



SharpFlow

Battery Powered Electromagnetic Water Meter

The SharpFlow is a static meter electromagnetic type, battery powered with 15 years life time. Available from D25 up to DN300, the electronic register is available in compact or remote version. Its IP68 design allows installation in places where flooding can occur, or completely buried underground. The SharpFlow is designed for custody transfer according to European Directive MI-001. The measuring accuracy reflects the most recent specifications of the ISO/EN, MI-001 and OIML standards.

SharpFlow measuring tube has a smooth shape. This unique design, consisting of a rectangular cross section; optimized stainless steel electrodes and a homogeneous magnetic field, forms the basis for a flow-optimizing cross section, and thereby provides reliable measurements that are largely independent of the flow profile. The measuring chamber is made of Rilsan® and is resistant to corrosion, aging and abrasion. As a result, SharpFlow is compatible with drinking water and complies with all regulations for water, waste water industries.

FEATURES AND BENEFITS

- » Unique flow sensor design for limited pressure loss
- » Battery lifetime up to 15 years
- » IP 68, Maintenance-free
- » High accuracy, repeatability
- » Compatible with AMR boards
- » MID MI-001 & OIML R49 certifications
- » Available from D25 up to DN300

Distribution and abstraction

Flow can be measured in both directions with the same degree of accuracy. Furthermore, reliable and repeatable measurements of low flow at night aid in early leakage detection.

Bulk water / revenue metering

To ensure water bills are fair, and to reduce the need for verification, usage must be measured cost effectively and accurately.

With high turndown ratio, energy-saving low pressure drop, and certification to global revenue standards, the SharpFlow measures flow with consistently high accuracy over a wide range of flow rates.

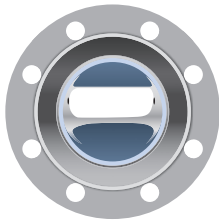
Irrigation

Where irrigation systems are used in crop production, SharpFlow ensures water wastage is kept to a minimum and that farmers get a fair deal.

The SharpFlow has no moving parts and is not prone to wear and tear in the usual way. It is resistant to solids and debris in the water supply.

Display
optical key for
menu access

- IP 68 Converter
- Battery Lifetime
- MID Approved

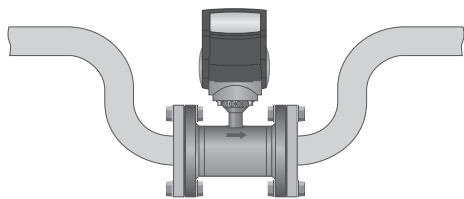


Rectangular cross section

- Calculations on flow profile behaviour demonstrate: SharpFlow has a superior uniform flow profile, also with disturbances
- No internal moving parts
- Smooth liner
- Insensitive to water quality & impurities (sand, minerals, iron, etc)
- Not sensitive to spinning or jetting
- No possible blocking of meter
- No filters / strainers required

IP 68 convector output connection to AMR systems

- WaterMind
- EverBlu
- AnyQuest

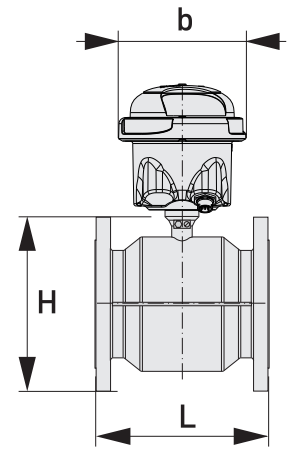
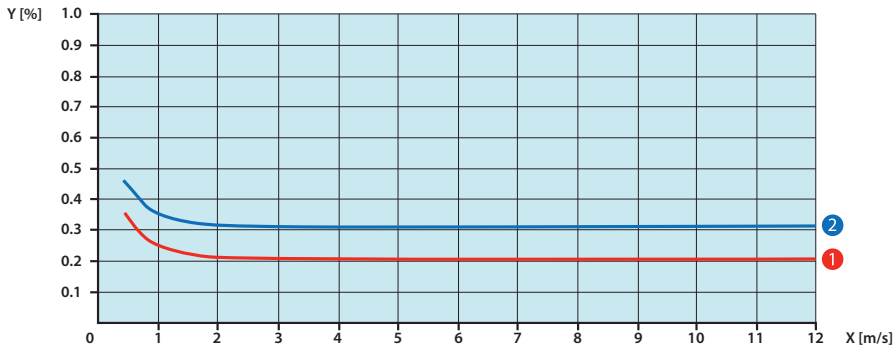


