



SharpFlow

Battery-powered electromagnetic water meter

SharpFlow is a static battery-powered electromagnetic meter. Available in nominal diameters from DN25 to DN300, it exists in compact or remote-read versions. Its IP68 water-resistance rating level enables it to be installed in flood areas and it can even be buried. SharpFlow is approved for commercial transactions as per European Directive MI-001. Its accuracy of measurement over a wide range of flows complies with European standard specifications ISO/EN and OIML.

BENEFITS

- » High accuracy over a wide range of flows
- » Compact
- » Display:
 - Instantaneous flow-rate display
 - Net, positive and reverse index
 - No water alarm

- » Battery service life: Up to 15 years*
- » Pulse output dedicated to instantaneous flow analysis

Advantages

- » Reduced maintenance
- » Low pressure drop
- » IP 68 rating
- » MID MI-001 & OIML R49 certification

- » Measuring possible in both directions
- » Fraud / flat battery / pipe empty alarms for remote reporting

*Under certain conditions

USE FOR DMA

By using SharpFlow in distribution systems, up to three times more water can be passed through it than with a standard mechanical counter of the same diameter.

Pulse output is directly proportional to the flow-rate for monitoring network behaviour.

Reverse volume and instantaneous flow values and a "no water" status can be viewed by the complete, customisable display unit. The accuracy of index display can be adjusted to the litre depending on the DN.

SharpFlow advantages

- » Higher flow rates allowed than with a mechanical meter of equivalent diameter
- » Numerous outputs available for connecting SharpFlow to different recording/analysing systems.
- » Flow-rate directly visible on the display unit
- » Low pressure loss

USE FOR CUSTODY TRANSFER PURPOSES

The absence of any moving parts limits wear and maintenance requirements. Metering accuracy remains stable throughout the unit's service life. In this way, volumes measured remain very close to real consumption over time.

In the context of MID certification, each unit is tested with water on a production bench certified as per European directives.

SharpFlow advantages

- » Measurement accuracy maintained over time
- » Custody transfer, MID Annex MI-001 type examination certificate

POTABLE OR RAW WATER (IRRIGATION / SAMPLING)

SharpFlow advantages

- » Sturdiness when used with raw water
- » Battery service life 15 years*
- » Compatible with Itron AMR solution like: WaterMind, Everblu, Anyquest

* Under certain conditions



Rectangular cross-section

Display

IP 68 convertor

- Model approved for commercial transactions
- Service life of battery up to 15 years

Military IP68 connector for connections to the following Itron systems:

- WaterMind
- EverBlu
- AnyQuest

Rilsan lining

The SharpFlow measuring pipe has a rectangular cross-section in order to increase the efficiency of the magnetic field and make the flow profile uniform.

The unit does not require any flow stabilizers and thereby reduces the space required for installing the unit.

With its Rilsan lining, the measuring pipe is corrosion, aging and abrasion resistant.

The SharpFlow meter is compatible with drinking water and complies with all regulations applicable to water and sewage industries.

2 versions available

- » Compact with the display unit directly on the measuring pipe
- » Remote reading up to 25 m away for installation in a manhole or simply for burying the measuring unit.

Sensor

| | |
|---|--|
| Internal surface lining | Rilsan |
| Electrode material | AISI 304 / option Hastelloy C22 |
| Earthing | Equipotentiality provided by the internal measurement electrodes |
| Internal geometry | Rectangular |
| Sensitiveness to hydraulic disturbances | U0/D0 in the sense of standard EN14154 |
| Maximum pressure allowed | Up to 40bar in option |
| Typical pressure drop | Maximum 0,5bar at Q3 |
| Index of protection | IP68 |

Display unit / Converter

Performances and characteristics identical in compact and remote reading versions

Measurement units available

| | |
|-------------|---|
| - Volume | m ³ (default), litre, gallon, imperial gallons, cubic feet, acre inch, acre feet |
| - Flow-rate | m ³ /h (default), l/s, GPM, Imperial GPM, Cu ft/h |

Displays available

| | |
|---------|---|
| - Digit | 99999999 |
| - Index | Forward, Net, Reverse (Only the "net" volume is displayed by default) |

| | |
|--------------------------|--|
| Frequency of measurement | 1-15s (15s by default) Frequency has a direct effect on the battery's service life |
|--------------------------|--|

| | |
|----------------------|---|
| Battery service life | 15 years (DN50-200) - 8 years (DN250-300) |
|----------------------|---|

