Wall Mounted Ultrasonic Flow /BTU Meter

TUF-W Wall Mounted Ultrasonic Flow / BTU Meter

Overview

TUF-W Ultrasonic Flow Meter is a wall mounted,transit-time ultrasonic flow and BTU meter, with clamp ontransducer for non-invasive liquid flow measurement.Easy to use, it is ideal for installation in existing systems whenshutdowns are impractical. For BTU/Energy applications both clamp-on and insertion RTDs are available.

Applications

Widely used for water supply,non conductive liquid such as the distilled water, food oil & light oil, boiler fuel oil engine for diesel measurement, and air conditioner system to measure the flow & heat, food and beverage, pharmaceutical, ballast water, fuel consumption and other processes on-board ship.

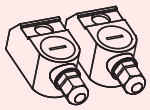
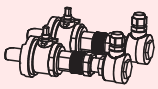
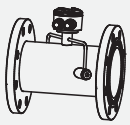
Feature

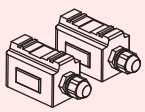
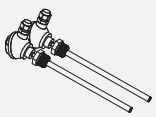
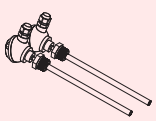
- High Accuracy of ±1.0% of reading
- 2 line LCD display with flowrate, totalizer
- Transducers for pipe size from DN15 ~ DN6000 (1/2” ~ 240”)
- Temperatures of up to 160°C
- Available with clamp on or insertion RTDs for BTU/Energy application
- Support SD card memory
- Configure with dual power 8~36VDC and 85~ 264 VAC

Specifications

Measuring Principle	Transit time ultrasonic
Pipe Size	S2 transducer: DN15~DN100 (½" ~ 4") M2 transducer: DN50~DN700 (2"~ 28") L2 transducer: DN300~DN6000 (12"~ 240")
Pipe Material	Carbon Steel,Stainless Steel, Cast Iron, Ductile Iron, Copper,PVC,Aluminum
Display	2 line LCD with backlight
Engineering Units	Cubic Meter, Liter, US Gallon, Million US Gallon, Cubic feet, US liquid barrel, Imperial liquid barrel, Oil barrel
Time units	Second, Minute, Hour, Day
Accuracy	±1% of reading (0.5 ~ 5 m/s)
Data logger	SD card optional
Repeatability	0.2%
Communication	RS485/Modbus
Keypad	16 key with tactile action
Response Time	0-999 seconds,user chose
Flow Velocity	0.5-10 m/s
Ambient Temperature	-30°C ~ 80°C
Mounting	Wall mounted
Max.Cable Length	100 meter
Power Consumption	Less than 5W
Power Supply	24VDC and 85 ~264VAC 50/60HZ
Data Storage	Operation parameters,totalization
Output	One way 4-20mA analog, electric resistance: 0~1k, accuracy: 0.1% One way OCT pulse One way Relay
Protection	Converter and Sensor: IP65; Sensor: IP68 optional
Language	English, China, Italy, Turkey

Standard Transducer

Flow transducer	Picture	Model	Measuring range (mm)	Temperature
Clamp on		S2 (small)	DN15-DN100	-30℃ ~ 90℃
		M2 (medium)	DN50-DN700	
		L2 (large)	DN300-DN6000	
High temp. clamp on		S2-HT (small)	DN15-DN100	-30℃ ~ 160℃
		M2-HT (medium)	DN50-DN700	
		L2-HT (large)	DN300-DN6000	
Insertion		TC-1 (standard)	DN50-6000	-30℃~ 160℃
		TC-2 (extended)		
		TP-1 (parallel)	DN200-6000	
Inline		Standard	DN15-1000	-30℃ ~160℃

Temperature transducer	Picture	Model	Measuring range	Temperature	Cut off water
Clamp on		CT-1	⩾ DN50	-40℃ ~ 160℃	No need
Insertion		TCT-1	⩾ DN50	-40℃ ~ 160℃	Need
Insertion under pressure		PCT-1	⩾ DN50	-40℃ ~ 160℃	No need