Rilsan coating

- Durable and maintenance-free
- High chemical & corrosion resistance
- High abrasion resistance
- Temperature range: -5 to 70°C
- Flexible and tough
- Smooth and pore-free minerals prevented from sticking
- Free of solvents
- Widely accepted by W&WW industry
- Green (100% based on renewable resources)



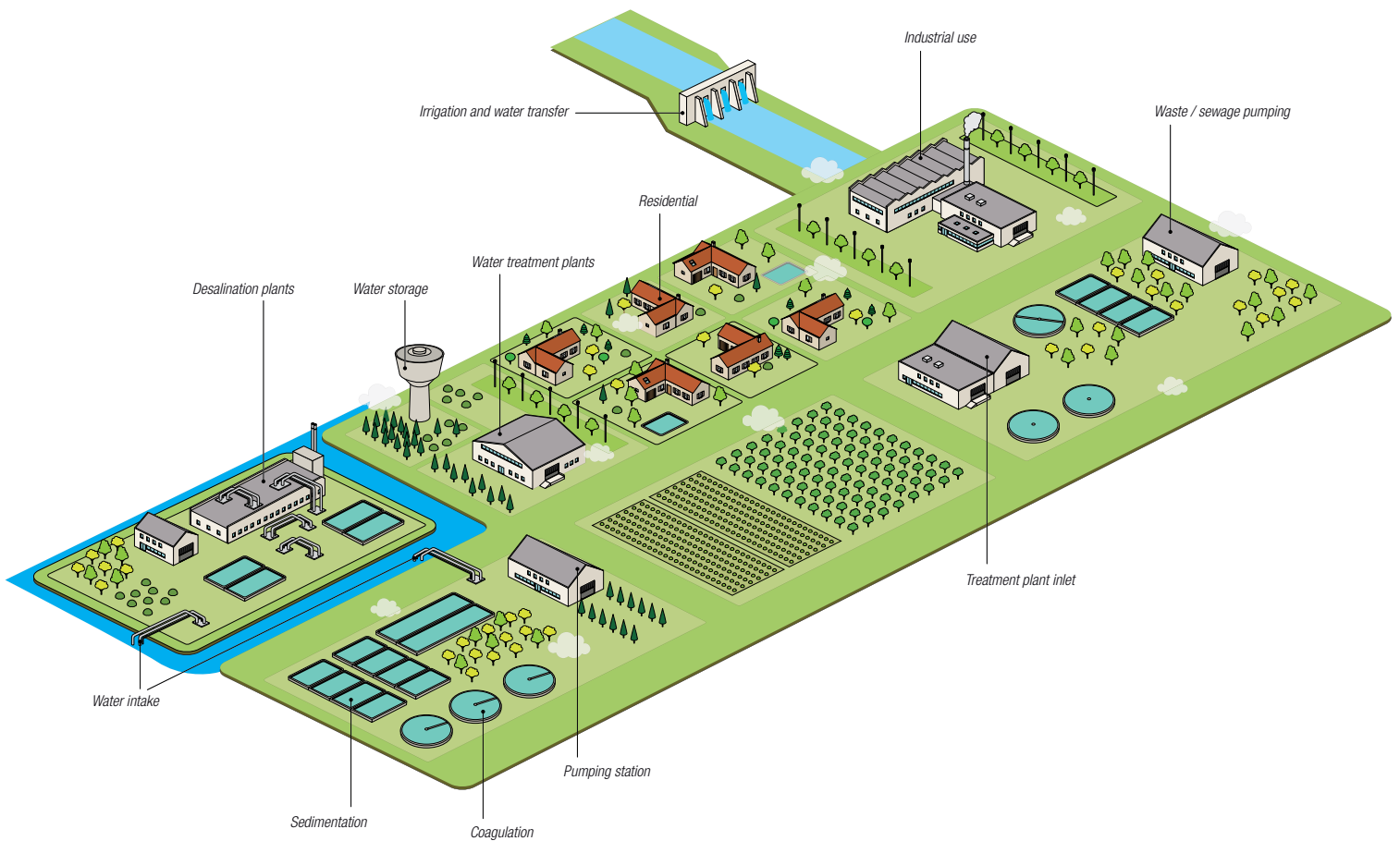
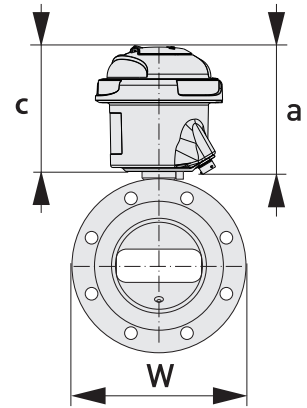
ACCURACY / PERFORMANCE



