



This standard Intelligent Meter for Domestic or Household usage indeed is a very smart meter. The built-in length is only 165 mm, making this meter the smallest all-in-one smart meter available.

Type of this meter can be a **Qn 1.5** with a nominal flow of 1500 litres per hour and a maximum of 3000 litres per hour or a **Qn 2.5** with a nominal flow of 2500 litres per hour and maximum 5000 litres per hour. Dependent on the water pressure in the infrastructure, mostly the Qn 1.5 will be sufficient.

This type of meter is not a compound meter. It is a true digital compact meter with integrated bi-stable latched valve. Reversed water flow is not possible due to the keen design of flow meter and valve. Therefore a check-valve or non-return valve is redundant.

The meter measures over **100 pulses per litre** and we guarantee a resolution of 0.01 litre with an accuracy of 0.05 litre. This makes a big difference with competitive types because those can only measure with 1 pulse per litre or 1 pulse per 10 litre.

Batteries are used as power supply with a calculated lifespan of five years. Optional an external power supply can be used or our special hydro-generator. Mostly the meter is in an idle mode, consuming only 6 µA. When fully active 20 mA are drawn from the battery-pack. Open/Close cycles of the valve up to 3.5 million times with one battery pack.

Used plastic materials are ABS, POM and Poly Carbonate. Optional UV-resistant ASA can be used as a substitute for the ABS parts. The body of the flow meter is made of a non-stick material. Particles in the water, like lime, do not obstruct the flow part. Because of the slight elastic characteristics of materials used for the flow part, frozen water is not damaging the meter.

The electronics are state of the art and RoHS compliant (lead free). Potting the electronics is a standard procedure to protect them against humid and tropical environments. A build-in RISC based microprocessor measures and controls several sensors. Also tamper and fraud detection is build in. The valve is closed permanent when the enclosure is opened or when external applied electromagnetic fields are detected. Optional a bypass detection can be installed. To get the meter out of the Tamper mode, special ServiceTags are needed.

This meter does not have keys or buttons. To interact with the meter we use contact less wireless RFID-Transponder Tags. The meter itself also writes data back onto the Tag like meter readings and status of the meter. These results can be read into our Management Software for further analyses and statistics. The Tags used by the customer are called UserTags, which can be disposable or rechargeable. For service and maintenance of the meter you can use special ServiceTags. The final type of Tags we use are VendorTags for identification at our POS-Terminals.

Optional this meter can be equipped with the following:

- **GSM/GPRS module** for Automatic Meter Management. With this module you can retrieve meter data but also send commands to the meter using your mobile telecom provider. All you need is a SIM-card.
- **Wireless RF Module**, based on IEEE 802.15.4 protocol. Applicable for instance if the electronics are placed in your house and the meter itself is placed somewhere else. Several distance ranges are available.
- **Mini Hydro Generator**. During the flow of water, electric energy is generated which is sufficient for powering the meter.



## Mechanic Specifications:

- Qn 1.5 (nominal flow 1500 litres per hour, maximum flow 3000 litres per hour) or Qn 2.5 (nominal flow 2500 litres per hour, maximum flow 5000 litres per hour), Class B
- True digital meter, not derived from a mechanical counter;
- Pressure drop only 85 kPa, valve included; Operating pressure 1.6 MPa, maximum 2.0 MPa, tested at 4.0 MPa;
- Operating temperature according cold-water meters regulation Tmax 30°C safe up to 50°C
- Small built in length: only 165 mm, with a process connection of 1"; optional ¾" process connection with optional adapter;
- Strong non-stick durable plastics; no water particles stick to the flow compartment; used plastic materials are made of ABS, UV-resistant ASA, POM and Poly Carbonate;
- Unique design of the flow meter with integrated bi-stable latched valve; due to this design a check-valve or non-return valve is redundant;
- Flow compartment and Electronic compartment are separated mechanically
- Very accurate; measure resolution of 0.01 litre and accuracy of 0.05 litre

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## Electronic Specifications:

- Battery operated; estimated five years lifespan battery pack; storage battery-pack 20 years without deterioration; Open/Close valve 3.5 million times with one battery pack
- 2 line LCD DOT Matrix Display (alpha numeric)
- Low power consumption; only 6 µA in idle mode and 20 mA standby mode
- Potted electronics, RoHS compliant; resistive against humid and tropical environments
- Tamper and fraud proof; detection of external electromagnetic applied field, opening enclosure and option bypass
- Unique contact less RFID transponder technology capable of reading from and writing to a transponder;
- Individual tariffs, block tariffs and free water implemented;

## CONTACT DETAILS

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TagMeter Systems is a fast growing consortium with worldwide several production plants, local assembly plants, representatives, agents and partners worldwide. This is the way to guarantee that our products, sales, after-sales and commitment are secured at high standards.

Our proven references may confirm this.

Our own software departments are willing and able to implement tailor-made solutions and products.

Before installing a system we provide training and workshops to make sure that the product wanted is implemented the way you want.

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Systems



### PRODUCTION PLANT

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