

USM Ultrasonic Watermeter

Industrial Water Meter DN50-250



USM is an innovative , accurate and reliable ultrasonic water meter

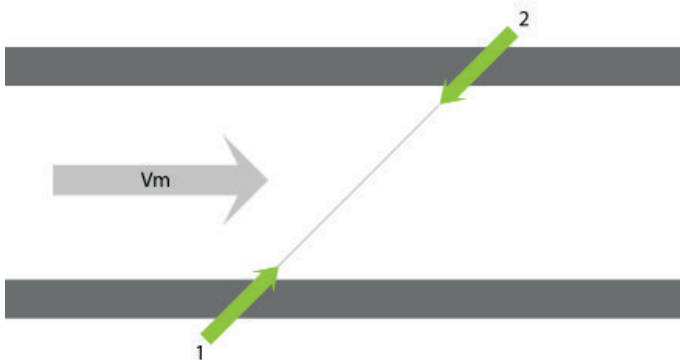
USM is an innovative, high-precision, maintenance-free - water meter equipped with the latest ultrasonic technology to read the water consumption in all areas of water supply.

The ultrasonic water meters have no moving parts, due to this fact the water meters are maintenance-free.

The ultrasonic meter can be read remotely and offers wired M-BUS interface for read-out.

Measuring principle of ultrasonic meters :

The USM water meter sends out ultrasonic waves. An ultrasonic wave in the same direction of water flow and one against the water flow. The ultrasonic wave that is sent in the same direction of water flow, is faster than that which was sent against the water flow. The flow times (from sensor 1 to sensor 2 and vice versa) are measured continuously. The time difference is directly proportional to the real flow velocity (V_m). The flow rate is thus a result of the velocity which is multiplied by the size of the meter.



Applications:

Water companies, waternetwork- grid providers, industrial and agricultural applications

Technical characteristics:

- High quality and long term reliability
- Robust mechanical design - IP68
- Insensitive to sediments and particulate material in water
- No magnetic interference
- Interface for remote meter reading
- Battery life approximately 10 years
- LCD display

Technical Specification:

Operational Pressure:	16 bar
Temperature range:	T50
Accuracy class:	Class 2
Power supply:	Li-Battery / approx. 10 years
Display:	integrated to unit
Protection:	IP 68
Connection::	Flange



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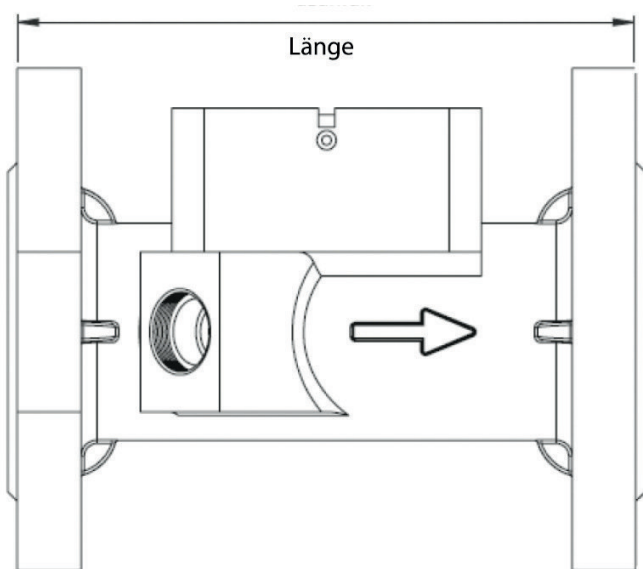
Interface:

- wired M-BUS
- Radio SubGHz

Dimension:

DN50 DN65 DN80 DN100 DN150 DN200 DN250

L_{length}: 200 200 220 250 250 250 250
F_{lange}: DN50 DN65 DN80 DN100 DN150 DN200 DN250



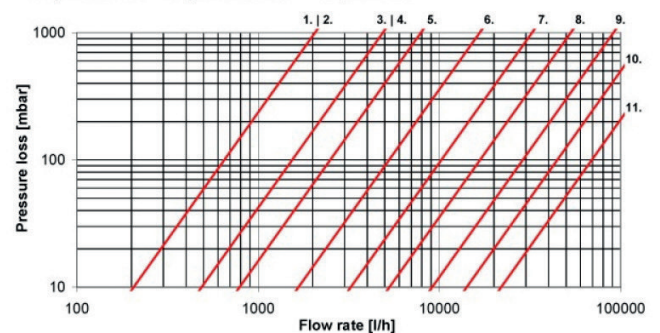
Performance:

DN50 DN65 DN80 DN100 DN150 DN200

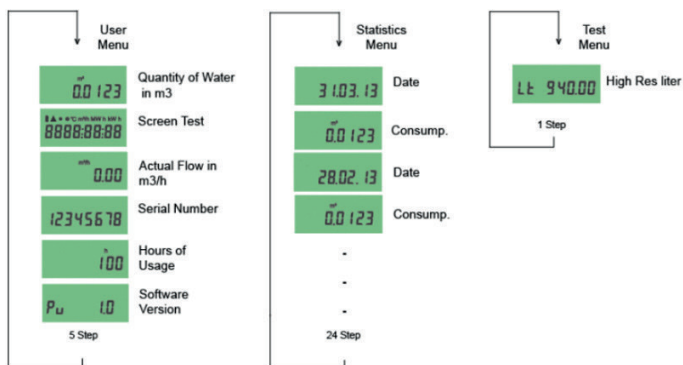
Q3 (m3/h)	40	63	100	160	250	400
Q4 (m3/h)	50	78,75	125	200	312,5	500
Q1 (m3/h)	0,127	0,2	0,3175	0,508	0,7937	1,2698
Q2 (m3/h)	0,0232	0,32	0,508	0,8128	1,270	2,032

Pressure Drop:

1. q₀ 0,6 | DN 15 4. q₀ 1,0/1,5 | DN 20 7. q₀ 10 | DN 40 10. q₀ 40 | DN 80
2. q₀ 0,6 | DN 20 5. q₀ 2,5 | DN 20 8. q₀ 15 | DN 50 11. q₀ 60 | DN 100
3. q₀ 1,0/1,5 | DN 15 6. q₀ 3,5/6 | DN 25/32 9. q₀ 25 | DN 65



Display:



Certificates:

MID 2004/22/EC
EN ISO 9001:2008
EN 14154



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