

# ULTRASONIC WATER METER

## QALCOSONIC W1



### APPLICATION

Ultrasonic water meter QALCOSONIC W1 is designed for accurate measurement of cold and hot water consumption in households, apartment buildings and small commercial premises.

- Static method of water consumption measurement, no moving parts
- High accuracy calculation of water consumption
- Eliminates measuring deviations caused by sand, suspended particles or air pockets.
- Long-term measurement stability and reliability
- 9 digits, multi-line LCD. Total volume and instantaneous flow rate indication
- Sensitive and accurate in low flows, down to 1l/h
- IoT and AMR, NFC, LoRa technology ready

### APPROVAL IN PROGRESS

- 2014/32/EU
- OIML R49 Compliant
- RoHS Directive Reach
- WRAS (UK)
- KTW (D)
- ACS (French Drinking Water Standard)

### TECHNICAL FEATURES

- Temperature class T30, T30/90, T90
- Nominal flow 1.6 / 2.5 / 4.0 m<sup>3</sup>/h
- Wide measurement range Q3/Q1 = R 250/400/800 (optional)
- No straight sections required
- Installation in any position
- No measurement of air
- Environment class E1/M1
- Protection class IP68
- Nominal pressure PN16
- Metering archive registration
- Maintenance free device, battery lifetime > 16 years
- Bi-directional flow measurements
- Flow direction indication
- Meter parametrisation and archive reading via NFC or optical interface
- Durable composite body
- Measurement units: m<sup>3</sup>-m<sup>3</sup>/h, Gal-GPM, ft<sup>3</sup>-ft<sup>3</sup>/h
- Strainer and back flow valve (optional)

### AMR READY (IN PROGRESS) OPTIONAL

- W-Mbus 868 (433)MHz. OMS T1; S1
- LoRa WAN
- SigFox
- NFC

### PARAMETRISATION OF THE METER

- NFC and optical interface is integrated into the top front panel of calculator. It is designed for data reading via M-bus protocol and parameterisation of the meter

### PULSE AND MBUS OUTPUT:

- Pulse and Mbus output option is available via optical interface by means of add clamp-on module

### RADIO INTERFACE

- The internal radio provides data reading via WMBUS telegram: 868/433MHz. S1, T1 OMS mode, LoRa WAN, SigFox (optional)

### DATA REGISTRATION

- Total volume
- Forward volume
- Reverse volume
- Maximum flow rate value and date
- Minimum flow rate value and date
- Operating time without an error
- Operating time
- Error code
- Temperature indication

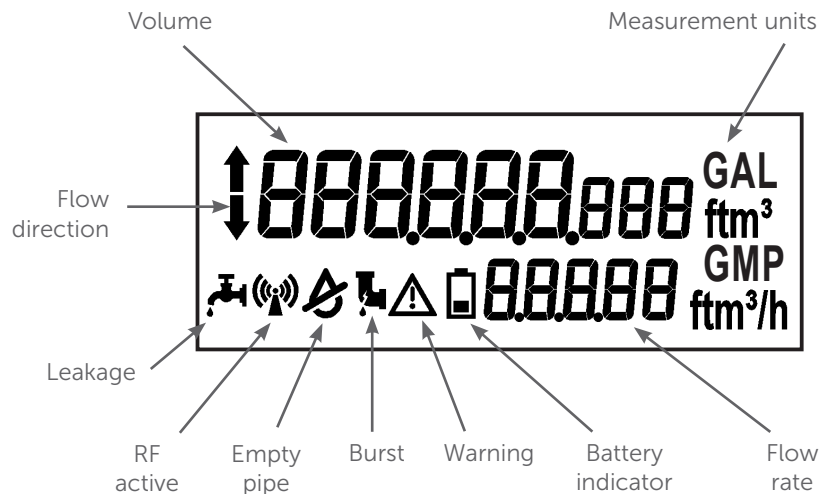
### DATA LOGGER – HISTORY VALUES

- Hourly, daily, monthly values of the measured parameters are stored in internal memory
- All data from archive can be read by means of the remote reading

### LCD INDICATIONS AND ALARMS

MULTIPLE SETTABLE ALARMS AND EVENTS INCLUDES:

- Flow direction indication
- Battery level indication
- Leakage
- Burst
- Backflow
- Empty pipe
- Radio communication
- Warning indication
- Temperature indication (special configuration)



### TECHNICAL DATA:

Flow rate sensor	Q3 [m3/h]	1.6 / 2.5 / 4.0
	R Q3 / Q1	Q3 1.6: 400 Q3 2.5: 400 / 800 Q3 4.0: 800
	Medium Temp. (operating temperature)	0 – 90 °C
	LCD Display	9-digits
Flow measurement	Protection class [IP]	IP68
	Ambient class	Class C / EN 14 154
	Ambient temperature	+5 °C...+65 °C
	Installation position	All installation positions (vertical, horizontal, rising pipe, down pipe)
	Nominal pressure [bar]	PN16 bar
	Pressure loss	0.63 / (0.25) bar
	Battery lifetime	16 years
	Units	m <sup>3</sup> /h - l/h - m <sup>3</sup> - GAL - ft <sup>3</sup> - GMP - ft <sup>3</sup> /h

## TECHNICAL DATA:

Permanent $Q_3$ , m <sup>3</sup> /h	R $Q_3/Q_1$	Maximum $Q_4$ , m <sup>3</sup> /h	Minimum $Q_1$ , m <sup>3</sup> /h	Transitional $Q_2$ , m <sup>3</sup> /h	Starting flow m <sup>3</sup> /h	Connections	Overall length, mm	$\Delta P$
1,6	R400	2	0,004	0,006	0,001	G3/4" (DN15)	80, 105, 110, 165, 170	$\Delta P$ 25
2,5	R800	3,125	0,003	0,05	0,001	G3/4" (DN15)	80, 105, 110, 165, 170	$\Delta P$ 63
2,5	R400	3,125	0,006	0,01	0,002	G1" DN20	105, 110, 130, 190	$\Delta P$ 25
4	R800	5	0,05	0,009	0,002	G1" DN20	105, 110, 130, 190	$\Delta P$ 63

## SIZE AND DIMENSIONS:

DN [mm]	15	20
L [mm]	80, 105, 110, 165, 170	105, 110, 130, 190
H [mm]	69,5	74,1
G	3/4"	1"

