

Ultrasonic Type WATER METER

uFlow 350W SERIES

DN15 - 300



1. Introduction

The **uFlow 350W series** type ultrasonic water is an innovative flow meter with static flow sensor based on the ultrasonic measuring principle. It utilizes ultrasonic measuring methodology and microprocessor technology. All calculation and flow measuring circuits are designed on one single board, thus offering exceptional accuracy and reliability.

FEATURES

- Double beam ultrasonic sensors for high accuracy and reliable operation
- Less than 0.01 m/s starting velocity
- Multi line 9 digital LCD accumulative flow and 4 digital for instantaneous flow
- Automatic power saving function under the empty pipe or long-term fluid stationary state
- IP68 protection, ensure long-term operation though water in the inside meter
- Date cumulative record and data acquisition function
- Various kinds of communication interface:TTL levels pulse output and USART interface,convenient to connect the low power consumption equipment; RS485; Infrared communication interface; support CJ-188 communication
- Support MODBUS,M-BUS ,HART communication protocol
- Output: Two way isolated pulse output(pulse equivalent and output pulse can be arbitrary programmed); two-wired system 4-20mA output
- With the two way PT1000 temperature transducer, which can realize the heat measurement
- Built-in batch controller and time accumulator
- Various of Units selected, including Cubic meter, USA gallon, Cubic feet and Liter
- Built-in Lithium battery for 6 years life

APPLICATION

- Residential water meter
- District water meter
- Tenant billing

4. Display and operation



5. Communication and signal output



* There are 4 terminals available

Standard configuration:

- 1. RS485+ (A)
- 2. RS485- (B)
- 3. DC8~30V
- 4. GND

Optional:

- 1. OCT 1
- 2. OCT 2
- 3. C1 (TTL output 1)
- 4. C2 (TTL output 2)
- 5. 2 wired 4-20mA (Also function as external power supply 24V DC)

NOTE: When ordering, you may choose any two of the above output or interface, lead to the external junction

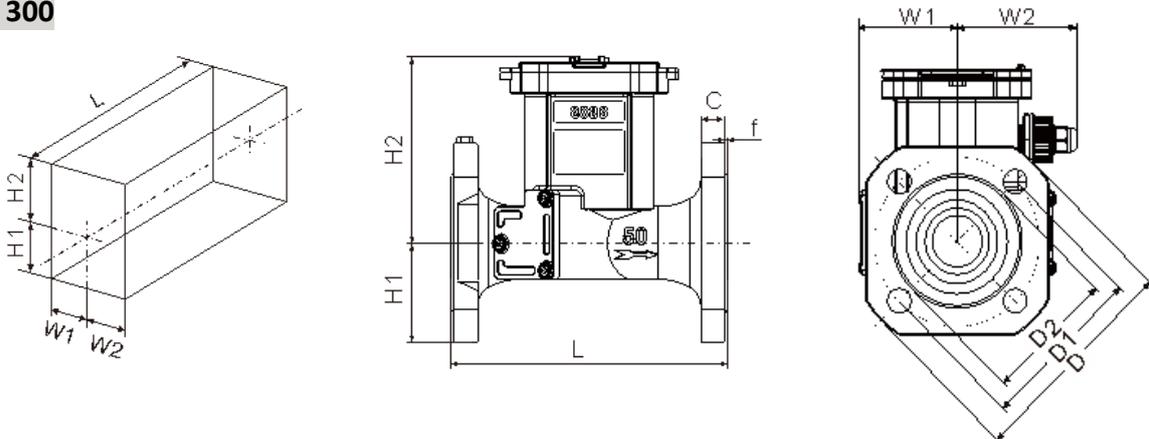
6. Dimensions

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Size (mm)	Pressure MPa	Dimension						
		L (mm)	H1 (mm)	H2 (mm)	W1 (mm)	W2 (mm)	Screw thread	Screw thread coupling
15	1.6	110	17.5	168	58	90	G3/4B	R1/2
20		130	24	173	58	90	G1B	R3/4
25		160	25	175	58	90	G1 1/4B	R1
32		180	31	177	58	90	G1 1/2B	R1 1/4
40		200	31	181	58	90	G2B	R1 1/2

