

1.4 THERMAL ENERGY MEASUREMENT

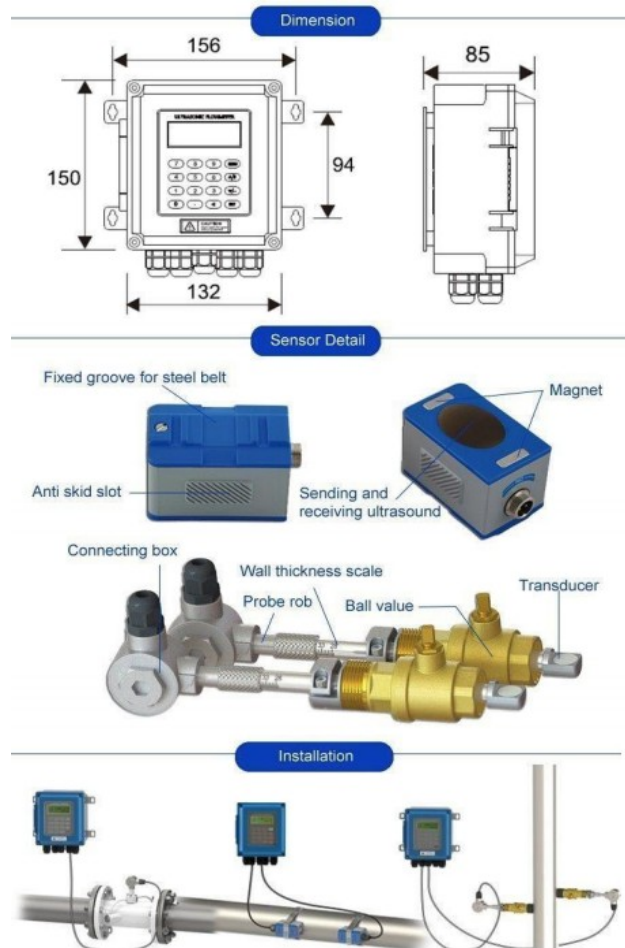


Wall Mounted Ultrasonic Flow Meter

DESCRIPTION

The TUF-2000B flowmeter can be applied virtually to a wide range of long-term in-line measurements. The box comes with protection class IP67 and transducer protection class IP98. A variety of liquid applications can suit ultra-pure liquids, portable water, chemicals, raw sewage, reclaimed water, cooling water, river water, plants, etc.

- Transducer protection class ES IP98
- Inverters protection class IP67
- Wide measuring range DN-15DN6000mm
- Multiple signal output, achieve remote monitoring



Performance and parameters:

Articles	Performance and parameters	
Converter	Beginning	Ultrasonic transit time flowmeter $\pm 1\%$
	Accuracy	
	Monitor	2x20 character LCD with backlight, English language compatible 1-way 4-20 mA output,
	Departure from sign	electrical resistance 0-1K, accuracy 0.1% 1-way OCT pulse output (pulse width - 1000 ms, the value
		default is 200 ms) 1 - way Relay output
	Entry signal	3-way input 4 - 20 mA, 0.1% accuracy, acquisition signal as temperature, pressure and liquid level
Connect the PT-100 temperature transducer, you can end heat the measurement / power.		
Interface data	Isolate RS-485 serial interface, upgrade computer flow meter software, support MODBUS.	
Special cable	Twisted pair cable, usually the shortest length to 50 meters, select the RS-485, the transmission distance can exceed 1000m	
Tube Installation Condition	Material of the pipeline	Steel, stainless steel, cast iron, copper, cement pipe, PVC, aluminum, glass steel product, cladding is allowed
	Diameter of the pipeline	25 - 6000 mm
	Straight tube	Installing the transducer must be satisfied: upstream 10 D, pump. downstream 5 D, 30 D from the
Measurement Half	Kind of liquid	A single liquid can transmit sound waves; cold as water (hot water, water, water city, seawater, wastewater, etc.); waters residuals with content of small particles, petroleum (crude, oil lubricant, diesel, fuel oil, etc.); chemical products (alcohol, etc.); e uent of the plant; drink; Liquids ultra-pure, etc.
	Temperature to	-30 - 160
	Turbidity	No more than 10,000 ppm and less bubbles 0 - ± 7 m / s
	Cup of ow	
	Temperature to	Converter; -20 - 60 ° C; Flow transducer: -30 - 160
Humidity	Converter: 85% RH; Flow transducer: can measure underwater, water depth ≤ 2 m	
Working Humidity ambie	Temperature to	Converter; -20 - 60 ° C; Flow transducer: -30 - 160 ° C
	ntal	Converter: 85% RH; Flow transducer: can measure underwater, water depth ≤ 2 mDC 8 36 V or AC -
Power supply	85 - 264 V (optional)	
Power consumption	1.5 W	
Dimensions	132 * 150 * 85mm (converter)	

