ULTRASONIC WATER METER

W01-WMUS-FT-001

Product data sheet · Water meters

Ultrasonic water meter with no moving parts, from DN 40 to DN 300, for drinking water networks, irrigation and industry. Cast iron, composite or stainless steel body, IP68, 16 bar, battery life up to 15 years, outputs and communication depending on option.



Technical data

Measuring principle	Transit-time ultrasonic, no moving parts
Diameters	DN 40 to DN 300 depending on material and connection
Connections	Threaded 1" 1/2 and 2", NPT, BSP or GAS fittings; ISO, BS 10 or ANSI 150 flanges
Maximum working pressure	16 bar
Water temperature	0.1 to 50 °C, class T30/T50
Accuracy class	ISO 4064:2014, class 2
Protection rating	IP68
Ambient temperature	-25 to +55 °C
Power supply	2 D-size lithium batteries, service life up to 15 years
Pressure loss	0.16 bar at Q3
Installation	U0/D0, pipeline always full
Water	Drinking water or clean water, free of suspended solids
Body	Epoxy-coated cast iron, 316 stainless steel or composite (reinforced polymer) depending on DN and version; stainless steel external bolts
Compliance	MID 2014/32/EU, OIML R49:2013, EN 14154, ISO 4064:2014, AWWA, WRAS, NSF, ACS, KTW, W-270



Cast iron, composite and stainless steel versions (left to right)

Description

The meter measures the flow rate and volume of clean water ultrasonically, by transit time. It has no moving parts. It measures in both flow directions: forward and reverse volumes and flow rates, depending on the configuration.

The built-in LCD display shows:

- the cumulative volume, on 12 digits;
- the instantaneous flow rate, on 4 floating-point digits, with configurable units;
- the flow direction and the pulse resolution;
- battery and measurement fault alarms.

A 48 KB data logger stores volumes and alarms, up to 4,130 points.

The body is available in epoxy-coated cast iron, composite or stainless steel, depending on the diameter. The diameter and flow direction are moulded on the body. Threaded versions cover DN 40 and DN 50, flanged versions DN 50 to DN 300.

Outputs and communication, depending on option

- 4–20 mA output: measured instantaneous flow rate, programmable 20 mA point.
- Pulse outputs: forward and reverse pulses, programmable resolution, alarms depending on configuration.
- Dry contacts or solid-state relays (SSR): two relay or electronic outputs depending on the version; on-site power supply 5 to 35 Vdc.
- Modbus or M-Bus: current flow rate, flow direction, forward and reverse volumes, alarms, real-time clock (RTC), units.
- NB-IoT, LoRaWAN or 169 MHz radio: remote meter reading of volumes, flow rates and alarms; NFC configuration depending on option.

Applications

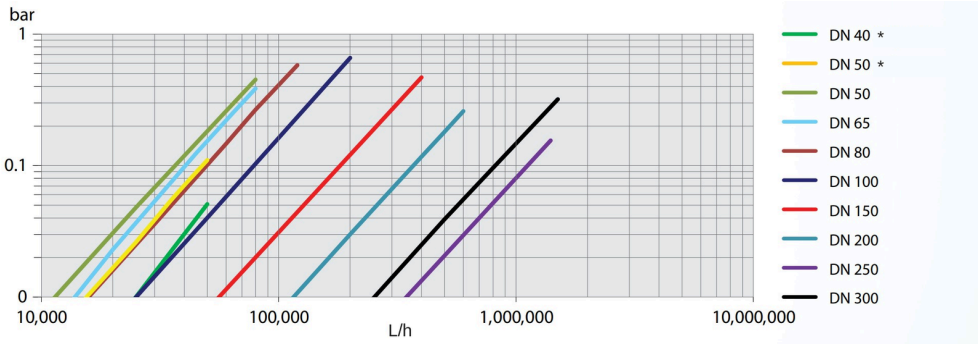
- Drinking water networks.
- Main metering and distribution metering.
- District metering of networks.
- Irrigation.
- Industrial processes.

Performance

Flow rate ranges by diameter

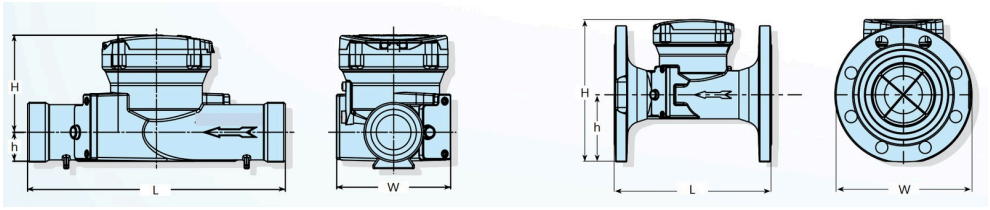
DN	Inlet / outlet	Nominal flow rate (m^3/h)	Max. flow rate (m^3/h)	Starting flow rate (L/h)	R (Q3/Q1)
40	1" 1/2	16	20	25	500
40	1" 1/2	40	50	25	250
50	2"	40	50	25	500
65	2" 1/2	40	50	25	500
80	3"	63	80	25	500
100	4"	100	125	25	500
150	6"	250	313	200	500
200	8"	400	500	200	500
250	10"	1000	1250	500	500
300	12"	1000	1250	500	500

Q3 = permanent flow (“Nominal flow rate” column), Q4 = overload flow rate (“Max. flow rate” column), R = Q3/Q1 measuring ratio. Temperature class T30/T50, installation U0/D0.



Pressure loss (bar) according to flow rate (L/h); * = composite version

Dimensions



Threaded version (left) and flanged version (right): dimensions L, W, H and h

Indicative dimensions and weights

DN	Inlet / outlet	L (mm)	W (mm)	H (mm)	h (mm)	Weight, cast-iron version (kg)	Weight, composite version (kg)	Weight, stainless-steel version (kg)
Threaded version								
40	1" 1/2	300	113	155	35		1.4	4
50	2"	300	113	155	35	8	1.45	4
Flanged version								
50	2"	200	165	194	40	9		6
65	2" 1/2	200	185	210	90	11.5		
80	3"	225	200	210	90	13		7
100	4"	250	220	223	103	15		9.5
150	6"	300	285	282	140	32		16
200	8"	350	340	332	165	45		
250	10"	450	406	383	203	68		
300	12"	500	489	456	245	96		

Installation

The pipeline must remain full of water. The water must be drinking water or clean water, free of suspended solids.

Related documents : W01-WMWT-FT-001, D05-AQUADOS-FT-001