Communication

| | |
|----------|--|
| - Pulse | Pulse output dedicated to instantaneous flow analysis Customizable pulse (weight/width) |
| - Status | 2 customizable status outputs (pipe empty / battery alarm / self-diagnosis) |

| | |
|---------------------|--|
| Index of protection | IP67 remote reading version / IP68 compact version |
|---------------------|--|

MID 2002/24/EC approvals as per OIML R49

EC examination certificate, MID type number: NMI T10402

Operating environment

| | |
|---------------------|-----------------|
| Water temperature | +0,1°C... +50°C |
| Ambient temperature | -10°C... +55°C |
| Storage temperature | -50°C... +65°C |

Fluid chemical properties

| | |
|-------------------------|-----------------------|
| Physical conditions | Raw or drinking water |
| Electrical conductivity | ≥ 20µS/cm |

Measuring accuracy

| | |
|-----------------------------|--|
| - Maximum measurement error | From 0.2% of the value measured ± 0.5 mm/s |
| - Repeatability | ±0.1% (v > 0.5 m/s / 1.5 feet/s) |

Compatible with AMR Itron solutions



WaterMind Advanced Logger



AnyQuest / EverBlu Pulse Enhanced



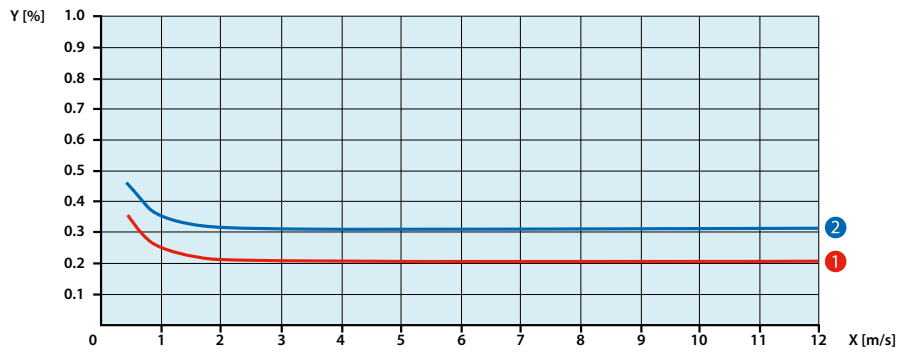
EverBlu Collector

MI-001 certified flow characteristics

| Nominal diameters (DN) | mm | 25 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
|----------------------------------|-------------------|-------|-------|--------|------|------|--------|--------|------|------|------|------|
| Maximum certified ratio* (Q3/Q1) | | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 |
| Minimum flow (Q1) | m ³ /h | 0,025 | 0,04 | 0,0625 | 0,1 | 0,1 | 0,1575 | 0,1575 | 0,25 | 0,25 | 0,4 | 0,4 |
| Transition flow (Q2) | m ³ /h | 0,04 | 0,064 | 0,1 | 0,16 | 0,16 | 0,252 | 0,252 | 0,4 | 0,4 | 0,64 | 0,64 |
| Permanent flow (Q3) | m ³ /h | 10 | 16 | 25 | 40 | 40 | 63 | 63 | 100 | 100 | 160 | 160 |
| Overload flow (Q4) | m ³ /h | 12,5 | 20 | 31,25 | 50 | 50 | 78,75 | 78,75 | 125 | 125 | 200 | 200 |
| Sampling interval | l | 0,01 | 0,01 | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 | 1 | 1 |

*Standard production ratio Q3/Q1= 80

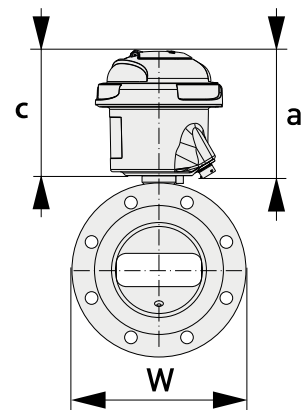
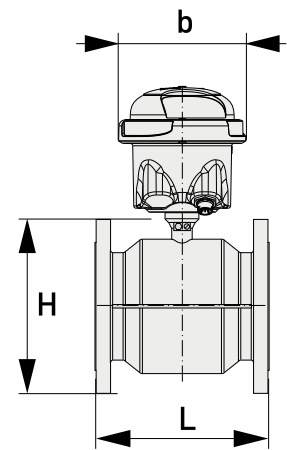
ACCURACY / PERFORMANCE



| 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 | 200 | 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 |



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