Battery-Powered Ultrasonic Water Meter DN50 (50mm) with RS485 Digital Output. Designed for continuous flow measurement in full pipeline installations. Not suitable for use in short test rigs; requires a stable flow through a sufficiently long pipeline for accurate performance.

Link to DN125 DN150

ASW-1-K series sandwich-type ultrasonic water meter is a new type of water meter specially designed for agricultural irrigation, garden management and water resources monitoring.
The water meter has some advantages,such as low cost, high measurement accuracy, low power consumption, stable and reliable operation and so on. The thickness of the water meter is only 2 inches(50.8mm), which saves installation space, and the IP68 scheme is adopted for all parts, so that the water meter can be used in various harsh environment. The uniquestructure of the water meter makes the measurement basically free from the influence of water quality and pressure loss, which is a major breakthrough in the agricultural irrigation water measurement.

Items	Parameters
Executive standard:	ISO4064-2014、GBT778-2018
Measured fluid:	Water、sewage、seawater(Measuring other liquids requires customization) Ensure that water fills the pipe
Fluid temperature:	0.1-30°C
Working environment:	Temperature：-30-45°C；Humidity100%(RH)
Working pressure:	1.6MPa
Pressure loss:	No pressure loss
Sensitivity level of upstream flow field:	U5
Sensitivity level of downstream flow field:	D3
Climate and mechanical safety leve:	Level C
Electromagnetic compatibility level:	Level E2
Communication interface:	RS485/USART/Infrared interface,optional M-BUS, NB-IOT wireless transmission
Output signal:	Optional OCT
Power supply:	Built-in lithium battery/External DC 8-24V power supply
Protection level:	IP68
Local display:	Two lines show 9-bit cumulative flow,6-bit instantaneous flow,various status prompts and units
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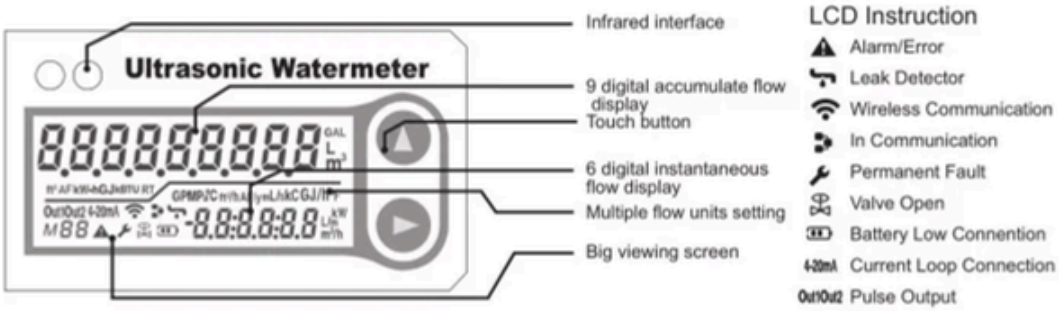
Data storage:	Lithium battery power is required for storing parameters. It can automatically record the cumulative flow of 31 months and the daily flow of the 32nd month.
Flow measurement period:	Application status:once/second;Verification status:4times/second
Power consumption:	Standard status:<30uA,The longest working time of a battery can be more than 15 years.
Material:	Measuring tube:nylon+GF;Sensor:PEEK;Housing:ABS

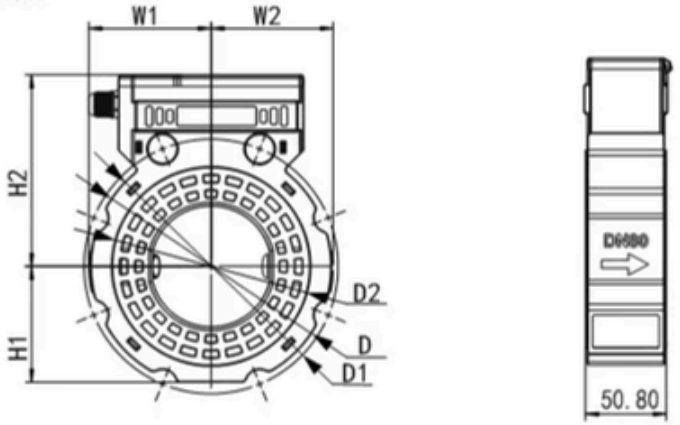
Welcome to use ASW-1-K Sandwich-type Ultrasonic Water Meter.
The ASW-1-K Sandwich-type ultrasonic water meter is a newly developed product with low cost, high measurement accuracy, small power consumption, stable and reliable characteristics, which is according to ISO4064-1:2014, GB/T778-2018 and the other standards, based on ultrasonic time-deference measurement technology.

