

bd flow

flow, level, pressure, temperature

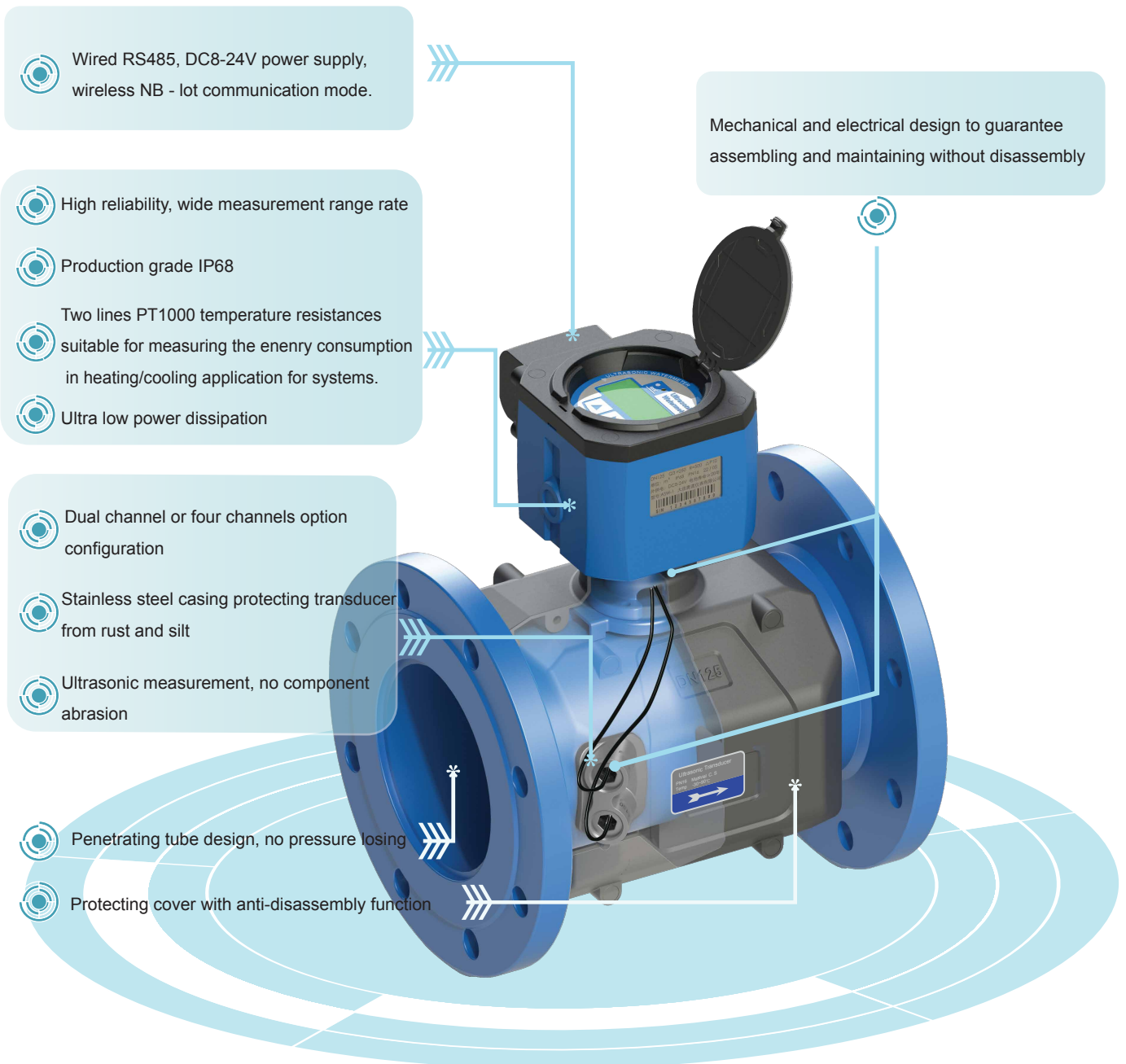
ULTRASONIC WATER METER



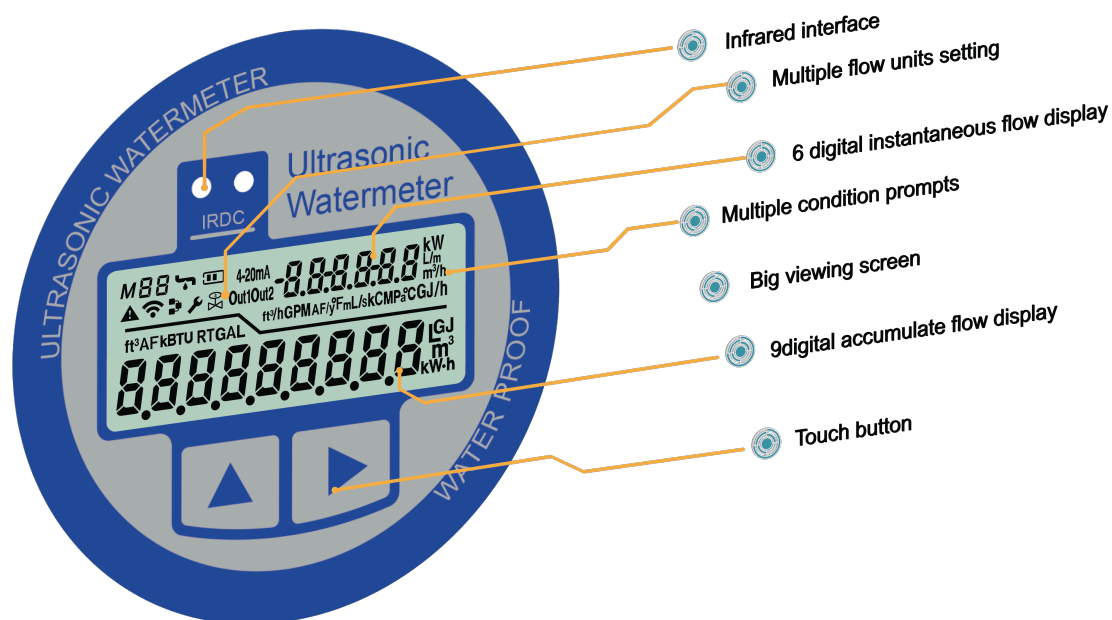
General Introductions

The ASW-1 series ultrasonic water meter is a newly launched dual channels and four channels ultrasonic water meter with high integration.

This series of ultrasonic water meter has many advantages, such as wider measurement range, ultra low power consumption, stable and reliable performance, etc. Every single part of this series ultrasonic water meter reaches IP68 protection grade, which can be used in all kinds of hostile environment, it is extensively used in city water supply, water resources management, agriculture irrigation, landscaping, industry production, etc. It is a great technical innovation in water technical measure areas.



