AXIØMA METERING

Real Needs. Real Solutions.

Qalcosonic W2 Smart Valve

Application

Qalcosonic W2 accurately measures water consumption and enables remote water supply management through its integrated valve. It helps utilities secure timely payments and manage water infrastructure more efficiently, while giving users greater visibility into their water use.

- Static method of water flow measurement, no moving parts.
- High accuracy of water consumption.
- Eliminates measuring deviations caused by sand, suspended particles or air pockets.
- Long-term measurement stability and reliability.
- 10 digits, multi-line LCD. Total volume and instantaneous flow rate indication.
- Sensitive and accurate in low flows, down to 1 l/h.
- Failsafe mechanisms in place for every real-life scenario
- Configurable physical button on the housing.
- Daily consumption mode enables daily usage limit in litres.
- Valve health monitoring
- Configurable partial valve position.
- Equipped with NFC, wM- Bus, LoRa and NB-IoT technologies.

AMR Ready

- wM-Bus 433 or 868 MHz OMS T1
- LoRaWAN (EU863-870, AS923, AU915-928, US902-928, IN865-867 channel plans)
- NB-IoT (CoAP, DLMS)
- NFC

Parameterisation of the meter
NFC and optical interfaces on the top panel enable meter data reading and parameterisation

Valve and meter parameterisation is available over the air (COTA)

Meter FW update available over the air (FOTA)

Meter parameterisation and archive reading via NFC, optical interface or remotely

Technical features

Temperature class T30, T50, T30/90, T90
Nominal flow 1.6 / 2.5 / 4.0 m³/h
Wide measurement range Q_3/Q_1 = 80 / 160 / 250 / 315 / 400 / 500 / 800
No straight pipe sections required before or after the meter
Installation in any position
No measurement of air
Electromagnetic environment class E2 Mechanical environment class M1
Protection class IP68
Nominal pressure PN16
Internal datalogger
Maintenance free device, battery lifetime up to 16 years*
Bi-directional flow measurements
Flow direction indication
Meter parameterisation and archive reading via NFC, optical interface or remotely
Brass and composite body options
Tamper detection mechanism
Self-cleaning valve mechanism

* Depending on communication and valve settings

Data logger – history values

Hourly, daily, monthly values of the measured parameters are stored in internal memory.

Radio interface

Integrated radio communication allows data reading via wM-Bus telegram: 433 MHz or 868MHz OMS T1 mode, LoRaWAN or NB-IoT.

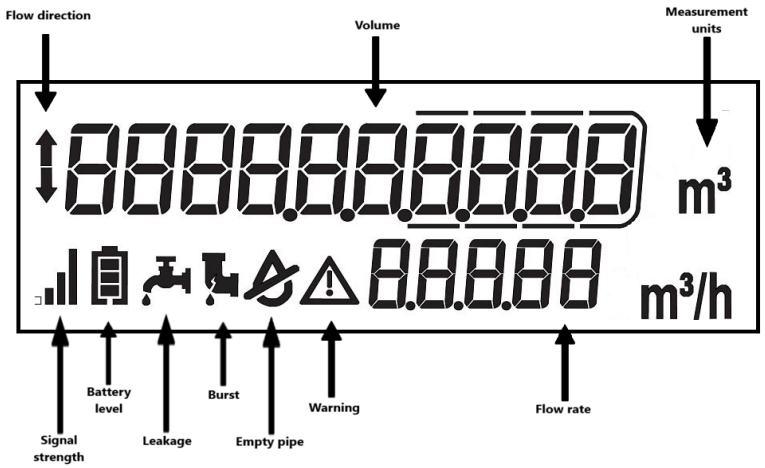
AMR interfaces, optional

LoRaWAN® NB-IoT M-Bus wireless

LCD indications and alarms

Multiple alarms and events, including:

- Flow direction indication;
- Battery level indication;
- Leakage;
- Burst;
- Backflow;
- Empty pipe;
- Signal strength;
- Warning indication;
- Low-temperature warning.



Technical data:

Flow sensor	Q_3 [m^3/h]	1.6 / 2.5 / 4.0
	R Q_3 / Q_1	80 / 160 / 250 / 315 / 400 / 500
	Water temperature	0,1 – 90°C
	LCD Display	10-digits
Flow measurement	Protection class [IP]	IP68
	Environmental class	B (Indoors) / O (Outdoors) / ISO 4064
	Ambient temperature	-15°C ... +70°C
	Installation position	All installation positions (vertically, horizontally, diagonally)
	Nominal pressure [bar]	PN16 bar
	Pressure loss	0.16 / 0.25 / 0.40
	Battery lifetime	Up to 16 years (depending on communication and valve settings)
	Units	m^3 – m^3/h

Nominal flow rate	**1,6**	**2,5**	**2,5**	**4,0**
Overall length, mm	110, 165	110, 165	130**, 165*, 190	130**, 165*, 190
Nominal diameter	**DN15**	**DN15**	**DN20**	**DN20**
Connection	G ¾"	G ¾"	G 1"	G 1"
Dynamic range R,Q_3/Q_1	80 / 160 / 250 / 315 / 400 / R500	80 / 160 / 250 / 400 / 500 / R800	80 / 160 / 250 / 400 / 500	80 / 160 / 250 / 400 / 500 / R800
Minimum flow rate Q_1, m^3/h	0,020 / 0,010 / 0,0064 / 0,005 / 0,004	0,031 / 0,0156 / 0,010 / 0,0062 / 0,005 / 0,0031	0,031 / 0,0156 / 0,010 / 0,0062	0,050 / 0,025 / 0,016 / 0,010 / 0,008 / 0,005
Transitional flow rate Q_2, m^3/h	0,032 / 0,016 / 0,010 / 0,008 / 0,0064	0,050 / 0,025 / 0,016 / 0,010 / 0,008 / 0,005	0,050 / 0,025 / 0,016 / 0,010	0,080 / 0,040 / 0,026 / 0,016 / 0,0128 / 0,008
Starting flow rate, m^3/h	0,001	0,001	0,001	0,002
Maximum flow rate Q_4, m^3/h	2,0	3,125	3,125	5,0

* – Composite only ** – Brass only

Size & dimensions:

DN15 / L [mm]: 110, 165
DN15 / connection: 3/4"

DN20 / L [mm]: 130**, 165*, 190
DN20 / connection: 1"