1.Parts Descriptions

The ASW-1-K ultrasonic water meter has wired type as the standard configuration, wireless type need to be customized.



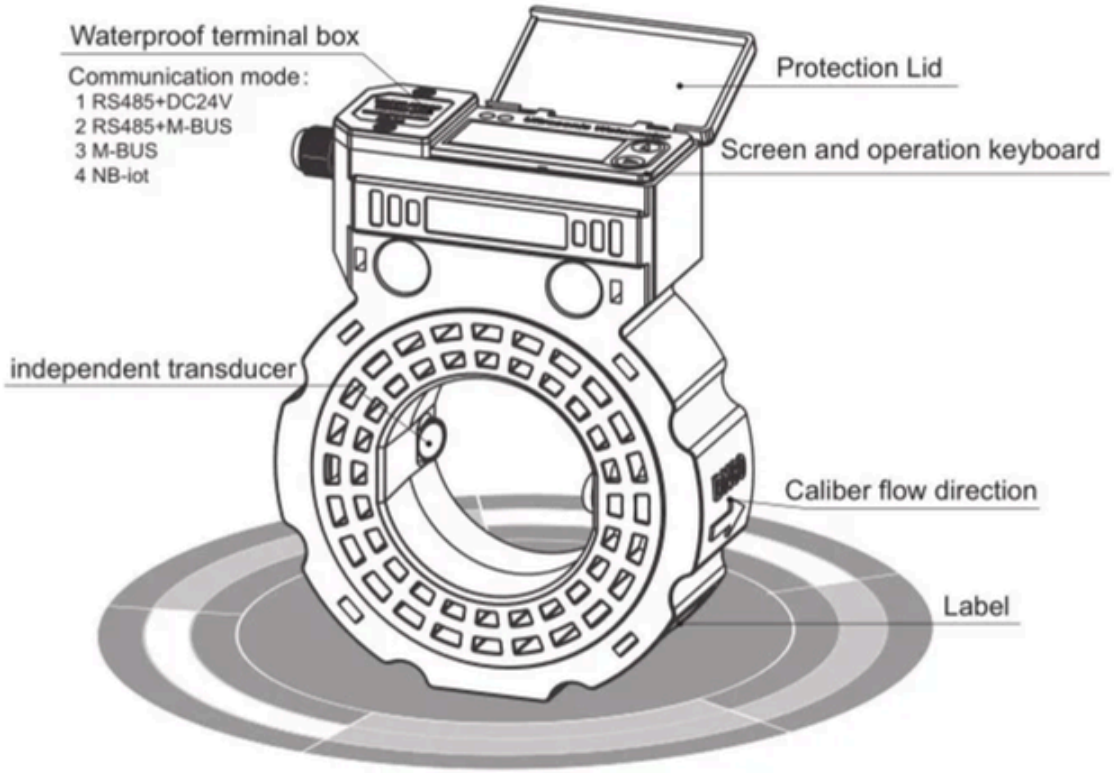
Water Meter Dimension



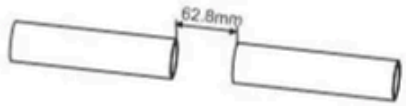
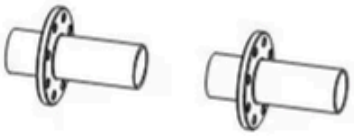
Nominal diameter (mm)	Water meter dimension (mm)					Flange Dimension (mm)					Pressure level	Weight kg
	L	H1	H2	W1	W2	Outside Diameter D	Diameter of bolt circle D1	Bore Diameter ×Quantity Φ×n	Sealed Face D2	Sealed Face f		
DN50	50.8	59	102.5	77.5	63.5	125	125	18*4	93.5	1	1.6	0.71
DN65	50.8	66	112	77	71	152	145	18*4	113	1	1.6	0.84
DN80	50.8	73	120	77	77	152	160	18*8	125	1	1.6	0.89
DN100	50.8	85	130	90	90	178	180	18*8	154	1	1.6	1.11
DN125	50.8	102	156	109	109	210	215	18*8	184	1	1.6	1.32
DN150	50.8	114	165	120	120	238	240	22*8	210	1	1.6	1.5