Display Screen Introduction

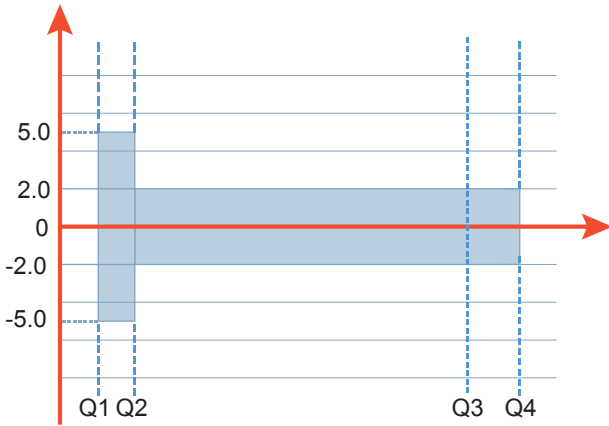


Technical Parameters

Items	Parameters
Executive standard	ISO4064-2014、GBT778-2018
Measurable fluid	Water, sewage, seawater (other liquid need be customized), Liquid full of pipeline
Fluid temperature	0.1-30℃
Work environment	temperature: -30-45℃; humidity:100%(RH)
Bearable pressure	1.6MPa, 2.5MPa alternatives
Pressure loss	DN15-DN40 ΔP40;≥DN50 ΔP10
The sensitivity grade of upstream	U3
The sensitivity grade of downstream	D0
Climate and mechanical environment	C class
Electromagnetism compatibility grade	E2 class
Communication interface	RS485/USART/infrared interface, M-BUS alternatives;NB-IoT wireless transmission
Output signal	OCT alternatives
Power supply	2 built-in lithium batteries/external DC8-24V power supply
Protection grade	IP68
Spot display	Screen with two rows: 9digital accumulated flow display,6 digital instantaneous flow display, various condition prompt symbols and units.
Data storage	Ferroelectric storage parameters usage, recording accumulated flow of 32moths and 31days before automatically
Flow measurement cycle	Measurement condition: 1time/second(settable); Authentication condition: 4times/second
Power consumption	Standard condition < 30uA, working 20 years above constantly
Materials	Measuring pipe: carbon steel(stainless steel for sensor); sensor: PEEK; protection cover:nylon plus glass fiber

Error Curve

Pressure Loss



- DN15-40 : $\Delta P40$
- DN50 above: $\Delta P10$ (drift diameter)

Communication and Networking

Equipping waterproof junction box, applicable for both wired and wireless communication.



Complete Type and Specification

- **Industrial grade small calibre ultrasonic water meter (DN15-DN40)**

Tube materials: copper, available in 304 or 316 stainless steel



DN15-DN40
copper



DN15-DN40
304 or 316 stainless steel

- **Dual channels ultrasonic water meter (DN50-DN800)**

Tube materials: carbon steel (304 stainless steel for probes) available in 304 or 316 stainless steel



DN50-DN150



DN200-DN800



DN200-DN500

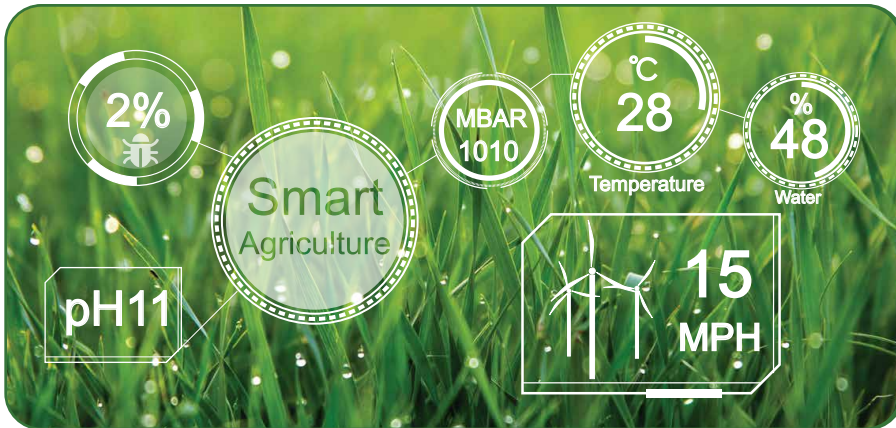


DN80-DN150

- **Four channels ultrasonic water meter (DN80-DN800)**

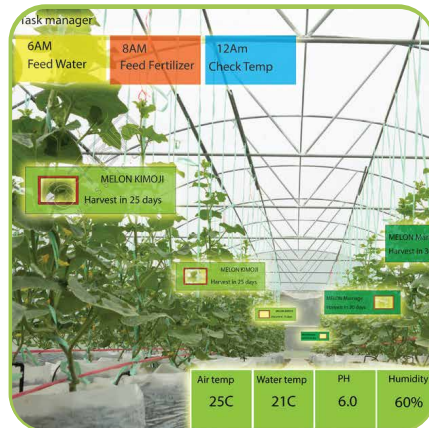
Tube materials: carbon steel (304 stainless steel for probes) available in 304 or 316 stainless steel

Typical Application



- Agriculture Irrigation and Landscaping
- intelligence agriculture system

To provide quantificational irrigation information in order to water saving, time saving, labour saving, scientific irrigation.