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Parts

Transducers

Upstream
Signal Cable

Chain

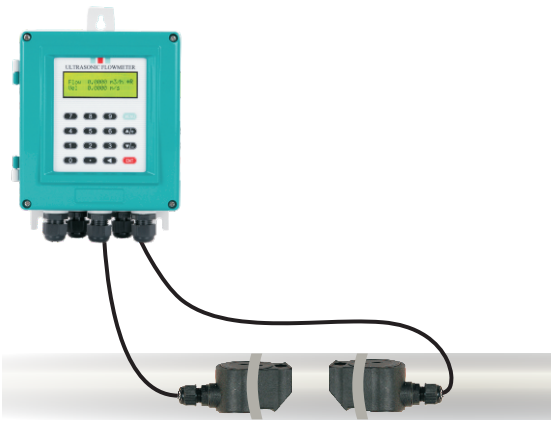
Main Board

Coupling Gel

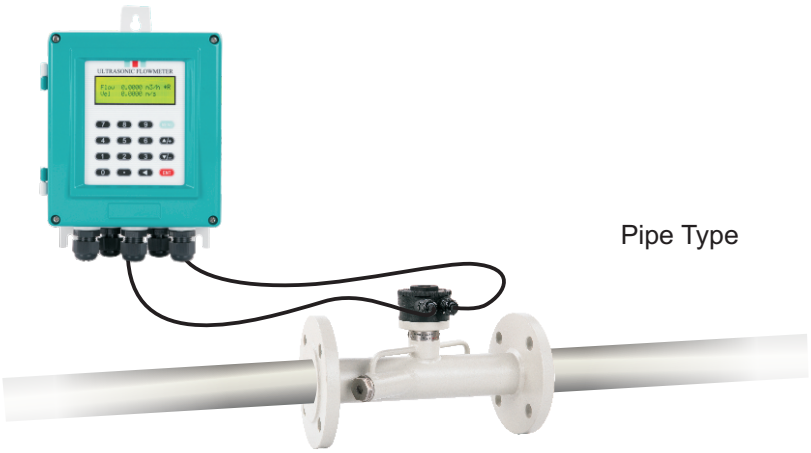
Downstream
Signal Cable

Installation

Insertion Type

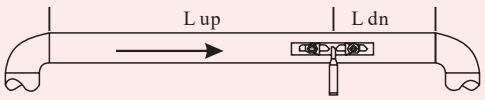
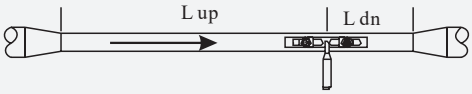
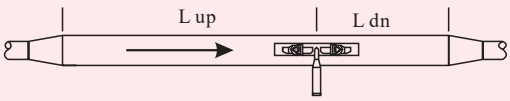
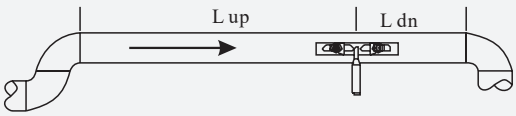
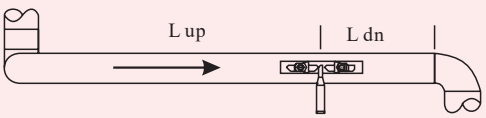
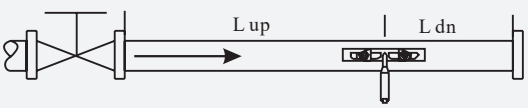
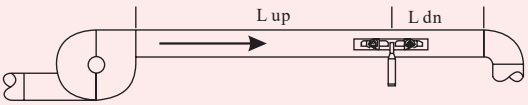


Clamp On Type



Pipe Type

Transducers Mounting Allocation

Piping Configuration and Transducer Position	Upstream Dimension L up x Diameters	Downstream Dimension L dn x Diameters
	10D	5D
	10D	5D
	10D	5D
	12D	5D
	20D	5D
	20D	5D
	30D	5D

Model Selection

DESCRIPTION	TUF	XX	XX	XX	XX	XX	XX
Nominal Size	DN15-DN6000 / 1/2"-240"	W					
Transducers	Small clamp sensor, DN15-DN100 (½"-4"), -30~90°C		S2				
	Middle clamp sensor, DN50-DN700 (2"-28"), -30~90°C		M2				
	Large clamp sensor, DN300-DN6000 (12"-240"), -30~90°C		L2				
	High Temperature small clamp sensor, DN15-DN100 (½"-4"), -30~160°C		S2H				
	High Temperature middle clamp sensor, DN50-DN700 (2"-28"), -30~160°C		M2H				
	High Temperature large clamp sensor, DN300-DN6000 (12"-240"), -30~160°C		L2H				
	Insertion, pipe thickness ≦ 20mm, -30~160°C, 1/2"-240"		TC-1				
	Insertion, pipe thickness ≦ 70mm, -30~160°C, 2"-240"		TC-2				
	Insertion, parallel, 8"-240"		TP-1				
Signal Cable Length	5m length, 2 Cables (Standard length)			S1			
	Optional cable length			X			
Temperature sensor	Without temperature sensor				W1		
	With temperature sensor (PT100)				N1		
SD card data storage	Without SD card data storage					0	
	With SD card data storage					1	
Protection Class	IP65 Protection for transducers						ST
	IP68 Protection for transducers						IP68