

Wall Mounted Ultrasonic Flowmeter





Overview

QTDS-100F Ultrasonic Flow Meter is a wall mounted,transit-time ultrasonic flow and BTU meter, with clamp on transducer for non-invasive liquid flow measurement.Easy to use, it is ideal for installation in existing systems when shutdowns 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 $\pm 1.0\%$ of reading
- 2 line LCD display with flowrate, totalizer
- Transducers for pipe size from 1/2" ~ 240" (DN15 ~ DN6000)
- 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 (1/2" ~ 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	Flow Unit: cubic Meter, Liter, US Gallon, Million US Gallon, Cubic feet, US liquid barrel, Imperial liquid barrel, Oil barrel
	Heat Unit: GJ, KC, KWh, BTU
Time units	Second, Minute, Hour, Day
Accuracy	±1% of reading (0.5 ~ 5 m/s)
Data logger	SD card optional
Repeatability	±1% of reading
Communication	RS485/Modbus
Keypad	16 key with tactile action
Response Time	0-999 seconds,user chose
Flow Velocity	0.5-10 m/s
Temperature	Transmitter: -30°C~60°C
	Transducer: -30°C~90°C standard, -30°C~160°C optional
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
Input	3 ways 4~20 mA analog, accuracy: 0.1%.
Protection	Converter and Sensor: IP65; Sensor: IP68 optional
Language	English, China, Italy, Turkey

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Standard Transducer

Temperature: -30 ~ 90°C

Accuracy: +/-1.0%

Flow transducer	Picture	Model	Measuring range (mm)	Temperature
Clamp on		S2 (small)	DN15-DN100 (1/2"-4")	-30°C ~ 90°C
		M2 (medium)	DN50-DN700 (2"-28")	
		L2 (large)	DN300-DN6000 (12"-240")	
High temp. clamp on		S2-HT (small)	DN15-DN100 (1/2"-4")	-30°C ~ 160°C
		M2-HT (medium)	DN50-DN700 (2"-28")	
		L2-HT (large)	DN300-DN6000 (12"-240")	
Insertion		TC-1 (standard)	DN50-6000 (2"-240")	-30°C ~ 160°C
		TC-2 (extended)		
		TP-1 (parallel)	DN200-6000 (8"-240")	
Inline		Standard	DN15-1000 (1/2"-40")	-30°C ~ 160°C

Temperature transducer	Picture	Model	Measuring range	Temperature	Cut off water
Clamp on		CT-1	≥ DN50 / 2"	-40°C ~ 160°C	No need
Insertion		TCT-1	≥ DN50 / 2"	-40°C ~ 160°C	Need
Insertion under pressure		PCT-1	≥ DN50 / 2"	-40°C ~ 160°C	No need

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Parts



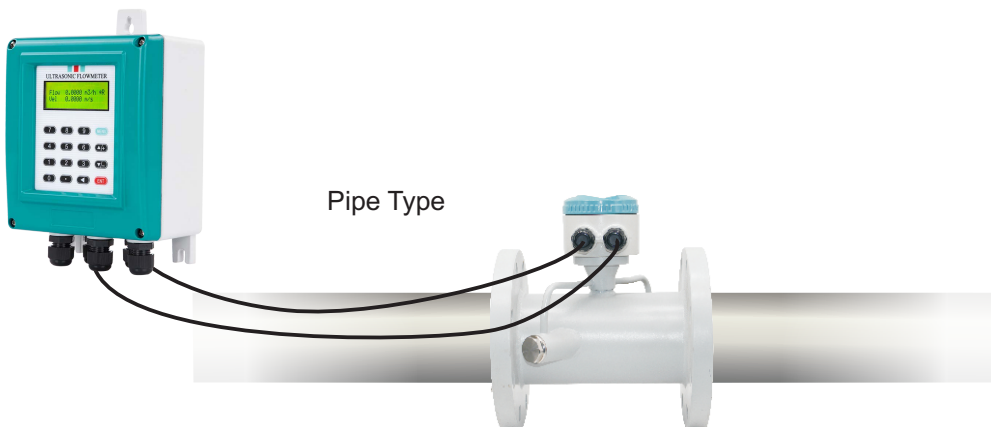
Installation



Insertion Type



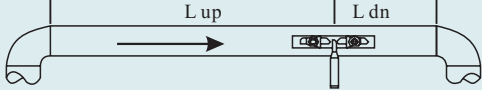
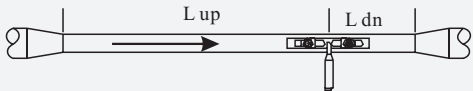
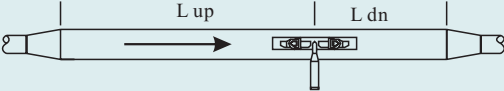
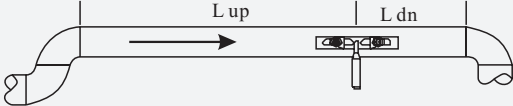
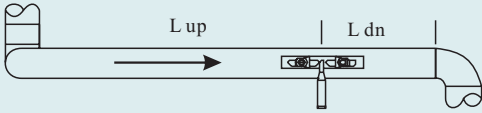
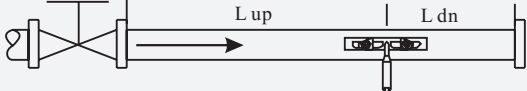
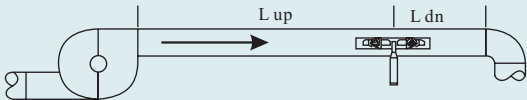
Clamp On Type



Pipe Type



Transducers Mounting Allocation

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



Model Selection

DESCRIPTION	QTDS-100F	XX	XX	XX	XX	XX	XX
Flowmeter Unit	Wall mounted	400F					
Transducers	Small clamp sensor, DN15-DN100 (½"-4"), -30°C~90°C		S2				
	Middle clamp sensor, DN50-DN700 (2"-28"), -30°C~90°C		M2				
	Large clamp sensor, DN300-DN6000 (12"-240"), -30°C~90°C		L2				
	High Temperature small clamp sensor, DN15-DN100 (½"-4"), -30°C~160°C		S2H				
	High Temperature middle clamp sensor, DN50-DN700 (2"-28"), -30°C~160°C		M2H				
	High Temperature large clamp sensor, 12" ~ 240" DN300-DN6000 (12"-240"), -30°C~160°C		L2H				
Signal Cable Length	5m length, 2 Cables (Standard length)			S1			
	Optional cable length			O1			
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

