

# 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 m³/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 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:  $m^3-m^3/h$ , Gal-GPM,  $ft^3-ft^3/h$  (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

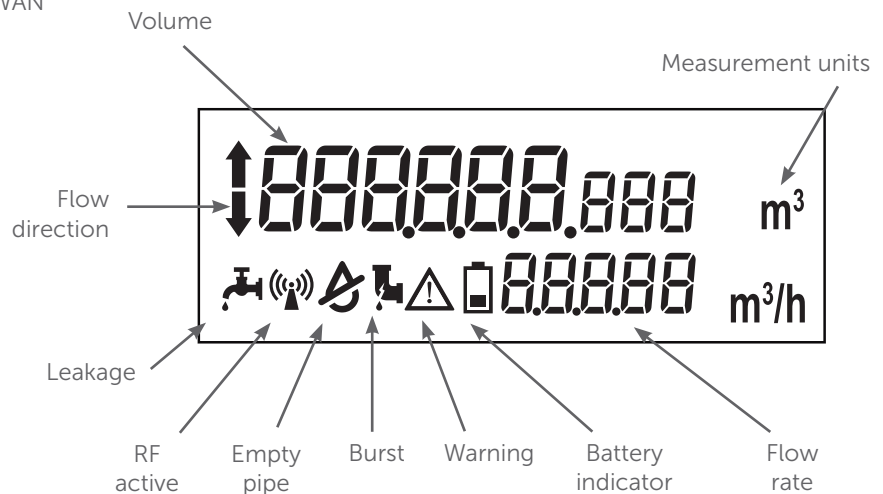
#### DATA LOGGER – HISTORY VALUES

- 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:

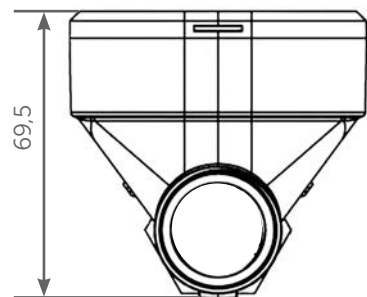
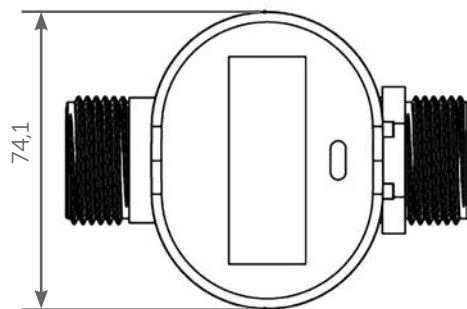
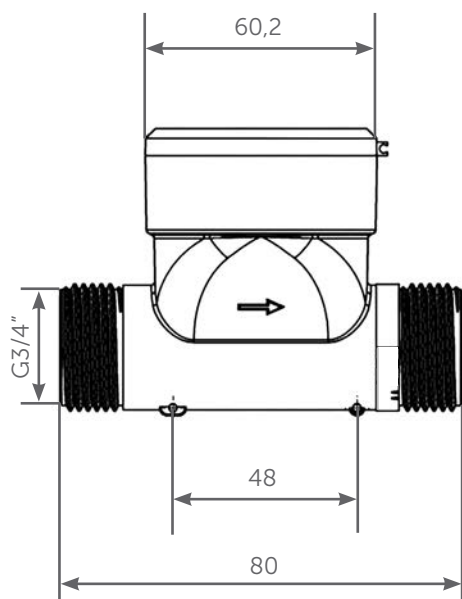
Flow rate sensor	Q3 [ $m^3/h$ ]	1.6 / 2.5 / 4.0
	R Q3 / Q1	Q3 1.6: 250 / 315 Q3 2.5: 250 / 400 Q3 4.0: 250 / 400 / 800
	Medium Temp. (operating temperature)	0,1 – 90 °C
	LCD Display	9-digits
Flow measurement	Protection class [IP]	IP68
	Ambient class	Class C / EN 14 154
	Ambient temperature	-15 °C ... +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	$m^3/h$ - l/h - $m^3$ , (GAL - $ft^3$ - GMP - $ft^3/h$ 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	R250	2	0,0064	0,010	0,001	G3/4" (DN15)	80, 105, 110, 165, 170	$\Delta P 25$
1,6	R315	2	0,005	0,008	0,001	G3/4" (DN15)	80, 105, 110, 165, 170	$\Delta P 25$
1,6	R400	2	0,004	0,0064	0,001	G3/4" (DN15)	80, 105, 110, 165, 170	$\Delta P 25$
2,5	R250	3,125	0,010	0,016	0,001	G3/4" (DN15)	80, 105, 110, 165, 170	$\Delta P 40$
2,5	R400	3,125	0,0063	0,010	0,001	G3/4" (DN15)	80, 105, 110, 165, 170	$\Delta P 40$
2,5	R800	3,125	0,0031	0,005	0,001	G3/4" (DN15)	80, 105, 110, 165, 170	$\Delta P 40$
2,5	R250	3,125	0,010	0,016	0,001	G1" (DN20)	105, 110, 130, 165, 190	$\Delta P 25$
2,5	R400	3,125	0,0063	0,010	0,001	G1" (DN20)	105, 110, 130, 165, 190	$\Delta P 25$
4	R250	5	0,016	0,026	0,002	G1" (DN20)	105, 110, 130, 165, 190	$\Delta P 40$
4	R400	5	0,010	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, 130, 165, 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"





fieldsmart technology



AXIOMA



ADRwater

**AUCKLAND**  
8 BEATRICE TINSLEY CRES  
ROSEDALE 0632  
PO BOX 302-248, NORTH HARBOUR  
AUCKLAND 0751  
T: (09) 444 2350 F: (09) 444 3085

**HAMILTON**  
1/21 RAILSIDE PLACE  
DINSDALE 3204  
PO BOX 230  
RAGLAN 3265  
T: (07) 846 0602 F: (07) 846 0604

**WELLINGTON HEAD OFFICE**  
137 THORNDON QUAY  
WELLINGTON 6011  
PO BOX 3749  
WELLINGTON 6140  
T: (04) 472 7614 F: (04) 472 7658

**CHRISTCHURCH**  
UNIT 4, 89 VICKERYS ROAD  
WIGRAM 8042  
PO BOX 11 033, SOCKBURN  
CHRISTCHURCH 8443  
T: (03) 379 2628 F: (03) 379 2627