ASIONIC®

400W, 400S & 400SW

ASIONIC EQUIPMENTS

Battery Operated
Ultrasonic water meter

FEATURES

- Wear Free Ultrasonic Technology with RF / GPRS / GSM / WMBUS / Zigbee / RS485 Connectivity
- Bidirectional Flow Measurement
- Long Battery Life
- Low Pressure Drop
- Compatible with automatic reading system
- In accordance with OIML R-49 and ISO 4064
- OMS Facility Available
- For Clear Potable Water

400W, 400S & 400SW

ASIONIC® 400W, 400S & 400SW a state-of-the-art ultrasonic water meter with the latest design features the UltraSonic Technology, a unique metering method. The Ultrasonic Technology enables meter readings in the R100,R160, R250, R400 and R500 range with the starting flow already from 6 l/h (at DN15).
The meter is made to the highest quality standards and all materials in contact with water are free from heavy metals (for the composite meter body). The water meter is rated at IP67/IP68 and with a high resistance to hydraulic shock and magnetic interference. The measurement chamber is designed to provide the water meter with insensitivity to hydraulic shock. The ultrasonic measurement technology of the water meter is completely impervious to interference from magnetic fields.

APPLICATION

Cold water supply systems with the maximum water temperature of 5 to 60°C, requiring reliable water consumption metering and reliable data communication methods, including remote meter reading over GSM/GPRS or RF. The water meter can be installed in any orientation and does not require upstream and downstream sections of straight piping.

ASIONIC® 400W/400S/400SW

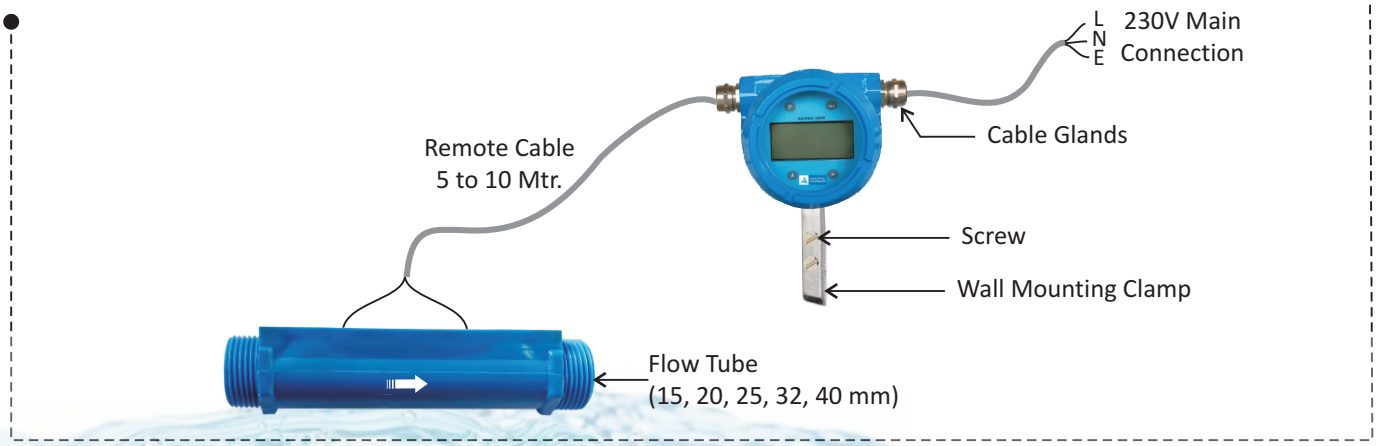
ADVANTAGES

ADVANTAGES

PROVIDES SAVINGS

- High-precision measurement improve efficiency of water use:
  the water meter can detect all leaks in the supply system below set low flow rate.
- No moving parts for a high resistance to fouling: cost-free inspection and maintenance
- No upstream or downstream straight sections of piping required
- Compact size for easy installation in confined spaces
- Robust design and minimum electrical power demand for a stable, long-term operation
- A wide measurement range with immunity to electrical conductivity of metered water
  (as required for electromagnetic water meter systems)
- Extremely low pressure loss (and a low resistance to flow)

