Water Meter

SEGO

Ultrasonic Water Meter-Bulk

CNAS ISO9001 CE

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SEGO LXC-S8 ultrasonic water meter is an electronic water meter developed and produced to solve these problems. It has been widely used in pipe network metering, public water metering and agricultural irrigation metering and has achieved remarkable results.The sizes from DN50 to DN400 designed and manufacture by WEIZIDOM and meets to the requirements requirements of Directive 2004/22/EC on measuring instruments; the European Standard EN14154: Water Meter ISO4064 Standard :Water meters for cold potable water and hot water ;the International Organization of Legal Metrology OIML R-49: 2006(E):Water meters intended for the metering of cold potable water.

Characteristics:

1. No wear and pressure loss. There is no mechanical impeller inside the water meter body, so there is almost no pressure loss and clogging, and the accuracy wil not be affected over time. This can adapt to the installation environment with poor water quality.
2. More accurate measurement. Because the ultrasonic water meter adopts the acoustic wave electronic measurement method, the accuracy can reach a very high level. Even if the water flow is very small, it can accurately measure this flow.
3. IP68 protection design. The water meter module adopts a special sealing process, and the battery is also completely waterproof. The water meter can even work normally in the water.
4. Remote data transmission. If the customer needs to transmit data remotely, then you can choose touse wired transmission: RS485, M-BUS and pulse output. You can also use wireless transmission: LoRa, GPRS and NB-IOT. You can choose flexibly according to actual needs.

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Composition

It is composed of flow sensor, calculator, pipe fittings, etc., detailed as follows.

No.	Parts list	Material/Specification	PCS
1	Pin	HPb57-3	1
2	Upper Cover	PC70+ABS(Balck)	1
3	Hex Socket Set Screws	Stainless steel/M5×16	4
4	Button Seal	Lead alloy	2
5	Upper Shell	PA66+GF30(plastic)	1
6	Light Guide Part	PC	1
7	Sealing Glass	Tempered glass	1
8	Rubber Pad	26×20×2	1
9	Circuit Board	DN50-400	1
10	Power Cord	220mm	1
11	Lithium Battery	ER26500	1
12	Circuit Board Sealing Box	ABS	1
13	Spring Washer	M4	4
14	Cable Connector	M8×1.25	1
15	RS485 Wire	1100mm	1
16	Sensor Holder Sealing Gasket	Silicone rubber	2
17	Sensor Pressing Flake	Stainless steel 304	2
18	Sensor Holder	HPb57-3	2
19	Sensor Holder Wire Pressing	HPb57-3	2
20	Ultrasonic Sensor	40cm	4
21	Sensor Holder Cover	HPb57-3	2
22	Sensor Sealing Gasket	Silicone rubber	4
23	Screws	Stainless steel 201/M3×6	12
24	Control Box(Iron)	S8(Iron)	1
25	Sensor holder cover	HPb57-3	2
26	Temperature measuring hole plug	HPb57-3/G1/2	1
27	Gasket	Silicone rubber	1
28	Screws	Stainless steel/M4x14	4
29	Water meter body	Iron	1

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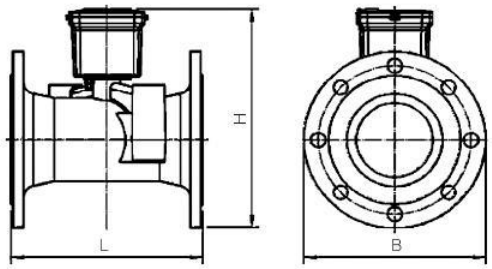
Technical Data

Nominal Diameter	mm		50	65	80	100	125	150	200	250	300	350	400
Max Flow	Q4	m^3/h	31.25	50	78.75	125	200	312.5	500	787.5	1250	2000	3125
Nominal Flow	Q3	m^3/h	25	40	63	100	160	250	400	630	1000	1600	2500
Transitional Flow	Q2	m^3/h	0.16	0.256	0.4	0.64	1.024	1.6	2.56	4.03	6.4	10.24	16
Min Flow	Q1	m^3/h	0.1	0.16	0.252	0.4	0.64	1	1.6	2.52	4	6.4	10
Max Flow	m^3		99999999.9										
Reverse Flow	m^3		99999999.9										
Measuring Range			Q3/Q1, R250(R400)										
Accuracy Class			Class 2										
Protection Class			IP68										
Pressure Loss Class	MPa		⩽0.04										
Working Pressure	MPa		1.6										
Temperature Class			T30/T50										
Temperature Range	℃		(5~55)										
Environment Class			Indoor, Class B										
Electromagnetic Class			E1(Residential, Commercial, Industrial)										
Power Supply	V		Built-in lithium battery DC 3.6V										
Battery Life			＞10 years										
Installation Position			Any angle										
Display			LCD, 8 digits + additional characters										
Installation Standard			U10/D5										
Communication Interface			RS485 modbus/ Pulse output/GPRS/NB-IOT/Lorawan										