- Water Supply and Drainage

General pipeline and branch measure - dispatch and management

General water meter of household measure - using for building, single user settlement.



●Water Resources Management

Water resources flow monitor
Water resources expenses settlement



●Industrial Water Supply and Drainage Measure

External water supply settlement
Internal water using accounting
Drainage expenses settlement

Flow Range

- one channel industrial grade small calibre ultrasonic water meter (R=200)

Nominal diameter (mm)	Measurement range ratio R	Flow rate (m ³ /h)				
		Starting flowrate	Minimum flowrateQ1	Transitional flowrate Q2	Permanent flowrateQ3	Overload flow rateQ4
DN15	200	0.0031	0.0125	0.0200	2.5000	3.1250
DN20	200	0.0050	0.0200	0.0320	4.0000	5.0000
DN25	200	0.0079	0.0315	0.0504	6.3000	7.8750
DN32	200	0.0200	0.0800	0.1280	16.0000	20.0000
DN40	200	0.0313	0.1250	0.2000	25.0000	31.2500

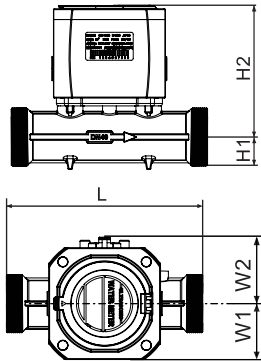
- dual channels big calibre ultrasonic water meter (R=100)

Nominal diameter (mm)	Measurement range ratio R	Flow rate (m ³ /h)				
		Starting flow rate	Minimum flow rateQ1	Transitional flowrate Q2	Permanent flowrateQ3	Overload flow rateQ4
DN50	100	0.100	0.400	0.640	40.000	50.000
DN65	100	0.158	0.630	1.008	63.000	78.750
DN80	100	0.250	1.000	1.600	100.000	125.000
DN100	100	0.400	1.600	2.560	160.000	200.000
DN125	100	0.625	2.500	4.000	250.000	312.500
DN150	100	1.000	4.000	6.400	400.000	500.000
DN200	100	1.575	6.300	10.080	630.000	787.500
DN250	100	2.500	10.000	16.000	1000.000	1250.000
DN300	100	4.000	16.000	25.600	1600.000	2000.000
DN350	100	4.000	16.000	25.600	1600.000	2000.000
DN400	100	6.250	25.000	40.000	2500.000	3125.000
DN450	100	6.250	25.000	40.000	2500.000	3125.000
DN500	100	10.000	40.000	64.000	4000.000	5000.000

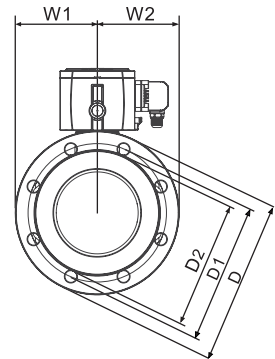
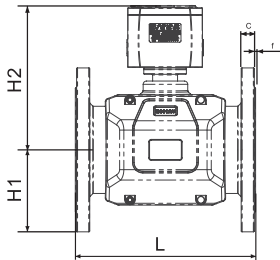
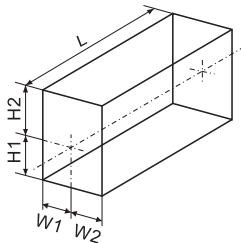
- four channels big calibre ultrasonic water meter (R=200)

Nominal diameter (mm)	Measurement range ratio R	Flow rate (m ³ /h)				
		Starting flow rate	Minimum flow rateQ1	Transitional flowrate Q2	Permanent flowrateQ3	Overload flow rateQ4
DN80	200	0.125	0.500	0.800	100	125.00
DN100	200	0.200	0.800	1.280	160	200.00
DN125	200	0.313	1.250	2.000	250	312.50
DN150	200	0.500	2.000	3.200	400	500.00
DN200	200	0.788	3.150	5.040	630	787.50
DN250	200	1.250	5.000	8.000	1000	1250.00
DN300	200	2.000	8.000	12.800	1600	2000.00
DN350	200	2.000	8.000	12.800	1600	2000.00
DN400	200	3.125	12.500	20.000	2500	3125.00
DN450	200	3.125	12.500	20.000	2500	3125.00
DN500	200	5.000	20.000	32.000	4000	5000.00