ASIONIC 400W WITH REMOTE CABLE CONNECTION



ADVANTAGES

CONVENIENT IN OPERATION

- Standard IP67-IP68 rated hermetically sealed body
- No risk of physical wear of the measurement chamber components, even during continuous operation at high flow rates
- MAP: 10 bar
- Body material: Hard ABS Plastic, SS, MSor composite & MS Composite
- Resistant to strong magnetic fields
- Resistant to hydraulic shock
- Highly resistant to overload flow rate, Q_4

MEASUREMENT ACCURACY

- Optimized measurement range: up to R500 in every operating orientation (H, V, and H/V)
- Starting flow already from 6 LPH at DN15
- Stable measurement system performance by insensitivity to fouling
- Back flow measurement enabled by a symmetrical structure and the applied measurement algorithms

ENVIRONMENTALLY FRIENDLY

- Extremely low power usage when in operation
- Very low lithium content: Li < 1.5 g
- Maximum design battery life of 8 years (depending on the configuration and environmental conditions)
- No heavy metals in the materials in contact with potable water (for the composite meter body)
- Low energy output at the water supply side (the unit pressure drop across the water meter is 0.17 bar at DN40 for Q_3)
- A measurement range up to R500 is also available for the water meter
  installation length L = 110 ,130,160,180mm
- Very low weight: low costs of transport

INNOVATIVE

The ASIONIC® 400W, 400S & 400SW water meter features a unique measurement system:
it emits an ultrasonic beam across the measurement chamber, which results in steady indications and errors in the whole measurement range. This is the ULTRASONIC Technology which includes distinctive characteristics:

- With its unique ultrasonic beam pattern, the asionic 400w/400s can be much more compact than other metering systems
- The full-bore design does not entrap any fouling or solids
- Insensitive to measurement bias from water contamination
- Sophisticated control algorithms of the ultrasonic beam system provide compensation for component ageing
- Requires no filters or check valves

REGULATORY AND STANDARD COMPLIANCE

- Comply With OIML R49:2013 – Water meters for cold potable water and hot water
- Comply with ISO 4064:2014

ASIONIC® 400W/400S/400SW

FEATURES

ASIONIC® 400W
DN15 L : 80 mm
DN15 L : 110 mm
DN15 L : 115 mm
DN15 L : 165 mm

ASIONIC® 400S
DN20 L : 110 mm

ASIONIC® 400SW
DN20 L : 110 mm

Communication

- RF (radio-frequency) reading of indications compatible with LORA, WMBUS, OMS, RS485 & PULSE
- RF indication reading for walk-by and drive-by reading systems and stationary reading systems without any reconfiguration required

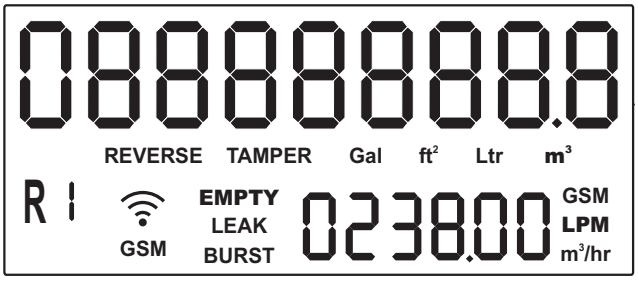
RF READING

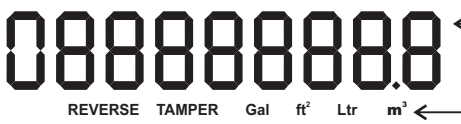
- The water meter has an integrated RF data communication module for easy and efficient remote reading.
- Device-level RF data frame encryption (OMS-compliant)
- Data transmission: previous month's consumption, current month's con- sumption, And actual (live) consumption data
- Alarms:
  – Reverse flow
  – Meter leak
  – Pipe empty
  – Tampering detected
  – Low battery

