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

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- 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
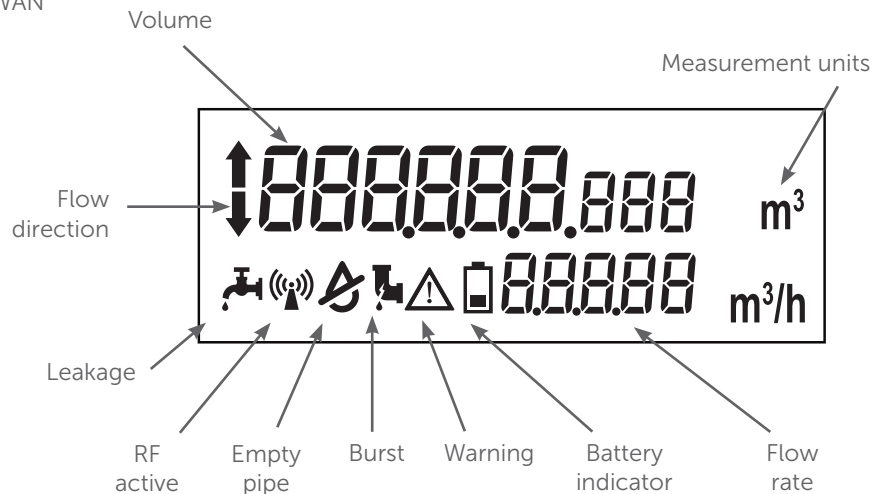- Operating time
- Error code
- Temperature indication

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 ºC
	LCD Display	9-digits
Flow measurement	Protection class [IP]	IP68
	Ambient class	Class C / EN 14 154
	Ambient temperature	-15 ºC ... +70 ºC
	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)

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TECHNICAL DATA:

Permanent Q_3, m³/h	R Q_3/Q_1	Maximum Q_4, m³/h	Minimum Q_1, m³/h	Transitional Q_2, m³/h	Starting flow m³/h	Connections	Overall length, mm	ΔP
1,6	R250	2	0,0064	0,010	0,001	G3/4" (DN15)	80, 105, 110, 165, 170	ΔP 25
1,6	R315	2	0,005	0,008	0,001	G3/4" (DN15)	80, 105, 110, 165, 170	ΔP 25
1,6	R400	2	0,004	0,0064	0,001	G3/4" (DN15)	80, 105, 110, 165, 170	ΔP 25
2,5	R250	3,125	0,010	0,016	0,001	G3/4" (DN15)	80, 105, 110, 165, 170	ΔP 40
2,5	R400	3,125	0,0063	0,010	0,001	G3/4" (DN15)	80, 105, 110, 165, 170	ΔP 40
2,5	R800	3,125	0,0031	0,005	0,001	G3/4" (DN15)	80, 105, 110, 165, 170	ΔP 40
2,5	R250	3,125	0,010	0,016	0,001	G1" (DN20)	105, 110, 130, 165, 190	ΔP 25
2,5	R400	3,125	0,0063	0,010	0,001	G1" (DN20)	105, 110, 130, 165, 190	ΔP 25
4	R250	5	0,016	0,026	0,002	G1" (DN20)	105, 110, 130, 165, 190	ΔP 40
4	R400	5	0,010	0,016	0,002	G1" (DN20)	105, 110, 130, 165, 190	ΔP 40
4	R800	5	0,005	0,008	0,002	G1" (DN20)	105, 110, 130, 165, 190	ΔP 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"

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