tork
valve & automation

IP68

ULTRASONIC FLOWMETER HEATMETER

PROFILE

UFM2012-F series Ultrasonic Flow/Heat Meter is the new product of TORK Proses Ölçüm Ekipmanları Ltd. Şti. it is designed strictly according to JJG1030-2007 standard to develope the reliability of protection class. Ultrasound transmit time principle makes the measurement range from DN25 to DN6000.

The advantages include high accuracy，strong anti-interference, reliability and stability,multiple interface. Each parts can achieve to IP68, enable the meter work in any severe environment.

CHARACTERISTICS

IP68 PROTECTION CLASS

Whole machine waterproof:whole machine is sealed completely reaching IP68 protection level.

Parts waterproof :Each part is waterproof,operating normally in the event of water inside .

WATERPROOF KEYBOARD

4-key board design,support setting operation password .

MULTIPLE INTERFACE

Communication interface:RS485 interface

Output: 4-20mA analog/OCT pulse/Relay signal

Heat measurement:achieve heat measurement by connecting 3-wired PT100 temperature transducers

Input: 3 way 4-20mA analog input, acquisition signals of temperature, press, liquid level,etc.

TEMPERATURE AND PRESSURE

Temperature range:-30℃~160℃

P/N： 0~2.5Mpa (Optional)

HIGH ACCURACY MEASUREMENT

Accuracy:0.5%、1% .

ULTRASOUND MEASUREMENT

No rotation, no moving parts , Long term measurement with high accuracy.

Applicable to variety of water quality, including the water gravel and weeds.

ULTRASONIC FLOWMETER HEATMETER

1、π Type Inline Ultrasonic Flow Meter(DN15mm~DN32mm)

The measuring range of π type inline ultrasonic flow meter is DN15mm~DN32mm,by flange connection or thread connection. IP68 protection level. measuring temperature range -30℃~160℃,P/N 0~4.0Mpa, high accuracy within ±0.5%。 （Please refer to page14 for detailed parameters）.

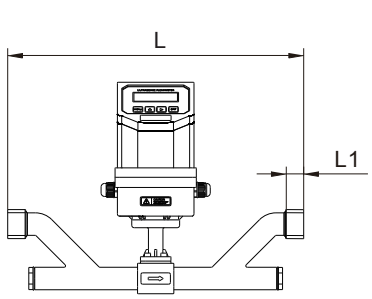
Measuring Diagram

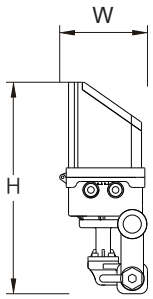
THREAD CONNECTION

FLANGE CONNECTION

ULTRASONIC FLOWMETER HEATMETER

• Thread Connection



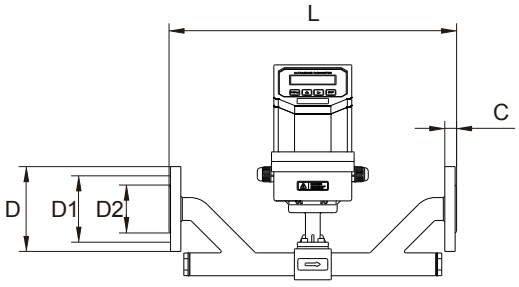


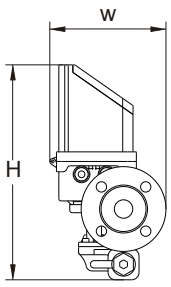
Unit: mm

Standard of Thread: GB/T7307-2001

Nominal Diameter (DN)	Pressure Level P	Length L	Width W	Height H	Thread Length L1	Thread Standard
DN15	2.5	320	121	285	13	G3/4B
DN20	2.5	360	121	285	15	G1B
DN25	2.5	390	121	292	16	G1 1/4B
DN32	2.5	450	121	292	22.5	G1 1/2B