ASIONIC® 400W/400S/400SW

DISPLAY DETAILS

ASIONIC® 400W





Totaliser

Totaliser Unit

Water meter indication in m3

Flow

Flow Unit

Water meter Flow

ASIONIC® 400SW

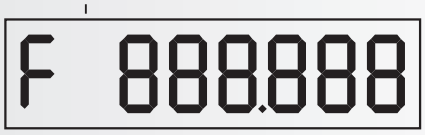
R I Revision Number

GSM RF Transmission ON

EMPTY
LEAK
BURST Empty Pipe Indication

DISPLAY DETAILS

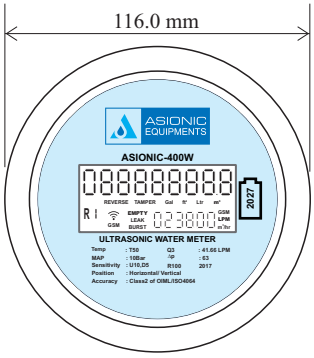
ASIONIC® 400S



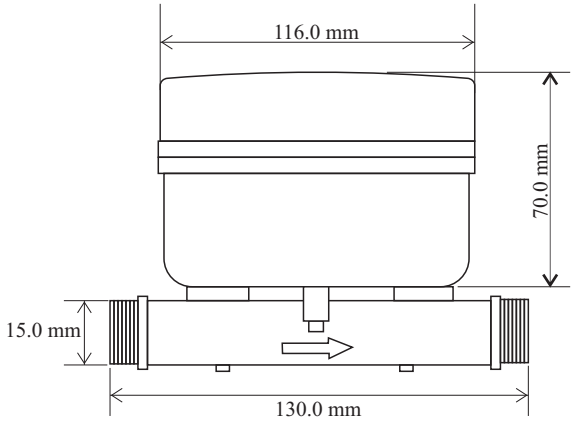
ASIONIC 400S display is toggling between flow rate and totaliser

ASSEMBLY OVERVIEW

Note : Actual product may slightly differ from represented image



Top View



Front View

Dimensional Details

Line Size		Length 'L' (mm)	Overall Height 'H'(mm)	Width 'W'(mm)	Weight (Kg)	Threads/Flanged
Inch	NB					
½"	15	130	135	95	0.98	BSP
¾"	20	130	135	95	0.95	BSP
1"	25	160	140	95	1.2	BSP
1¼"	32	160	145	95	1.3	BSP
1½"	40	160	150	95	1.5	BSP
2"	50	200	160	95	2	BSP
2"	50	210	160	95	4.5	SS Flanged

Flow Rate Performance Data

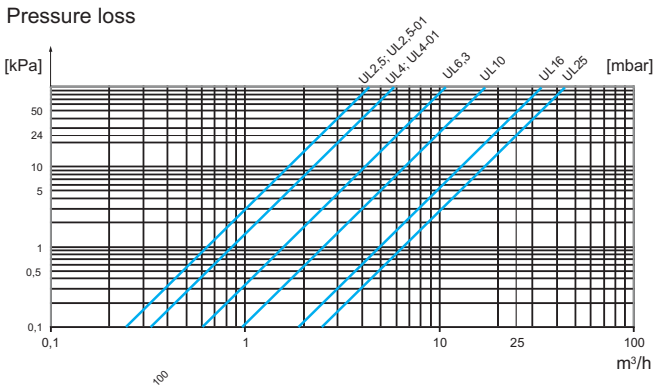
Q4 (m^3/hr)		Q3 (m^3/hr)		Q2 (m^3/hr)		Q1 (m^3/hr)		R
2	3.125	1.6	2.5	0.0048	0.008	0.003	0.0050	500
3.125	5	2.5	4	0.008	0.013	0.0050	0.008	500
5	7.875	4	6.3	0.013	0.0202	0.008	0.0126	500
7.875	12.5	6.3	10	0.0202	0.032	0.0126	0.02	500
12.5	20	10	16	0.032	0.051	0.02	0.032	500
20	24	16	20	0.051	0.064	0.032	0.04	500
20	24	16	20	0.051	0.064	0.032	0.04	500