Dimension



Nominal Diameter (mm)		Length L	Width W	Hight H	Flange Connection		
					Flange Diameter	Bolt Circle Diameter	Bolt Size-M
DN50	2Inch	200	170	215	170	125	4-M16
DN65	2.5Inch	200	185	220	185	145	4-M16
DN80	3Inch	225	200	235	200	160	8-M16
DN100	4Inch	250	220	255	220	180	8-M16
DN125	5Inch	250	250	285	250	210	8-M16
DN150	6Inch	300	285	335	285	240	8-M20
DN200	8Inch	350	340	405	340	295	12-M20
DN250	10Inch	450	405	470	405	355	12-M24
DN300	12Inch	500	460	525	460	410	12-M24
DN350	14Inch	500	520	520	520	470	16-M24
DN400	16Inch	600	580	650	580	525	16-M27

Note: The above technical parameters are subject to change for customization.
The ANSI flange standard and the standard of different flange holes can be customized.

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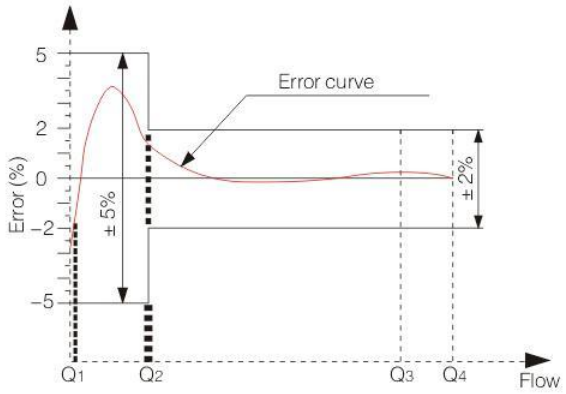
MAX. Permission Error

Maximum allowable error Q1-Q2 ± 5%,

Maximum allowable error Q3-Q4,

Water temperature S30°C, max permissible error ± 2%,

Water temperature >30°C, max permissible error ± 3%



Communication

The traditional mechanical water meter can only read the data on site, which wastesa lot of manpower and time. Moreover, when the user does not live for a long time, theleakage of the water pipe cannot be detected in time, so a lot of water resources arewasted. The LXC-S8 ultrasonic water meter can detect the flow rate of the water andupload the data regularly every day. The management party can analyze whetherthere is a leakage problem based on the daily water consumption data.

The ultrasonic water meter will have one of the many options output pre-selected when placing the order. This section will describe each output.

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Modbus/RS485 Output

1. The communication line of the water meter is a 4-core shielded line.
2. Red line is power +, Black wire is the power -.
3. Yellow line is signal A, Blue line is signal B.
4. The communication power supply of the instrument is the external DC power supply, and the communication voltage must be 12 to 24V.
5. The voltage must not be higher than the required range, otherwise the load on the circuit board may be too large and short circuit may be caused.

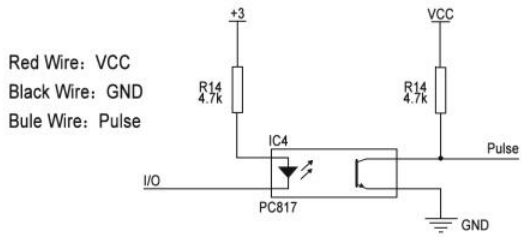
Pulse Output (Battery Powered)

Pulse output parameters:

Open-drain output

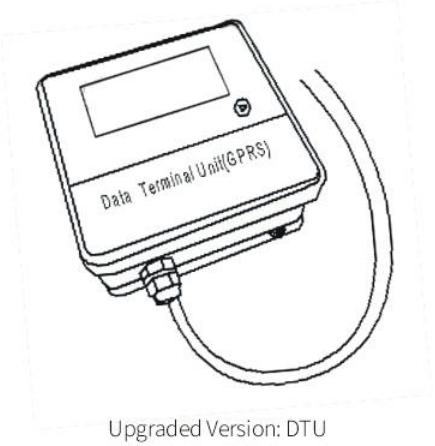
Voltage 3V～24V

Low level single pulse /Pulse duration: 5ms



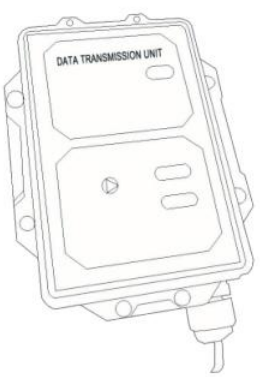
GPRS wireless transmission

Data Name	Parameter
Static Power	15μA
Power Consumption	60mA@RX
Control Box	Plastic
Online Method	Touch or automatically go online
Reporting Interval	How often to send data: Once every three days or once a day (The higher the sending frequency, the shorter the battery life)
Sending Bit	0.1m³
Power Supply	3.6VDC
Battery Capacity	8.5Ah
Uplink Interface	GPRS/NB-IOT
Downlink Interface	RS485



