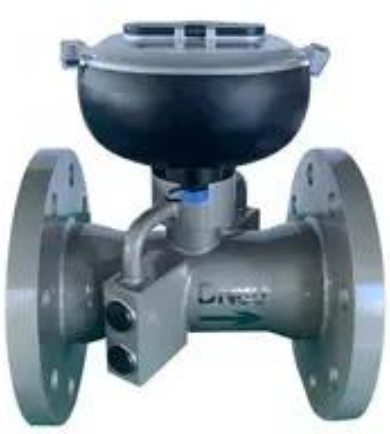
Bulk Ultrasonic Water Meter DN50-DN300

Product Description



WM9100 Series Ultrasonic Water Flow Meter is used for measuring, storage and display water flow.

Nominal Diameter: DN50~DN300.

Application range: Tap-water pipe net system

Product Features

- With rectifier function, low installation requirement of straight pipe.
- Wide range.
- Suitable for mass flow and tiny flow measurement.
- The integrated design of flow, pressure, wireless reading meets monitoring pipeline requirement.
- Configured with remote data collector, remotely connect to smart metering platform.
- IP68 protection class to ensure long term underwater working.
- Low consumption design, double D size batteries can continuously work for 15 years.
- Bi-directional measuring forward and reverse flow.
- Data storage function can save 10 years' data including day, month and year.
- 9 digits multi-line LCD display, can display cumulative flow, instantaneous flow, flow, pressure, temperature, error alarm, flow direction etc at the same time.
- Standard RS485 Modbus and OCT(Pulse), A Variety Of Options, NB-IOT, GPRS etc.
- Stainless steel 304 pipe which is tensile molding patent, electrophoresis with anti-scaling.
- According to Sanitary standard for drinking water.

Technical Parameter

Max. Working Pressure	1.6Mpa
Temperature Class	T30、T50、T70、T90 (Default T30)
Accuracy Class	ISO 4064, Accuracy Class 2
Body Material	Stainless Steel 304 (opt. SS316L)
Battery Life	15 Years (Consumption≤0.3mW)
Protection Class	IP68
Environmental Temperature	- 40°C ∽+70°C, ≤100%RH
Pressure Loss	△P10, △P16 (Based on different dynamic flow)
Climatic And Mechanical Environment	Class O
Electromagnetic Class	E2
Communication	RS485 (baud rate is adjustable)；Pulse, Opt. Nb-lot, GPRS
Display	9 digits multi-line LCD display. Can display cumulative flow, instantaneous flow, flow rate, pressure, temperature, error alarm, flow direction etc. at the same time
RS485	Default baud rate 9600bps (opt. 2400bps, 4800bps), Modbus RTU
Connection	Flanges according to EN1092-1 (others customized).
Flow Profile Sensitivity Class	A Full Bore(U5/D3) B 20% Reduced Bore (U3/D0) C Reduced Bore (U0/D0).
Data Storage	Store the data, including day, month, and year for 10 years.The data can be permanently saved even powered off.
Frequency	1-4 times/second

The Types of WM9100 Water Meter

1. A (A2/A4) Full Bore Measuring Range (R500)

Model		WM9100								
Nominal Size	(mm)	50	65	80	100	125	150	200	250	300
	(inch)	2	2.5	3	4	5	6	8	10	12
Overload Flow Q4 (m3/h)		78.75	125	200	312.5	312.5	500	787.5	1250	2000
Permanent Flow Q3 (m3/h)		63	100	160	250	250	400	630	1000	1600
Transitional Flow Q2 (m3/h)		0.202	0.320	0.512	0.800	0.800	1.280	2.016	3.200	5.120
Minimum Flow Q1 (m3/h)		0.126	0.200	0.320	0.500	0.500	0.800	1.260	2.000	3.200
R=Q3/Q1		500								
Q2/Q1		1.6								