4.1 Flow Parameter

Nominal diameter (mm)	Measurement range ratio R	Flow rate (m³/h)				
		Starting Flowrate	Minimum Flowrate Q1	Transitional Flowrate Q2	Permanent Flowrate Q3	Overload Flow rate Q4
DN50	63	0.159	0.635	1.016	40.000	50.000
DN65	63	0.250	1.000	1.600	63.000	78.750
DN80	63	0.397	1.587	2.540	100.000	125.000
DN100	63	0.635	2.540	4.063	160.000	200.000
DN125	63	0.992	3.968	6.349	250.000	312.500
DN150	63	1.587	6.349	10.159	400.000	500.000


Waterproof terminal box
Communication mode:
1 RS485+DC24V
2 RS485+M-BUS
3 M-BUS
4 NB-iot
Protection Lid
Screen and operation keyboard
independent transducer
Caliber flow direction
Label

2. 2 Installation Method

<table>
<tr>
<td>1.Confirm installation size
Cut 62.8mm of pipeline { water meter thickness 50.8mm
2pcs seal gasket thickness 6mm
Reserve space is 6mm
  </td>
<td>2.Install companion flange
  </td>
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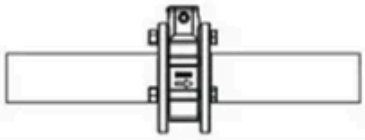
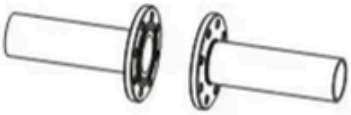
<td>3.Fixed flange
Install water meter with 3 screws to fix the flange averagely, then spot welding.
  </td>
<td>4.Weld flange
Take out water meter and weld flange.
  </td>
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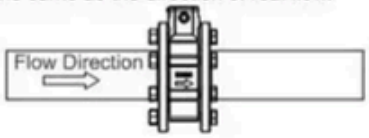
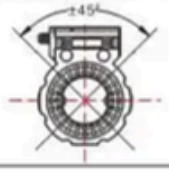
<td>5.After cooling install with seal gasket, and tighten screws.
▶ Make sure the direction signing on water meter is as the same as the direction of real flow.
  </td>
<td>6.Installation angle
Top of the pipe line may be not full of water, suggest to install the water meter on vertical direction of pipe line within a ±45 degree angle, please refer to attached picture.
  </td>
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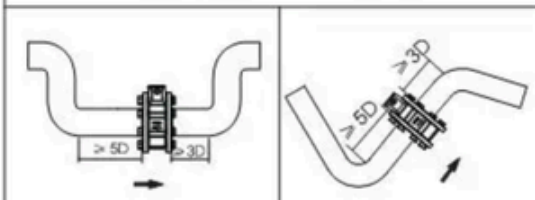
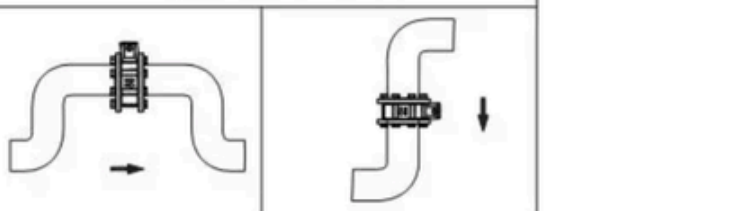
</table>

2.Installation Instructions

2. 1 Choosing install position

When install the water meter, the upstream straight pipe line should be ≥5D, downstream straight pipe line should be≥ 3D, 20D from the pump(D is the pipe diameter), and ensure water must be full of the pipe lines.

<table>
<tr><th>Correct installation point</th><th>Wrong installation point</th></tr>
<tr>
<td>  </td>
<td>  </td>
</tr>
<tr>
<td>Lowest point of the pipe line , water be full of the pipe.
Flow is vertically or obliquely upward
Upstream straight pipe line >=5D</td>
<td>Highest point of the pipe line, water would be not full of the pipe.
Flow is vertically or obliquely downward.
Upstream straight pipe line <=3D.</td>
</tr>
</table>

▶ Note : Arrow direction is the flow direction.