

Introduction

Modern water networks demand accuracy, resilience, and smart communication — and our LoRaWAN-enabled water meter is built for exactly that. It combines precise metering with long-range, low-power connectivity to give utilities continuous insight into consumption, system behavior, and emerging anomalies.

With Adaptive Data Rate (ADR), the meter automatically optimizes transmission settings to extend battery life and maintain network efficiency, even in challenging radio environments. Network-based clock synchronization keeps all readings time-aligned for accurate billing and streamlined analytics.

To ensure dependable communication at all times, the device includes Wireless M-Bus fallback in C1 mode and uses intelligent retransmission to improve delivery reliability without wasting energy. When critical events occur, it immediately sends priority info codes so leaks, bursts, or tampering attempts are reported without delay.

Engineered for long service life, this meter provides utilities and municipalities with a scalable, future-ready platform for digital water management and sustainable resource stewardship.



Communication features	Meter features
<ul style="list-style-type: none">LoRaWAN-certified	<ul style="list-style-type: none">Nominal flow available from 1.6 m³/h up to 16 m³/h (DN15-DN40)
<ul style="list-style-type: none">OMS over LoRaWAN	<ul style="list-style-type: none">Battery lifetime: Up to 16 years at 35°C
<ul style="list-style-type: none">Wireless M-Bus C1 fallback radio	<ul style="list-style-type: none">Protection class IP68
<ul style="list-style-type: none">On-display network status check	<ul style="list-style-type: none">MID-approved electronic operation temperature range: -25...55 °C
<ul style="list-style-type: none">Various datagrams with hourly volume	<ul style="list-style-type: none">Nominal pressure PN16
<ul style="list-style-type: none">Real-time critical info codes	<ul style="list-style-type: none">Ambient class B and O
<ul style="list-style-type: none">Auto-adaptive data transmission scheme to secure high data performance	<ul style="list-style-type: none">MID (2014/32/EU)
<ul style="list-style-type: none">Clock synchronization	<ul style="list-style-type: none">Ambient temperature monitoring
<ul style="list-style-type: none">External antenna for challenging installations	<ul style="list-style-type: none">Data logger with yearly, monthly, daily, and hourly data

Meter variants and sizes

flowIQ® 2200/3200 – composite:

Meter type	Nom. flow Q3 [m³/h]	Min. flow Q1 [L/h]	Max flow Q4 [m³/h]	Min. cutoff [L/h]	Max cutoff [m³/h]	Pressure loss Δp at Q3 [bar]	Dynamic range	Connection on meter and length [mm]
2A	2.5	25	3.1	2	4.6	0.17	100	G1B 105
2B	2.5	25	3.1	2	4.6	0.17	100	G1B 130
2C	4.0	40	5.0	3.2	8.5	0.4	100	G1B 130
2D	2.5	25	3.1	2	4.6	0.17	100	G1B 190
2E	4.0	40	5.0	3.2	8.5	0.4	100	G1B 190
1A	1.6	6.4	2.0	2	4.6	0.17	250	G¾B 110
1B	2.5	10	3.1	2	4.6	0.17	250	G¾B 110
1F	2.5	10	3.1	2	4.6	0.17	250	G¾B 165
1D	2.5	10	3.1	2	4.6	0.17	250	G¾B 170
2A	2.5	10	3.1	2	4.6	0.17	250	G1B 105
2B	2.5	10	3.1	2	4.6	0.17	250	G1B 130
2C	4.0	16	5.0	3.2	8.5	0.4	250	G1B 130
2D	2.5	10	3.1	3.2	4.6	0.17	250	G1B 190
2E	4.0	16	5.0	3.2	8.5	0.4	250	G1B 190
1B	2.5	6.3	3.1	1.5	4.6	0.17	400	G¾B 110
2E	4.0	10	5.0	2.0	8.5	0.4	400	G1B 190
3C	4.0	25.0	5.0	3.0	13	0.09	R160	G1¼B 260
3D	6.3	25.2	7.9	3.0	13	0.23	R250	G1¼B 260
3E	10	40.0	12.5	3.0	13	0.57	R250	G1¼B 260
3M	6.3	39.4	7.9	5.0	24.0	0.07	R160	G1½B 260
3N	10	40.0	12.5	5.0	24.0	0.17	R250	G1½B 260
4A	10	62.5	12.5	8.0	37.0	0.07	R160	G2B 300
4B	16	64.0	20.0	8.0	37.0	0.19	250	G2B 300

flowIQ® 2200 is available with Acoustic Leakage Detection

flowIQ® 2200/3200 – stainless steel:

