QALCOSONIC

W1

SMART ULTRASONIC WATER METER

/B design/ DN15-20

APPLICATION

Ultrasonic water meter **QALCOSONIC W1** is designed for accurate measurement of cold and hot water consumption in households, apartment buildings, and 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 1 l/h;
- Ready for AMR with NFC, wM-Bus, LoRa technologies.

AMR READY

- wM-Bus 433 or 868 MHz OMS T1;
- LoRaWAN (EU863-870, AS923, AU915-928,
- NB-IoT (CoAP);
- NFC.

PARAMETERISATION OF THE METER

NFC and optical interfaces are integrated into the top panel of the meter. They can be used for data reading and parameterisation of the meter.

APPROVALS

- MID (2014/32/EU);
- LoRa WAN compliance certificate;
- OMS compliance certificate;
- WRAS (UK);
- ACS (France);
- ICI (Italy);
- AS4020

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 80 / 160 / 250 / 315 / 400 / 500 / 800 (optional);
- No straight pipe sections required before or after the meter;
- Installation in any position;
- No measurement of air;
- Environment class E2/M1;
- Protection class IP68;
- Nominal pressure PN16;
- Minimum pressure 0.3 bar
- 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 or optical interface;
- Durable composite body.

** - depending on communication 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: 433MHz OMS T1 mode, LoRaWAN.

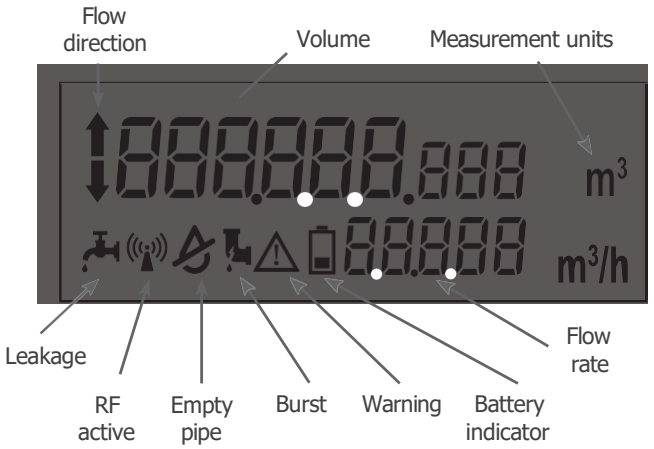
AMR INTERFACES, OPTIONAL

LoRaWAN CERTIFIED™ M-Bus wireless NB-IoT

LCD INDICATIONS AND ALARMS

MULTIPLE ALARMS AND EVENTS, INCLUDING:

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



TECHNICAL DATA:

Flow sensor	Q3 [m³/h]	1.6 / 2.5 / 4.0
	R Q3 / Q1	80 / 160 / 250 / 315 / 400 / 500 / 800
	Water temperature	0,1 – 900C
	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 (vertically, horizontally, diagonally)
	Nominal pressure [bar]	PN16 bar
	Pressure loss	0.16 / 0.25 / 0.40
	Battery lifetime	up to 16 years LoRa/wM-Bus (depending on communication settings)
	Units	m³ - m³/h

Nominal flow rate Q3, m³/h	**1,6**					**2,5**						**4,0**									
Overall length, mm	110					110					105, 130, 165, 190					105, 130, 165, 190					
Nominal diameter	**DN15**					**DN15**					**DN20**					**DN20**					
Connection	G ¾"					G ¾"					G 1"					G 1"					
Dynamic range R, Q3/Q1	80	160	250	315	400	80	160	250	400	500	800	80	160	250	400	80	160	250	400	500	800
Minimum flow rate Q1, m³/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 Q2, m³/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, m³/h	0,001					0,001						0,001				0,002					
Maximum flow rate Q4, m³/h	2,0					3,125						3,125				5,0					
Pressure loss class Δp, bar x 100*	Δp16					Δp25						Δp16				Δp25					

** - for direct flow, without optional strainer*

SIZE AND DIMENSIONS:

DN [mm]	15	20
L [mm]	110	105, 130, 165, 190
Connection	3/4"	1"

QALCOSONIC

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SMART ULTRASONIC WATER METER

DN25-50

APPLICATION

Ultrasonic water meter **QALCOSONIC W1** is designed for accurate measurement of cold and hot water consumption in households, apartment buildings, and 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 3 l/h;
- Ready for AMR 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);
- NFC.

PARAMETERISATION OF THE METER

NFC and optical interfaces are integrated into the top panel of the meter. They can be used for data reading and parameterisation of the meter.

APPROVALS

- MID (2014/32/EU);
- OIML R49;
- LoRa WAN compliance certificate;
- OMS compliance certificate;
- WRAS (UK);
- ACS (France);
- ICIM (Italy);
- KIWA (the Netherlands).
- AS4020

TECHNICAL FEATURES

- Temperature class T30, T50, T30/90, T90;
- Nominal flow 6.3 / 10 / 16 / 25 / 40 m³/h;
- Wide measurement range Q3/Q1 = R 80 / 160 / 250 / 400 / 500 / 800 (optional);
- No straight pipe sections required before or after the meter;
- Installation in any position;
- No measurement of air;
- Environment class E2/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 or optical interface;
- Durable composite body.