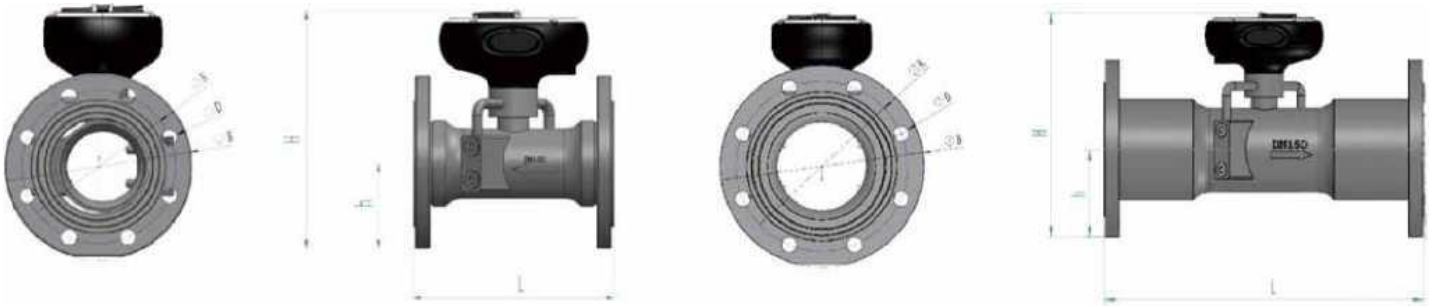
2. B 20% Reduced Bore Measuring Range (R1000)

Model		WM9100								
Nominal Size	(mm)	50	65	80	100	125	150	200	250	300
	(inch)	2	2.5	3	4	5	6	8	10	12
Overload Flow Q4 (m3/h)		78.75	125	200	312.5	312.5	500	787.5	1250	2000
Permanent Flow Q3 (m3/h)		63	100	160	250	250	400	630	1000	1600
Transitional Flow Q2 (m3/h)		0.101	0.160	0.256	0.400	0.400	0.640	1.008	1.600	2.560
Minimum Flow Q1 (m3/h)		0.063	0.100	0.160	0.250	0.250	0.400	0.630	1.000	1.600
R=Q3/Q1		1000								
Q2/Q1		1.6								

3. C Reduced Bore Measuring Range (R500)

Model		WM9100			
Nominal Size	(mm)	50	65	80	100
	(inch)	2	2.5	3	4
Overload Flow Q4 (m3/h)		50	78.75	78.75	125
Permanent Flow Q3 (m3/h)		40	63	63	100
Transitional Flow Q2 (m3/h)		0.128	0.202	0.202	0.320
Minimum Flow Q1 (m3/h)		0.080	0.126	0.126	0.200
R=Q3/Q1		500			
Q2/Q1		1.6			

Dimensions & Weight



Model		WM9100								
Nominal Size	(mm)	50	65	80	100	125	150	200	250	300
	(inch)	2	2.5	3	4	5	6	8	10	12
L-Standard length (mm)		200	200	225	250	250	300	350	450	500
L-Custom length (mm)		280	/	370	370	/	500	500	/	/
B-Width (mm)		162	185	200	220	255	285	340	406	489
H-Height (mm)		258	277	293	307	334	364	409	458	512
h-Height (mm)		74	89	96	106	120	138	169	189	216
D x n		18 x 4	18 x 4	18 x 8	18 x 8	18 x 8	22 x 8	22 x 8	22 x 12	22 x 12
K (mm)		125	145	160	180	210	240	295	350	400
Pressure (MPa)		1.6	1.6	1.6	1.6	1.6	1.6	1.0	1.0	1.0
Weight (kg)		9	11.5	13	15	17	32	45	68	96

N: Bolt Hole Numbers; K: Bole Hole Diameter;

Remark: Other length of pipes can be customized.

Configuration Code

WM9100	**WM9100 Ultrasonic Water Meter**							
	Pipe Size							
	050 DN50							
	065 DN65							
	... ...							
	300 DN300							
		Meter Type						
		A2 Full Bore Double Channel(U5/D3)						
		A4 Full Bore Four Chan nel(U5/D3)						
		B 20% Reduced Bore(U3/D0)						
		C Reduced Bore(U0/D0)						
			Power Supply					
			B Battery					
			O 24VDC + Battery					
				Body Material				
				S Stainless Steel 304				
				H Stainless Steel316L				
					Pressure			
					6 0.6MPa			
					10 1.0MPa			
					16 1.6MPa			
					25 2.5MPa			
					O Others			
						Connection		
						F Flange Connection		
						K Clamp Connection		
							Turn-down Ratio	
							1 R1000	
							2 R500	
							3 Others	
								Output
								1 RS485 + OCT (Pulse) (Standard)
								2 Others
								Optional Function
								N None