Upgraded Version: DTU

Data Name	Parameter
Static Power	15μA
Power Consumption	60mA@RX
Control Box	Plastic
Online Method	Touch or automatically go online
Reporting Interval	How often to send data: 1～144 h can be set(Default once a day) Can be connected to pressure collection device
Sending Bit	0.1m³
Power Supply	3.6VDC
Battery Capacity	18Ah/36Ah
Uplink Interface	GPRS/NB-IOT
Downlink Interface	RS485



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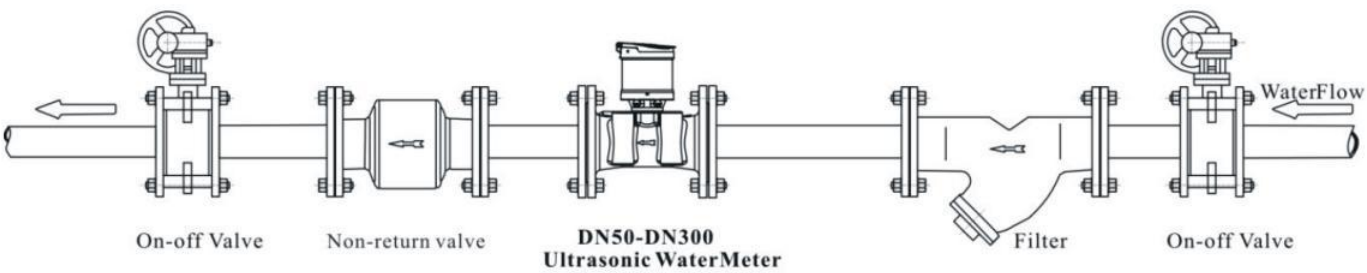
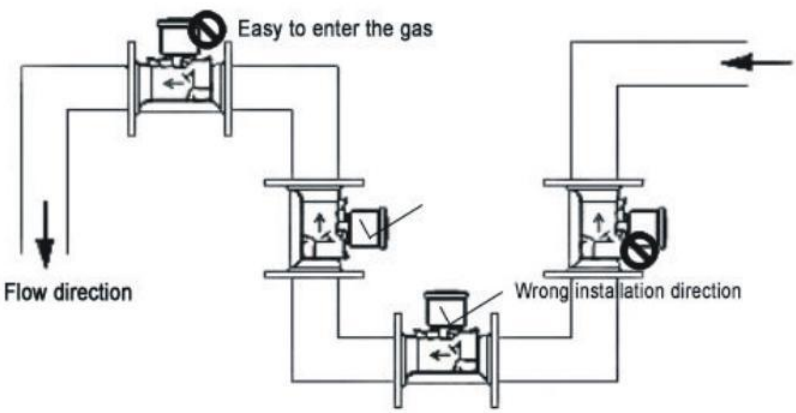
Installation

1. Flush pipes before installation to avoid gravels and other foreign objects.
2. Install a valve and filter before the water meter.
3. Do not touch the electrical part or pull wires to avoid damage during installation.
4. Reserve an adequate space for maintenance during installation.
5. When the water meter is installed in a horizontal or inclined way, the ultrasonic flow probe on pipes shall be placed horizontally, and when installed in a vertical way, make sure the water flows from down to up.
6. Please note that the arrow direction on the pipe shall be consistent with the water flow direction during installation;
7. The joint washer shall be installed correctly to avoid misaligned washer blocking water and affecting accuracy of the water meter;
8. The water meter shall not be installed at the place that may be affected by strong mechanical vibrations;

Special Notices: Be sure to install an on-off valve and filter before the water meter and another on-off valve is recommended after it for maintenance;
If the ultrasonic water meter is installed through flange, make sure the parallelism between water meter flange and pipe flange is not more than 0.5% of flange outer diameter and is less than 2mm, otherwise it may result in damage to the water meter.

Installation Figure





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Precautions

1. Before using this water meter, the pipe must be filled with water, otherwise it will lead to inaccurate or even non-measurement.
2. When installing the water meter, should be reserved length of DN*10 in front of the water meter. Or should be reserved the length of DN*5 behind the water meter.
3. The water meter shall refresh the display at every 4s, and read the water meter (including the starting value and end value) 4S at least after the valve is closed when test the water meter, otherwise the testing results may be affected;
4. Please make sure the medium flow is within the flow range of the water meter during test and use, otherwise it may result in damage to the water meter;
5. In case of any malfunction (e.g. metering failed, etc.) during use, please contact the related management department immediately and do not repair it by yourself;
6. The product is designed with a disposable anti-disassembly seal which shall be removed only by appointed personnel, or otherwise it shall be excluded from the free after-sales service.