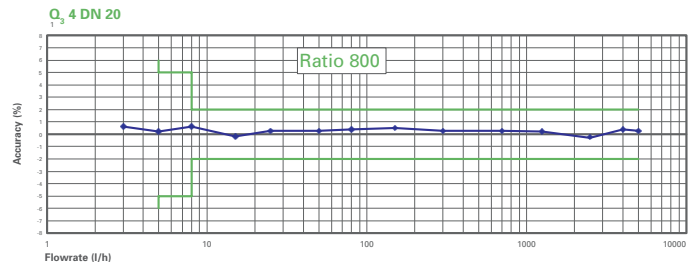
Sensus iPERL® FLX offers unrivalled, sustained R800 measurement accuracy for all sizes from DN15 to DN40 over its expected 15 year operational life when used for clean potable water:

- Operating ambient temperature range of +60 °C down to -15 °C, provided that a minimum water flow rate of 100 litre / hour is ensured to prevent freezing
- A water temperature range of +0.1 °C to +50 °C (70 °C special variant)
- Water conductivity down to 120 µS / cm
- Water pressure up to 16 bar
- As a special version available with ATEX approval
- MID certified in both flow directions up to R800

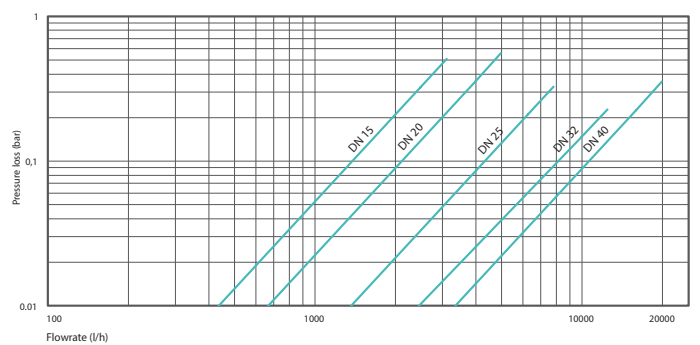
Unlike other solid state meters, iPERL® FLX uses remanent magnetic field technology which provides a linear measurement range even down to very low flow rates. The magnetic field acting on the water flowing through the flow channel generates an electrical voltage; this is proportional to the velocity of the water (principle of magnetic-inductive flow measurement).



Typical Accuracy Curve



Typical Pressure Loss Curve



TECHNICAL DATA

Nominal size	DN		DN (mm)				
			15	20	25	32	40
Permanent flowrate	Q ₃	m ³ /h	2.5	4	6.3	10	16
Starting flowrate		l/h	1	1.6	2.5	4	6.4
Ratio "R"	Q ₃ / Q ₁	R	800 ¹⁾				
Maximum flowrate	Q ₄	m ³ /h	3.125	5	7.875	12.5	20
Minimum flowrate	Q ₁	l/h	3.13	5	7.88	12.5	20
Transitional flowrate	Q ₂	l/h	5	8	12.6	20	32

¹⁾ also available at R=160, 250, 400



iPERL® FLX 400 MHz

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Constant metrological performance - independent of the installation position

iPERL® FLX delivers constant accuracy in a wide range of installation conditions and can be installed in any orientation without the need for linear pipe leads in or out. iPERL® FLX also has an automatic detection of the direction of flow, further enabling the choice of installation positions when operated in accordance with the framework conditions as set out in MID (European Directive 2014/32/EU) and European standard EN 14154-4:2014.

Communication and data availability

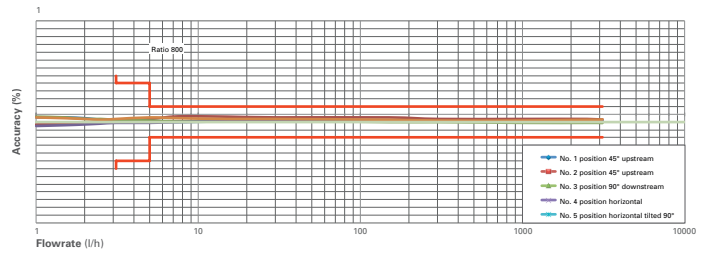
iPERL® FLX is equipped with high power Sensus FlexNet radio. This radio provides smooth connection to FlexNet network. The dedicated spectrum is at 400 MHz range¹⁾. This innovative communication provides for AMI deployment plus the ability to interrogate the meters for more precise data, including the log of up to 2880 data points and alarms.

Furthermore iPERL® FLX is equipped with a low power 433 MHz integrated ISM band radio technology to walk-by / drive-by collection.

The ability of local interface assures to communicate with the meter at any time. iPERL® FLX can be switched on site from low power walk-by / drive-by to high power Sensus FlexNet and vice versa.

¹⁾ high power Sensus FlexNet can be used only in regions where a licensed FlexNet frequency has been assigned

Metrological performance, independent of any installation position



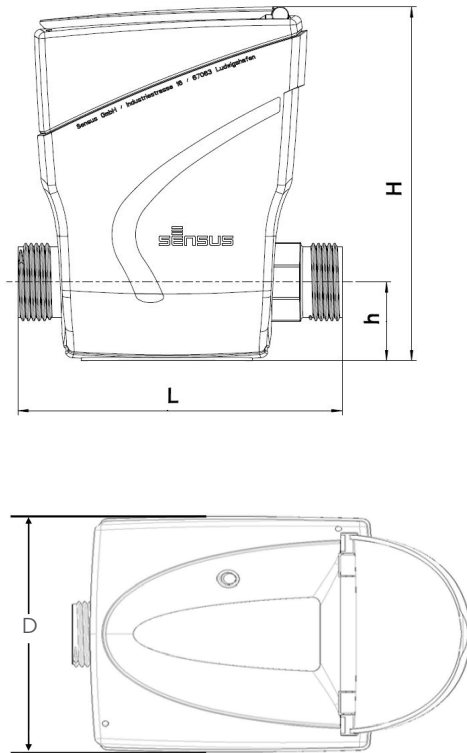
- iPERL® FLX can be installed in any orientation
- iPERL® FLX detects the direction flow automatically
- iPERL® FLX provides constant measurement accuracy over time



iPERL® FLX 400 MHz

Static electromagnetic meter with remanent magnetic technology and integrated FlexNet radio (FLX)

Dimensional Diagram



DIMENSIONS AND WEIGHTS

Nominal Size	DN	mm	15	20	25	32	40
Length	L	mm	110 ¹⁾	105 ³⁾	198 ⁴⁾	260	300 ^{5,6)}
Width	D	mm	94	94	114	114	114
Height	H	mm	120	120	138	138	138
Height to pipe axis	h	mm	26	26	40	40	40
Tail Diameter		inch	¾" ²⁾	1"	1¼"	1½"	2"
Weight		kg	0.85	0.85	1.65	1.65	1.75

¹⁾ also available in length 115, 134, 145, 165 and 170 mm

²⁾ also available in 7/8"x ¾" with length 115 mm

³⁾ also available in length 115, 130, 165, 190, 220 mm

⁴⁾ also available in length 260 mm

⁵⁾ also available in length 245 and 270 mm

⁶⁾ also available in 270 and 300 mm with composite flanges (possibility of a installation into a bulk meter measuring point of DN50)

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