



ULTRASONIC WATER HEAT METER



PRODUCT LITERATURE

GENERAL INTRODUCTIONS

The FUW3200 series ultrasonic water meter are dual channels and four channels ultrasonic water heat meter with high precision. 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 meets IP68 protection grade, which can be used in all kinds of hostile environment. It is a great technical innovation in water technical measure areas.



Wired RS485, DC8-24V power supply, M-Bus - lot communication mode.



High reliability, wide measurement range rate



Production grade IP68



Two lines PT1000 temperature resistances suitable for measuring the energy consumption in heating/cooling application for systems.



Ultra low power dissipation



Dual channel or four channels option configuration



Stainless steel casing protecting transducer from rust and silt



Ultrasonic measurement, no component abrasion



Penetrating tube design, no pressure losing



Protecting cover with anti-disassembly function

Mechanical and electrical design to guarantee assembling and maintaining without disassembly



TECHNICAL PARAMETERS

MECHANICAL DATA:

Materials	Carbon steel (stainless steel for sensor), Sensor: PEEK, Protection Cover: Nylon Plus Glass Fiber
Metrological Environment	Class C
Work Environment	Temperature: -30 to 45°C, Humidity: 100% (RH)
Protection Grade	IP68
Measurable Fluid	Water
Fluid Temperature	0 to 80°C
Max. Pressure	1.6MPa Standard, 2.5MPa Optional
Pressure Loss	DN15 - DN40: ΔP 40 Pa; DN50 & above: ΔP 10 Pa

ELECTRICAL DATA:

Power Supply	2 Built-in Lithium Batteries / External DC8-24V Power Supply Optional
Power Consumption	Standard Condition < 30uA,
Replacement Interval	20 Years Above Continuously
Electromagnetism Grade	Class E2
Communication Interface	RS485, M-BUS
Spot Display	Screen with two rows: 9 digital accumulated flow display, 6 digital instantaneous flow display, various condition prompt symbols & units
Data Storage	Ferroelectric storage parameters usage, recording accumulated flow of 32 months and 31 days
Flow Measurement Cycle	Measurement condition: 1time/second (settable); Authentication Condition: 4times/second

APPROVAL:

Standard	ISO4064-2014, GBT778-2018 EMC Directive 2014/30/EU
----------	---

COMMUNICATION NETWORK:

Equipped with waterproof junction box



RS485 communication interface

FLOW RANGE

One channel industrial grade small capacity ultrasonic water meter (R=200)

Nominal Diameter (mm)	Measurement Range Ratio (R)	Flow Rate (m³/h)		
		Minimum Flowrate Q1	Max. Flowrate Q2	Overload Flowrate Q3
DN15	200	0.0125	2.5000	3.1250
DN20	200	0.0200	4.0000	5.0000
DN25	200	0.0315	6.3000	7.8750
DN32	200	0.0800	16.0000	20.0000
DN40	200	0.1250	25.0000	31.2500

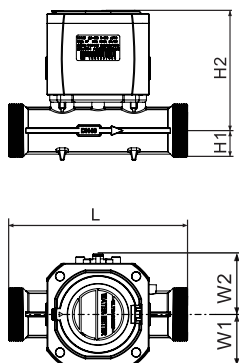
Dual channels big capacity ultrasonic water meter (R=100)

Nominal Diameter (mm)	Measurement Range Ratio (R)	Flow Rate (m³/h)		
		Minimum Flowrate Q1	Permanent Flowrate Q3	Overload Flowrate Q3
DN50	100	0.400	40.000	50.000
DN65	100	0.630	63.000	78.750
DN80	100	1.000	100.000	125.000
DN100	100	1.600	160.000	200.000
DN125	100	2.500	250.000	312.500
DN150	100	4.000	400.000	500.000
DN200	100	6.300	630.000	787.500
DN250	100	10.000	1000.000	1250.000
DN300	100	16.000	1600.000	2000.000
DN350	100	16.000	1600.000	2000.000
DN400	100	25.000	2500.000	3125.000
DN450	100	25.000	2500.000	3125.000
DN500	100	40.000	4000.000	5000.000

Four channels big capacity ultrasonic water meter (R=200)

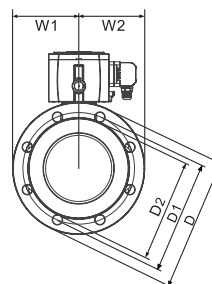
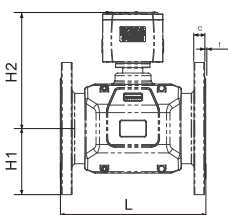
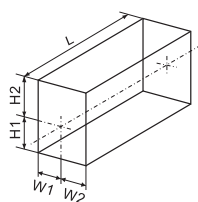
Nominal Diameter (mm)	Measurement Range Ratio (R)	Flow Rate (m³/h)		
		Minimum Flowrate Q1	Permanent Flowrate Q3	Overload Flowrate Q3
DN80	200	0.500	100	125.00
DN100	200	0.800	160	200.00
DN125	200	1.250	250	312.50
DN150	200	2.000	400	500.00
DN200	200	3.150	630	787.50
DN250	200	5.000	1000	1250.00
DN300	200	8.000	1600	2000.00
DN350	200	8.000	1600	2000.00
DN400	200	12.500	2500	3125.00
DN450	200	12.500	2500	3125.00
DN500	200	20.000	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				
	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

SELECTION CODE

FUW3200- ^{A B C D E}
☐-☐-☐-☐-☐

Letter	Items	Parameter	Remarks
A	Size	DN15– DN40 DN50– DN500	Choose pipe dia
B	Channel	1 – OneChannel 2 – Dual Channel 3 – Four Channel	One Channel: DN15 – DN40 Dual Channel: DN50 & above Four Channel: DN80 & above
C	Material	1 – Carbon Steel 2 – Brass 3 – 304 Stainless Steel 4 – 316 Stainless Steel	DN15– DN40: option 2,3,4 DN50 & above: option 1,3,4
D	Pressure	1.0 1.6 2.5	Standard Configuration PN1.6
E	Communication	1 – RS485 & 8-24Vdc 2 – RS485 & M-Bus	Standard Configuration 1

Example: FUW3200-DN100-4-2-1.6-1

Explanation: FUW3200 ultrasonic water meter, DN100 size, four channel, 304 stainless steel, Pressure rating 1.6MPa, RS485 – M-Bus



DISTRIBUTOR: Shan Controls
Plot # 45, Hill View Road, Mini commercial
Phase VII, Bahria Town Islamabad – Pakistan.
Phone: +92 (051) 5172280 | 5172281
Fax: +92 (051) 5172282
Email: sales@shancontrols.com