• Flange Connection





Unit: mm

Standard of Flange: GB/T 9119-2000

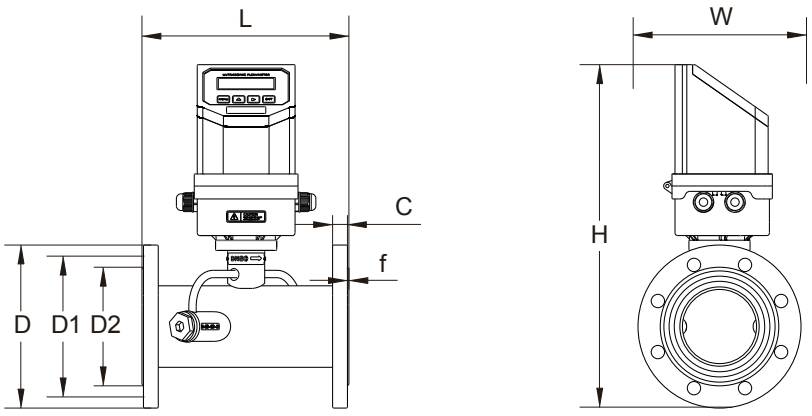
Nominal Diameter (DN)	Pressure Level P	Lengthl L	Width W	Height H	Flange Dimension						
					Normal Size D	Bolt Hole Centers D1	Bolt Hole X Quantity ϕ X n	Sealing Surface Diameter D2	Flange Thickness C	Flange Thickness f	Bolts Dimension
DN15	2.5	320	148	285	95	65	14x4	46	14	2	M12x50
DN20	2.5	360	153	285	105	75	14x4	56	16	2	M12x50
DN25	2.5	390	158	292	115	85	14x4	65	16	2	M12x50
DN32	2.5	450	170	292	140	100	18x4	76	18	2	M16x60

ULTRASONIC FLOWMETER HEATMETER

The measuring range of Standard inline type ultrasonic flow meter is DN40mm~DN1000mm, with high protection class of IP68, measuring fluid temperature of -30℃~160℃, pressure range of 0~2.5Mpa, high accuracy within ±0.5%. (Please refer to page14 for detailed parameters)

Measuring Diagram

Dimension



Unit: mm

ULTRASONIC FLOWMETER HEATMETER

Nominal Diameter (DN)	P/N P	Length L	Width W	Height H	Flange Dimension						
					Outer Diameter D	Bolt Hole Centers D1	Bolt Hole X Quantity ϕ X n	Sealing Surface Diameter D2	Flange Thickness		Bolt Specification
									c	f	
40	1.6	300	150	336	150	110	18x4	84	18	2	M16x60
50	1.6	300	165	349	165	125	18x4	99	20	2	M16x70
65	1.6	300	185	366	185	145	18x4	118	22	2	M16x70
80	1.6	225	200	381	200	160	18x8	132	20	2	M16x80
100	1.6	250	220	401	220	180	18x8	156	22	2	M16x80
125	1.6	275	250	428	250	210	18x8	184	22	2	M20x80
150	1.6	300	285	459	285	240	22x12	211	24	2	M20x90
200	1.6	350	340	511	340	295	26x12	266	26	2	M22x90
250	1.6	450	405	569	405	355	26x12	319	28	2	M22x90
300	1.6	500	460	621	460	410	23x16	370	32	2	M22x90
350	1.0	550	500	666	500	460	25x16	428	28	4	M20x80
400	1.0	600	565	697	565	515	25x20	482	30	4	M22x90
450	1.0	700	615	774	615	565	25x20	532	30	4	M22x90
500	1.0	800	670	826	670	620	30x20	585	32	4	M22x90
600	1.0	1000	780	931	780	725	25x24	685	36	5	M27x110
700	0.6	1100	860	1021	860	810	30x24	775	32	5	M22x90
800	0.6	1200	975	1129	975	920	30x24	880	32	5	M27x100
900	0.6	1300	1075	1229	1075	1020	30x24	980	34	5	M27x100
1000	0.6	1400	1175	1329	1175	1120	30x28	1080	36	5	M27x110

Standard Of Flange: GB/T 9119-2000 (DN40~300)
JB/T81-94 (DN350~1000)

ULTRASONIC FLOWMETER HEATMETER

It can achieve to heat measurement by connecting 3 way PT100 transducer. Accuracy:±1.0%, Heat meter's dimension is the same as In-line ultrasonic flow meter, except that the height increased 70mm.