TECHNICAL SPECIFICATIONS

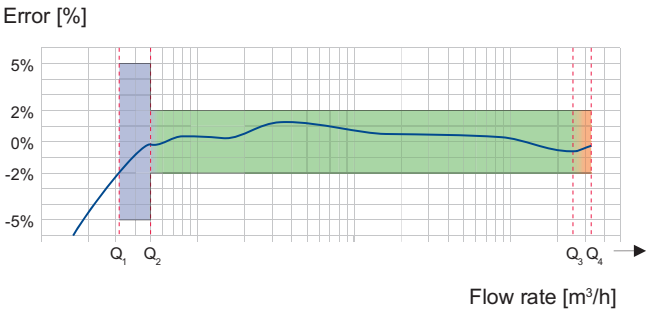
Note : Technical specification changes as per customer requirement & type of producty

Testing Pressure	16 Bar
Nominal Pressure	10 Bar
Minimum Pressure	0.1 Bar
Pressure Loss	< 0.63 Bar
Media Temperature	0.1 to 60°C
Remote Reading	Wireless
Downloading Store Data	Through Optical Port using proprietary Water AMR software (Apha Water Meter Software)
Battery life	10 Years
RF Frequency	865 MHz / 433 MHz / 915 MHz
Available line Sizes	15, 20, 25, 32, 40 & 50 NB
MOC - Electronics Enclosure	Die Cast Aluminium / SS316 / ABS
MOC - Flow Tube	SS304 / SS316 / ABS / Brass
Process Connection	BSP Threading (Male) / Flanged (Only for 50 NB)
Certification	CE

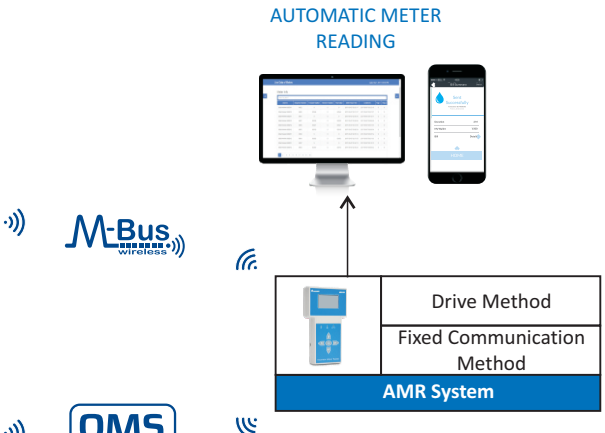
Pressure Loss Chart



Typical Error Chart



Installation, confguration and remote reading



ORDERING INFORMATION

For ordering please contact to ASIONIC EQUIPMENTS

Parameter		Code	Value			
01	Line Size	01A	15 NB		01D	32 NB
		01B	20 NB		01E	40 NB
		01C	25 NB		01F	50 NB
22	MOC Electronics Enclosure	22A	Die Cast Aluminium			
		22B	SS316			
		22C	ABS Plastic			
24	Power Supply	24B	24 VDC			
		24C	Battery Operated			
53	* Communication Output 1	53A	RS485			
		53G	Pulse (1–99L)			
		53Y	None			

Note :
- Due to our continuous product revisions, design specification and model numbers are subject to change without notice.
- Accuracy defined at Lab Conditions.
- For other requirement please consult factory.

* At a time only one Communication Output is possible.

* For RS485 or Pulse communication output power supply will be 24VDC

For Asterisk (*) mark kindly consult sales office before concluding.

Parameter		Code	Value			
54	* Communication Output 2	54A	GSM			
		54E	GPRS			
		54G	RF 1 Km			
		54H	WMBUS			
		54I	Zigbee			
		54Y	None			
66	Process Connection	66A	Threaded			
		66B	Flanged (Only for 50 NB)			
		66E	Tri Clover			
72	MOC Flow Tube	72A	ABS Plastic			
		72B	SS304			
		72D	SS316			
		72F	Brass			
92	Auto Shut–Off Valve	92A	15 NB		92E	40 NB
		92B	20 NB		92F	50 NB
		92C	25 NB		92Y	None
		92D	32 NB			

ASIONIC EQUIPMENTS

Registered Office:

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