Standard packing:

Host TUF - 2000B

Steel Belt

Ultrasonic transducer TM-1





Optional 2 x 5 m ow signal cable transducers:

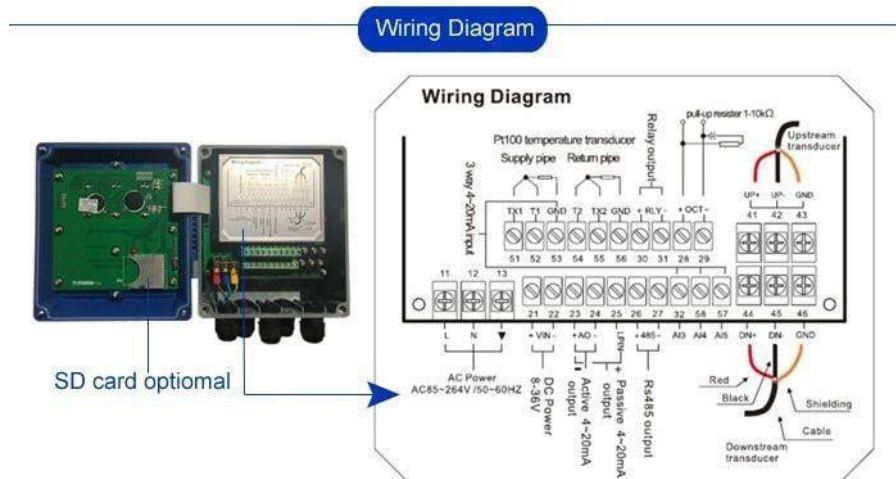


Please choose the suitable transducer, according to different liquid pipe condition and installation method, (please refer to the measuring diagram).

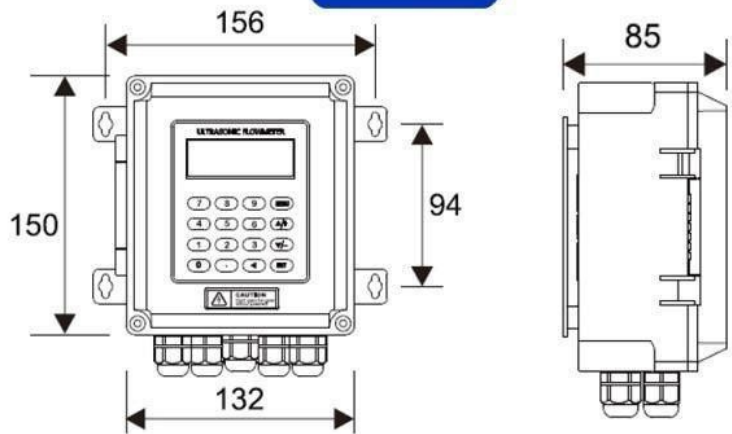
Types	Picture	Spec.	Model	Measurement Range	Temperature	Dimension	
Clamp on		Small Size	TS-2	DN25~DN100	-30~90℃	45×25×32mm	
		Medium Size	TM-1	DN50~DN700	-30~90℃	64×39×44mm	
		Large Size	TL-1	DN300~DN6000	-30~90℃	97×54×53mm	
High temp clamp on		Small Size	TS-2-HT	DN15~DN100	-30~160℃	45×25×32mm	
		Medium Size	TM-1-HT	DN50~DN700	-30~160℃	64×39×44mm	
		Large Size	TL-1-HT	DN300~DN6000	-30~160℃	97×54×53mm	
Insertion		Standard	TC-1	DN80~DN6000	-30~160℃	190×80×55mm	
		Lengthen	TC-2	DN80~DN6000	-30~160℃	335×80×55mm	
Pipe		II type	G1	DN15~DN32	-30~160℃	SUS304 thread connection	Please refer to detailed pipe dimensions
		Standard	G2	DN40~DN1000	-30~160℃	carbon steel thread connection	