Measuring Diagram

Optional Temperature Transducers(3-wired PT100)

Picture	Specification	Model	Meas. Range	Temperature	Cut off water	Accuracy
	Clamp on temperature Transducer Pt100	CT-1	≥DN50	-40~160℃	No	100℃ ±0.8℃
	Insertion temperature Transducer Pt100	TCT-1	≥DN50	-40~160℃	Yes	
	Insertion Pt100 Installation with pressure	PCT-1	≥DN50	-40~160℃	No	
	Insertion Pt100 Small size pipe diameter	SCT-1	<DN50	-40~160℃	Yes	

FIXED MOUNTED CLAMO ON ULTRASONIC FLOW METER/HEAT METER

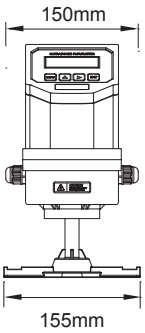
ULTRASONIC FLOWMETER HEATMETER

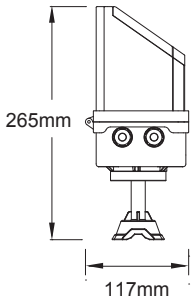
1、Fixed Mounted Clamp On Ultrasonic Flow Meter

Both converter and transducer are fixed on the pipeline, no need to cut off the pipeline, simplifying installation process. Wide measuring range of DN25mm~DN6000mm, IP68 protection class, measuring fluid temperature of -30℃~160℃, no limit for pressure , high accuracy within ±1%.（Please refer to page 14 for detailed parameters）

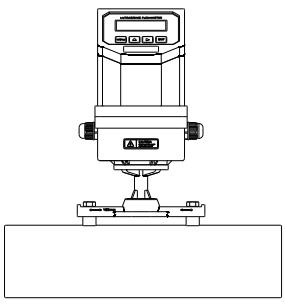
Measuring Diagram

Dimension & Installation

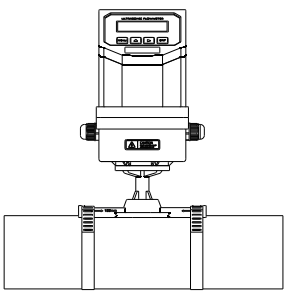




Unit: mm



Bolts Fixed



Steel Belt Fixed

ULTRASONIC FLOWMETER HEATMETER

Standard Clamp On Transducers

- Built-in magnet,attached to pipe surface Easily.
- IP68 if be sealed with Gel.
- Complete specifications，wide measuring range of DN25mm~DN6000mm.
- Fluid temperature :-30℃~160℃.

Description	Model	Measuring Range	Fluid Temperature	Dimension
Small Size	TS-2	DN25~DN100	-30~90℃	45×25×28mm
Medium Size	TM-1	DN50~DN700	-30~90℃	64×39×44mm
Large Size	TL-1	DN300~DN6000	-30~90℃	97×54×53mm

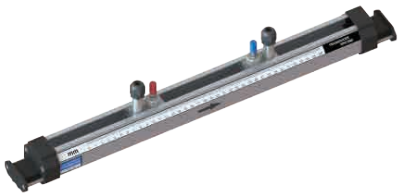
High Temperature Clamp On Transducers

- Built-in magnet,attached to pipe surface directly.
- IP68 if be sealed with Gel.
- Complete specifications，wide measuring range of DN25mm~DN6000mm.
- Fluid temperature :-30℃~160℃.

Description	Model	Measuring Range	Fluid Temperature	Dimension
Small Size	TS-2-HT	DN25~DN100	-30~160℃	45×25×28mm
Medium Size	TM-1-HT	DN50~DN700	-30~160℃	64×39×44mm
Large Size	TL-1-HT	DN300~DN6000	-30~160℃	97×54×53mm

ULTRASONIC FLOWMETER HEATMETER

- **Mounting Bracket Clamp On Transducers**



- Improve installation efficiency and installation accuracy
- IP68 protection class.
- Measuring range: DN25mm~DN700mm.
- Fluid temperature :-30~160℃

Description	Model	Measuring Range	Fluid Temperature	Dimension
Small Size	HS	DN25~DN100	-40~90℃	318×59×85mm
Medium Size	HM	DN50~DN300	-40~90℃	568×59×85mm
Large Size	EB-1	DN300~DN700	-40~90℃	88×59×49mm
High Temperature Small Size	HS-HT	DN25~DN100	-40~160℃	318×59×145mm
High Temperature Medium Size	HM-HT	DN50~DN300	-40~160℃	568×59×145mm
High Temperature Extended	EB-1-HT	DN300~DN700	-40~160℃	88×59×49mm