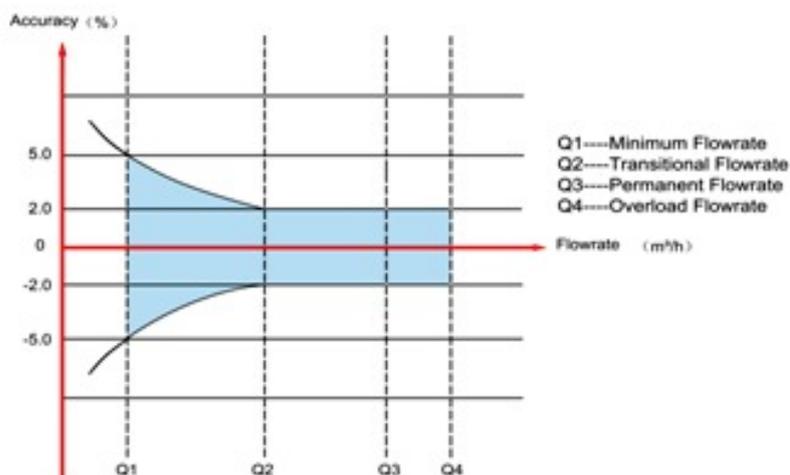
DN50 - 300



Size (mm)	Pressure MPa	Dimension					Flange dimension					
		L	H1	H2	W1	W2	Flange diameter D	Bolt Center D1	Bolt hole x Quantity $\Phi \times n$	Sealing Surface		Flange thickness C
50	1.6	200	70	131	76	95	165	125	18x4	102	2	19
65	1.6	200	75	135	79	95	185	145	18x4	122	2	20
80	1.6	225	94	132	94	95	200	160	18x4	138	2	20
100	1.6	250	104	140	104	104	220	180	18x4	158	2	22
125	1.6	275	117	148	117	117	250	210	18x4	188	2	22
150	1.6	300	134	155	114	114	285	240	22x8	212	2	24
200	1.6	350	165	254	165	165	340	295	22x12	268	2	26
250	1.6	450	197	269	197	197	405	355	26x12	320	2	29
300	1.6	500	223	287	223	223	460	410	26x12	370	2	32

7. Flow Range

Size (mm)	Ratio	Flow (m ³ /h)				
		Starting Flowrate	Minimum Flowrate Q1	Transitional Flowrate Q2	Permanent Flowrate Q3	Overload Flowrate Q4
15	200	0.003	0.0125	0.02	2.5	3.125
20	200	0.0035	0.016	0.026	3.2	4
25	200	0.007	0.02	0.032	4	5
32	200	0.01	0.032	0.05	6.3	7.875
40	200	0.015	0.1	0.16	20	25
50	100	0.03	0.4	0.64	40	50
66	100	0.059	0.63	1.008	63	78.75
80	100	0.064	1	1.6	100	125
100	100	0.094	1.6	2.56	160	200
125	100	0.12	2	3.2	200	250
150	100	0.27	2.5	4	250	312
200	100	0.315	4	6.4	400	500
250	100	0.508	4	6.4	400	500
300	100	0.77	6.3	10.08	630	787.5



5. Technical Specification

Parameter	Specification
Medium	Water, Sewage, Seawater (Other types of liquid need customization)
Medium temperature	0.1~30°C
Working environment	Temperature: -10~45°C; Humidity≤100%(RH)
Working pressure	1,6MPa (2.5MPa optional)
The sensitivity of upstream	U3
The sensitivity of downstream	D0
Climatic and mechanical	C class
Electromagnetic compatibility class	E2 class
Communication interface	RS485 / USART / Infrared
Output signal	Two way OCT pulse output/ TTL pulse output/ One way 4-20mA output
Power supply	Built-in Lithium battery (3.6, 19AhV) / DC8~36V power supply
Protection class	IP68, can work 2 meters under water
Display	Multi line 9 digits accumulative flow, 4 digital display for instantaneous flow, varies of state prompt and units
Data storage	EEPROM/FLASH, automatically record the accumulative flow of last 521 days
Measurement cycle	Measuring: 1/second; Verification: 4 times/second
Power consumption	≤2.7AH/year, 6 years battery life

6. Order Information

Model Number, Example and Option					Description
U-350W	- DN40	- PN16	- 1	- 1	
Meter Size	DNXX				Please specify size (DN15 - 300)
Pressure Rating		PN16			1.6MPa
		PN25			2.5MPa
Communication			0		None
			1		Modbus/ RS485 *
			2		M-bus (under development)
Output signal / External power supply			0		None
			1		DC8-30V
			2		Two-wired 4-20mA (also function as external power supply DC24V)
			4		OCT1 (open collector output 1)
			5		OCT2(open collector output 2)
			6		C1 (TTL pulse output 1)
			7		C2 (TTL pulse output 2)

* When choosing RS485 modbus communication, it is compulsory to choose external power supply 8-30V DC for the remaining terminal

Example:

U-350-DN40-PN16-1-1 means size 40mm water meter;Nominal pressure 16MPa; Modbus RS485 communication; External power supply 8~30VDC

NOTE

- DN15-40 Single channel; Brass thread;
- DN50-100 Dual channel; Cast ductile iron flange;
- DN125-600 Dual channel; Welded carbon steel flange;



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