1	Pressure Measurement
2	Built-in Remote Reading Function
3	Pressure Measurement & Built-in Remote Reading Function

Length

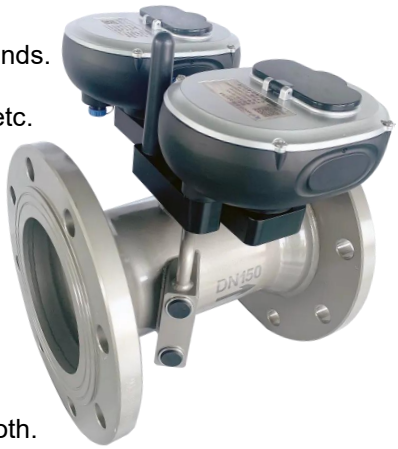
N	Standard Length
L	Customized Length

For example：WM9100-050-B-B-S-16-F-2-1-N-N

Stands for: WM9100 ultrasonic water meter, pipe size DN50, B 20% reduced bore water meter, battery power supply, stainless steel 304, pressure 1.6Mpa, flange connection, R500, RS485 output, none optional function, standard length.

GPRS/NB-IoT Wireless Remote Reading Device

Features



- LCD display function, real-time data updating.
- Super long stand-by time, the battery working life is 6 years if upload twice one day.
- Adopt NB communication module, transmit and receive data by multiple frequency bands.
- Reading forward and reverse cumulative flow, instantaneous flow, pressure, voltage etc.
- 3.6V power output can power supply to low-power consumption pressure transmitter.
- Built-in large data logger can save 4 months' data.
- With power-off memory function, no need to reset parameters after powered off.
- Automatically transmitting and re-sending data function.
- Parameter inquiry, parameter setting and status inquiry can be carried out via blue tooth.

Technical Parameter

Power Supply	Built-in Lithium Battery (3.6V)
External Power Supply	External 3.6V power supply for meter communication parts, current^80mA
Consumption Current	Stand-by 30uA, transferring peak 100mA
Working Life	2 years (reading in 15 minutes, transferring in 2 hours interval) 6 years (reading in 15 minutes, transferring in 12 hours interval)
Communication	Adopt NB communication module, by frequency band Bl, B2, B3, B5, B8, B12, B13 and B17 to receive and send message, monthly data usage less than 10M
Data Logger Time	Data can be saved in the device for 4 months
Enclosure Material	Cast Aluminum
Protection Class	IP68
Operation Environment	-40°C-70°C, <100%RH
Climate Mechanical Environment	Class 0
Electromagnetic Class	E2

GPRS/4G Wireless Remote Reading Device

Features

◆ It has the function of four-channel analog data reading and 16-bit high precision A/D simultaneous sampling.

◆ It has the function of two channels pulse counting and two channels switch sampling.

◆ It has one RS485 interface, specially used for RS485 instrument communication.

◆ The corresponding parameters can be set through the USB interface.

◆ The parameter type, range, Starting point, upper and lower alarm threshold and pulse bottom of the data can be collected.

◆ Configurable station number, time, communication parameters etc.

◆ Support dynamic domain name and fixed IP, support data transfer UDP or TCP mode.

◆ Configurable analog and switching GSM message alarm function.

◆ All run parameters can be queried and set locally and remotely.

◆ With power-off memory function, no need to reset parameters after powered off.

◆ Large capacity Eeprom, can save a month of historical data while saving once per minute.

◆ Communication transceiver and module status indicator light can clearly indicate the working status of the collector.

Technical Parameter

Power Supply	DC 9 - 24V
External Power Supply	24VDC output, 20mA drive capability
Communication	4G communication module, support NB-IoT
Data Logger Time	Data can be saved in the device for 1 month while saving every minute
Analog Input Impedance	250Q, adopt 4-20mA, 0-5V direct current signal
Protection Class	IP65
Operation Environment	- 40°0 ~ +70°C, ≤100%RH
Climatic Mechanical Environment	Class O
Electromagnetic Class	E2

Lanry Instruments (Shanghai) Co.,Ltd /6 Floor，Block F,Bldg 5,
No.2800 Jiuxin Rd., Songjiang District, Shanghai 201612,China
Tel：86 21-67801665,67618991 Fax：86 21-67801625
http://www.lanry-flow.com info@lanry-flow.com