Optional temperature transducers PT-100:

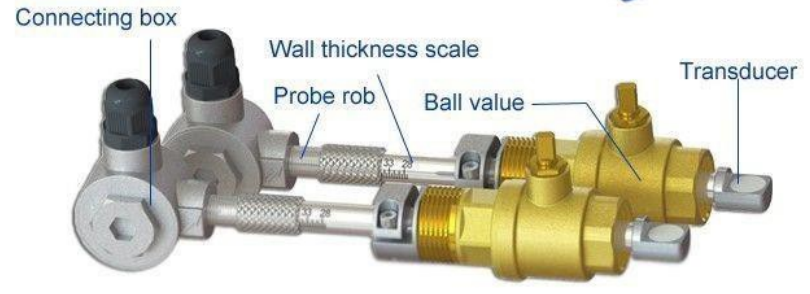
PT100	Picture	Model	Accuracy	Cut off water	Measuring Range	Temperature
Clamp on		CT-1	±1%	No	DN50-6000mm	-40°C-160°C
Insertion Type		TCT-2	±1%	Yes	DN50-6000mm	-40°C-160°C
Insertion Type Installation with pressure		PCT-1	±1%	NO	DN50-6000mm	-40°C-160°C
Insertion Type for small pipe diameter		SCT-1	±1%	Yes	DN15-50mm	-40°C-160°C



Dimension



Sensor Detail

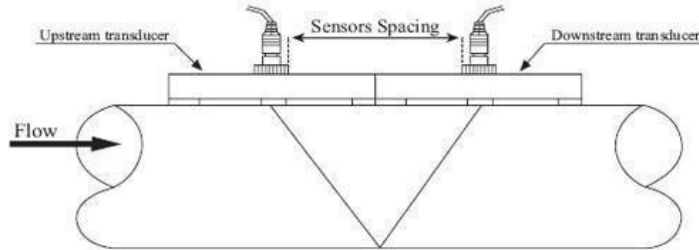


Installation

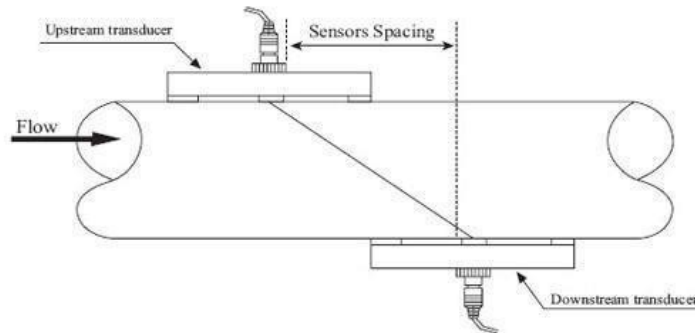


Installation Method

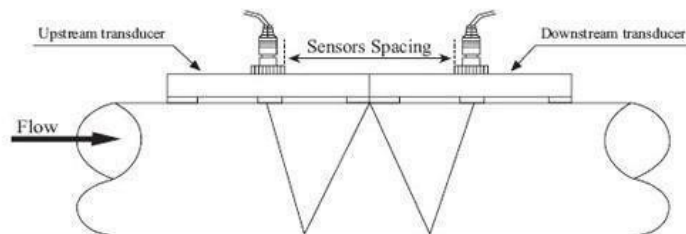
V method usually used on DN20~300mm pipe



Z method usually used on DN300~500mm pipe



W method usually used on DN10~100mm pipe



Top View	Bottom View	Side View	Wiring Diagram
<ul style="list-style-type: none"> 1 Fastening groove of puller strap 2 Fastening groove of wirerope 3 Fastening groove of steel belt 4 Fastening screw 5 Indicating arrow of signal direction 	<ul style="list-style-type: none"> 6 Acoustic wedge 7 Powerful magnet 8 Antiskid groove 9 Signs of upstream and downstream 10 Cable interface 	<ul style="list-style-type: none"> 11 Starting point of installation distance 12 Product information label 	<ul style="list-style-type: none"> 13 Positive terminal 14 Negative terminal 15 Earth terminal 16 Junction box

