

# 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 flow 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

### APPROVALS

- MID 2014/32/EU
- ACS (France)
- DL 174/2004 (Italy)
- KIWA (The Netherlands)
- PHZ (Poland)
- NMI 14/3/43 (Australia)

- OIML R49 Compliant
- RoHS Directive Reach

### APPROVALS IN PROGRESS

- WRAS (UK)
- KTW / DVGW (D)
- NSF61 (USA)
- AWWA (USA)
- WaterMark (Australia)

### TECHNICAL FEATURES

- Temperature class T30, T50, T30/90, T90
- Nominal flow 1.6 / 2.5 / 4.0 m<sup>3</sup>/h
- Wide measurement range  
Q<sub>3</sub>/Q<sub>1</sub> = R 250/400/800 (optional)
- No straight sections required
- Installation in any position
- No measurement of air
- Environment class E2/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 (optional)
- Strainer and back flow valve (optional)

#### AMR READY

- W-MBus 868 MHz, OMS T1; S1
- LoRa WAN
- 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

#### RADIO INTERFACE

- The internal radio provides data reading via WMBUS telegram: 868 MHz. S1, T1 OMS mode, LoRa WAN

#### 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

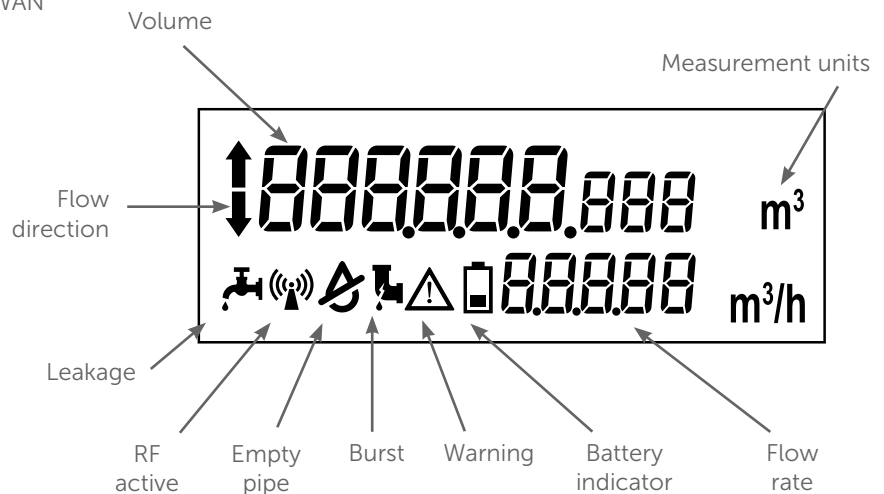
#### DATA LOGGER – HISTORY VALUES

- 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 ALARM

MULTIPLE ALARMS AND EVENTS, INCLUDING:

- 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 [m <sup>3</sup> /h]	1.6 / 2.5 / 4.0
	R Q3 / Q1	Q3 1.6: 250 / 315 Q3 2.5: 250 / 400 Q3 4.0: 250 / 400 / 800
	Medium Temp. (operating temperature)	0,1 – 90 °C
	LCD Display	9-digits
Flow measurement	Protection class [IP]	IP68
	Ambient class	Class C / EN 14 154
	Ambient temperature	-15 °C ... +70 °C
	Installation position	All installation positions (vertical, horizontal, rising pipe, down pipe)
	Nominal pressure [bar]	PN16 bar
	Pressure loss	0.25 / 0.40
	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 optional)

**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	R315	2	0,005	0,008	0,001	G3/4" (DN15)	80, 105, 110, 165, 170	$\Delta P$ 25
2,5	R400	3,125	0,0063	0,01	0,001	G3/4" (DN15)	80, 105, 110, 165, 170	$\Delta P$ 40
2,5	R400	3,125	0,0063	0,01	0,001	G1" (DN20)	105, 110, 130, 165, 190	$\Delta P$ 25
4	R400	5	0,01	0,016	0,002	G1" DN20	105, 110, 130, 165, 190	$\Delta P$ 40
4	R800	5	0,005	0,008	0,002	G1" DN20	105, 110, 165, 130, 190	$\Delta P$ 40

**SIZE AND DIMENSIONS:**

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