Products Dimension



Nominal Size (mm)	Dimension (mm)								Thread connection		Thread length		Weight kg	Pressure MPa
	L		H1		H2		W1	W2	Pipe screw thread A	Connection pipe screw thread B	Cu	SS		
	Cu	SS	Cu	SS	Cu	SS								
DN15	165	165	14	13.5	123	121	57	130	G3/4B	G3/4B	10	12	1.5	1.6
DN20	195	190	18	17	125	124	57	130	G1B	G1B	12.5	18	1.5	1.6
DN25	160	180	22	21	127.5	126.5	57	130	G1 1/4B	G1 1/4B	13	18	1.5	1.6
DN32	180	180	25	24	130	130	57	130	G1 1/2B	G1 1/2B	14.5	15	2	1.6
DN40	200	200	33.5	30	134	134	57	130	G2B	G2B	16	18	2.2	1.6



Nominal Size (mm)	Dimension (mm)					Flange Dimension (mm)						Pressure MPa	Weight kg
	L	H1	H2	W1	W2	Flange Diameter D	Bolt Hole Center D1	Bolt hole xQuantity φxn	Sealing surface		Flange thickness C		
									D2	f			
DN50	200	82.5	180	82.5	108	165	125	18*4	102	2	19	1.6	10.0
DN65	200	92.5	189	92.5	108	185	145	18*4	122	2	20	1.6	11.5
DN80	225	100	197	100	108	200	160	18*8	138	2	20	1.6	13.5
DN100	250	110	207	110	110	220	180	18*8	158	2	22	1.6	18.5
DN125	275	125	220	125	125	250	210	18*8	188	2	22	1.6	23.5
DN150	300	142.5	233	142.5	142.5	285	240	22*8	212	2	24	1.6	30.0

Nominal Size (mm)	Dimension (mm)					Flange Dimension (mm)						Pressure MPa	Weight kg
	L	H1	H2	W1	W2	Flange Diameter D	Bolt Hole Center D1	Bolt hole xQuantity φxn	Sealing surface		Flange thickness C		
									D2	f			
DN200	350	170	257	170	170	340	295	22*12	268	2	26	1.6	35.5
DN250	450	200.5	284.5	200.5	200.5	405	355	26*12	320	2	29	1.6	58.0
DN300	500	230	310	230	230	460	410	26*12	378	2	32	1.6	76.0
DN350	550	260	350	260	260	520	470	26*16	438	4	35	1.6	108
DN400	600	290	380	290	290	580	525	30*16	490	4	38	1.6	145
DN450	700	320	410	320	320	640	585	30*20	550	4	46	1.6	185
DN500	800	357.5	447.5	357.5	357.5	715	650	33*20	610	4	46	1.6	232

Product Selection Code

A B C D E
BD-FUWM -1 - □ - □ - □ - □ - □

Letter	Items	Parameter	Remarks
A	Caliber	DN15-DN40 DN50-DN800	Choose the pipe diameter
B	Channel number	1 one channel 2 dual channel 4 four channels	One channel: DN15-DN40 dual channel: DN50and above four channels: DN80and above
C	Materials	1 carbon steel 2 copper 3 304 stainless steel 4 316 stainless steel	DN15-DN40option of 2,3,4 DN50and above option of 1,3,4,
D	Pressure level	1.0 1.6 2.5	Standard configuration1,6
E	Communication interface and power supply	1 RS485 & DC8-24V 2 RS485 & M-BUS 3 NB-lot 4 RS485 & OCT&DC8-24V	Standard configuration1

Example: ASW-1-DN100-4-3-1.6-1

Explanation: ASW-1 ultrasonic water meter, DN100 caliber, four channels, 304 stainless steel, communication interface with RS485, DC8-24V external power supply for outputting.

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