** - depending on communication 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 CERTIFIED™

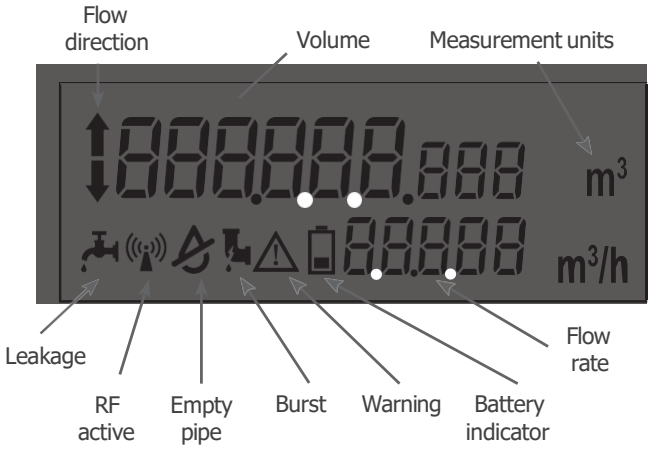
M-Bus wireless

NB-IoT

LCD INDICATIONS AND ALARMS

MULTIPLE ALARMS AND EVENTS, INCLUDING:

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



TECHNICAL DATA:

Flow sensor	Q3 [m³/h]	6.3 / 10 / 16 / 25 / 40
	R Q3 / Q1	80 / 160 / 250 / 400 / 500 / 800
	Water temperature	0,1 – 900C
	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 (vertically, horizontally, diagonally)
	Nominal pressure [bar]	PN16 bar
	Pressure loss	0.16 / 0.25 / 0.40 / 0.63
	Battery lifetime	up to 16 years LoRa/wM-Bus version, up to 13 years NB-IoT version (depending on communication settings)
	Units	m³- m³/h

Nominal flow rate Q3, m³/h	**6,3**									**10,0**										
Overall length, mm	260					260				260										
Nominal diameter	**DN25**					**DN32**				**DN25**						**DN32**				
Connection	G 1 ¼"					G 1 ½"				G 1 ¼"						G 1 ½"				
Dynamic range R, Q3/Q1	80	160	250	400	800*	80	160	250	400	80	160	250	400	500	800*	80	160	400	500	800*
Minimum flow rate Q1, m³/h	0,079	0,040	0,0252	0,016	0,080	0,079	0,040	0,0252	0,016	0,125	0,0625	0,040	0,025	0,0126	0,0125	0,125	0,0625	0,025	0,0202	0,0125
Transitional flow rate Q2, m³/h	0,126	0,063	0,040	0,0252	0,013	0,126	0,063	0,040	0,0252	0,200	0,100	0,064	0,040	0,0202	0,020	0,200	0,100	0,040	0,032	0,020
Starting flow rate, m³/h	0,003					0,005				0,003						0,005				
Maximum flow rate Q4, m³/h	7,875					7,875				12,5						12,5				
Pressure loss class Δp, bar x 100**	Δp25					Δp16				Δp63						Δp25				

Nominal flow rate Q3, m³/h	**10,0**			**16,0**						**25,0**										
Overall length, mm	300			300						300				300						
Nominal diameter	**DN40**			**DN40**						**DN50**				**DN40**						
Connection	G 2"			G 2"						DN50				G 2"						
Dynamic range R, Q3/Q1	80	160	250	80	160	250	400	500	800*	80	160	250	400	80	160	250	400	500	800*	
Minimum flow rate Q1, m³/h	0,125	0,0625	0,0625	0,200	0,100	0,064	0,040	0,032	0,020	0,200	0,100	0,064	0,040	0,3125	0,156	0,100	0,0625	0,050	0,0312	
Transitional flow rate Q2, m³/h	0,200	0,100	0,100	0,032	0,016	0,102	0,064	0,0512	0,032	0,032	0,016	0,102	0,064	0,500	0,250	0,160	0,100	0,080	0,050	
Starting flow rate, m³/h	0,01			0,01						0,016				0,01						
Maximum flow rate Q4, m³/h	12,5			20,0						20,0				31,25						
Pressure loss class Δp, bar x 100**	Δp16			Δp16						Δp16				Δp16						

* - T30 temperature class only ** - for direct flow, without optional strainer

TECHNICAL DATA:

Nominal flow rate Q3, m³/h	25,0						40,0					
Overall length, mm	300						300					
Nominal diameter	DN50						DN50					
Connection	DN50						DN50					
Dynamic range R, Q3/Q1	80	160	250	400	500	800*	80	160	250	400	500	800*
Minimum flow rate Q1, m³/h	0,3125	0,156	0,100	0,0625	0,0312	0,0312	0,5	0,25	0,16	0,1	0,080	0,05
Transitional flow rate Q2, m³/h	0,500	0,250	0,160	0,100	0,050	0,050	0,8	0,4	0,256	0,16	0,128	0,08
Starting flow rate, m³/h	0,016						0,016					
Maximum flow rate Q4, m³/h	31,25						50,00					
Pressure loss class Δp, bar x 100**	Δp16						Δp16					

* - T30 temperature class only
** - for direct flow, without optional strainer

SIZE AND DIMENSIONS:

DN [mm]	25	32	40	50**
L [mm]	260	260	300	300
Connection	G 1 ¼"	G 1 ½"	G 2	DN50

* - T30 temperature class only

DN50 Flange AS4087