DN (mm)	DN (Inches)	Inlet	Outlet	Accuracy	Curve
25...300	1...12	3 DN	1 DN	0.2% + 0.5 mm/s	1
25...300	1...12	0 DN	0 DN	0.3% + 0.5 mm/s	2

DIMENSIONS AND WEIGHTS

DN	mm	25	40	50	65	80	100	125	150	200	250	300
A	mm	163	163	163	163	163	163	163	163	163	163	163
B	mm	161	161	161	161	161	161	161	161	161	161	161
C	mm	159	159	159	159	159	159	159	159	159	159	159
L	mm	150	150	200	200	20	250	250	300	350	400	500
H	mm	150.5	165.5	186	200	209	237	266	300	361	408	458
W	mm	115	150	165	185	200	220	250	285	340	395	445
Weight	kg	5	5.7	13	11	17	17	21	29	36	50	60



compatible with Itron AMR solutions



WaterMind

Measuring system	
Measuring principle	Faraday's law of induction
Application range	Electrically conductive fluids
Measured value	
Primary measured value	Flow velocity
Secondary measured value	Volume flow
Measurements	
Measuring units	Volume flow Standard: m ³ Optional: US Gallons Flow rate Standard: m ³ / hr Optional: USGPM
Measurement frequency	Standard: 15s (1 measurement per 15 seconds) Optional: 1s, 10s, 20s
Empty pipe detection	Optional: Display shows – EP – in case of empty pipe detection
Low flow cut off	Measurement below this value are neglected Standard: 10 mm/s Optional: 0 mm/s, 5 mm/s
Measuring accuracy	
Reference conditions	Flow condition: similar to EN290104 Medium: water Electrical conductivity: > 300 µS/cm Temperature: 20 °C / 68 °F Operating pressure / 14.5 psig
Maximum measuring error	Down to 0,2% of the measured value ± 0.5 mm/s
Repeatability	DN 25...300: ±0.1% (v > 0.5 m/s / 1.5 ft/s)
Calibration / Verification	Standard: Each meter is calibrated before leaving the factory. Optional: Verification to Measurement Instrument Directive (MID), Annex MI-001
Temperature	
Process temperature	Refer to the technical datasheet of SharpFlow
Ambient temperature	-40 to +65 °C / -40 to +149 °F Ambient temperatures below - 25 °C / -13 °F may affect the readability of the display. It is recommended to protect the converter from external heat sources such as direct sunlight because high temperatures reduce the lifecycle of all electronic components.
Storage temperature	50 to +70 °C / -58 to +158 °F
Pressure	
Medium	Refer to the technical datasheet of SharpFlow
Chemical properties	
Physical conditions	Water: Drinking water, raw water, irrigation water
Electrical conductivity	≥20 µS/cm
Other conditions	
Protection category	C (compact version) in plastic housing: IP68 (NEMA 4X/6P) C (compact version) in aluminium housing: IP66/67 (NEMA 4/4X/6) F (remote version) in aluminium housing: IP66/67 (NEMA 4/4X/6) F (remote version) IP68 (NEMA 4X/6P) flow sensor (remote electronic converter)



AnyQuest / EverBlu Pulse Enhanced



EverBlu Collector



Our company is the world's leading provider of smart metering, data collection and utility software systems, with over 8,000 utilities worldwide relying on our technology to optimize the delivery and use of energy and water.

To realize your smarter energy and water future, start here: www.itron.com

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