Meter type	Nom. flow Q3 [m³/h]	Min. flow Q1 [L/h]	Max flow Q4 [m³/h]	Min. cutoff [L/h]	Max cutoff [m³/h]	Pressure loss Δp at Q3 [bar]	Dynamic range	Connection on meter and length [mm]
2D	2.5	15.6	3.1	3.0	11.0	0.05	160	G1B 190
3C	4.0	25.0	5.0	5.0	24.0	0.03	160	G1¼B 260
3D	6.3	25.2	7.9	5.0	24.0	0.07	250	G1¼B 260
3E	10.0	40.0	12.5	5.0	24.0	0.17	250	G1¼B 260
3M	6.3	39.4	7.9	5.0	24.0	0.07	160	G1½B 260
3N	10.0	40.0	12.5	5.0	24.0	0.17	250	G1½B 260
4A	10.0	62.5	12.5	8.0	37.0	0.07	160	G2B 300
4B	16.0	64.0	20.0	8.0	37.0	0.19	250	G2B 300

flowIQ® 2200/3200 is available with Acoustic Leakage Detection

Meter variants and sizes - continued

flowIQ® 1200 – composite:

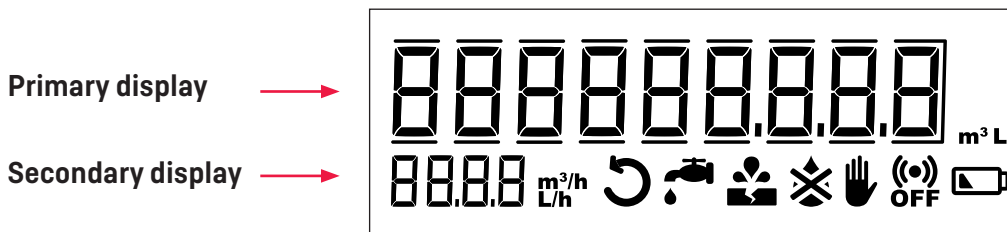
Meter type	Nom. flow Q3 [m³/h]	Min. flow Q1 [L/h]	Max flow Q4 [m³/h]	Min. cutoff [L/h]	Max cutoff [m³/h]	Pressure loss Δp at Q3 [bar]	Dynamic range	Connection on meter and length [mm]
2B	2.5	25	3.1	2	4.6	0.17	100	G1B 130
2C	4.0	40	5.0	3.2	8.5	0.4	100	G1B 130
2D	2.5	25	3.1	2	4.6	0.17	100	G1B 190
2E	4.0	40	5.0	3.2	8.5	0.4	100	G1B 190
1A	1.6	6.4	2.0	2	4.6	0.17	250	G¾B 110
1B	2.5	10	3.1	2	4.6	0.17	250	G¾B 110
1F	2.5	10	3.1	2	4.6	0.17	250	G¾B 165
*1D	2.5	10	3.1	2	4.6	0.17	250	G¾B 170
2A	2.5	10	3.1	2	4.6	0.17	250	G1B 105
2B	2.5	10	3.1	2	4.6	0.17	250	G1B 130
2C	4.0	16	5.0	3.2	8.5	0.4	250	G1B 130
2D	2.5	10	3.1	3.2	4.6	0.17	250	G1B 190
2E	4.0	16	5.0	3.2	8.5	0.4	250	G1B 190
1B	2.5	6.3	3.1	1.5	4.6	0.17	400	G¾B 110
2E	4.0	10	5.0	2.0	8.5	0.4	400	G1B 190

*flowIQ® 1200 is available for warm water – EXCEPT for 1D

Dynamic Range R100 and R400 are only available for cold water variants.

Display

The flowIQ® X2XX display features a 9-digit volume display as well as a secondary display for actual flow, with several decimal configuration options. Alarms are also featured on the display to alert the user of potential bursts, leaks, tamper, low battery, etc.



flowIQ® X2XX with LoRaWAN also features several display views which enable the check of the link quality and the communication status as well as to pause the radio. The different display views can be accessed through the use of a magnet or Kamstrup’s optical read-out heads.

Menu

Menu order	Description	Primary display	Secondary display
1	Legal volume view	Volume	Flow
2	Display segment test	All segments ON	All segments ON
3	Call menu	Call (don't Call)	Blank/Done
4	Communication status	Link status	No49
5	Link quality	Link quality	No47
6	Configuration number	Configuration number	No31
7	Firmware revision	Firmware revision	No32
8	High resolution	Volume V1 + 1 decimal	Flow
9	Radio status	RF pause/RF on	Blank/Done
10	Adjustment log	Adjustments	No02

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