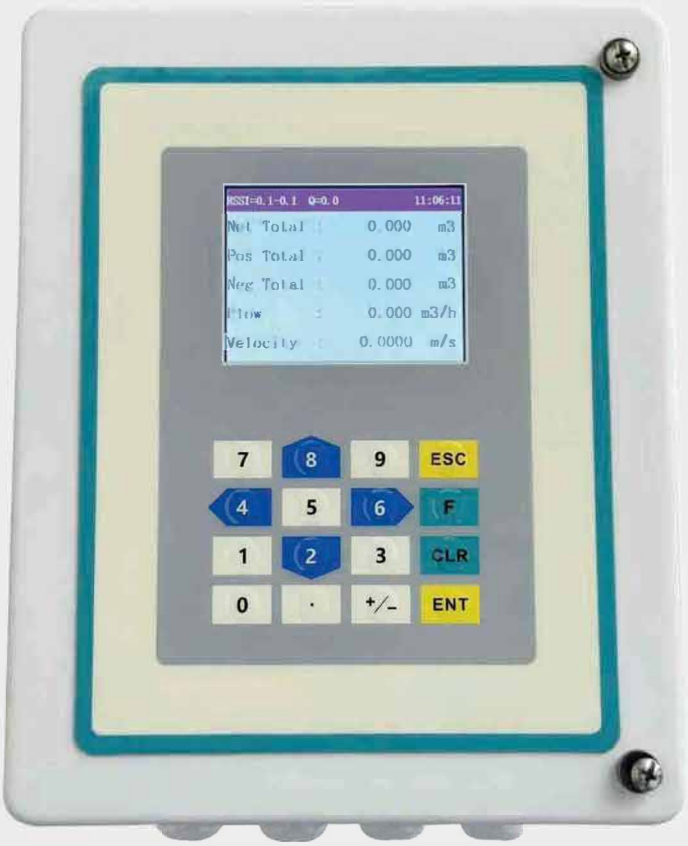
Dill-Tech

SINGLE-CHANNEL ULTRASONIC FLOWMETER

INSERTION



Spool-piece transducer for best accuracy and better long-term stability.

TRANSIT-TIME ULTRASONIC FLOWMETER

General:

Transit-time Ultrasonic Flowmeter works on the transit-time method.
The clamp-on ultrasonic transducers (sensors) are mounted on the external surface of the pipe for non-invasive and non-intrusive flow measurement of liquid in fully filled pipe. Two pairs of transducers are sufficient to cover the most common pipe diameter ranges. In addition, its optional thermal energy measurement capability makes it possible to carry out a complete analysis of thermal energy usage in any facility.
The Insertion ultrasonic transducers (sensors) is hot-tapped mounting, there is no ultrasonic compound and coupling problem; Even though the transducers are inserted into pipe wall, they do not intrude into the flow, thus, do not generate disturbance or pressure drop to the flow. The insertion (wetted) type has the advantage of long-term stability and better accuracy.
This flexible and easy to use flow meter is the ideal tool for the support of service and maintenance activities. It can also be used for the control or even for the temporary replacement of permanently installed meters .

Applications:

General

- Service and maintenance
- Replacement of defective devices
- Support of commissioning process and installation
- Performance and efficiency measurement
  - Evaluation and assessments
  - Capacity measurement of pumps
  - Monitoring of reulating valves
- Energy efficiency audits

Water and waste water industry - hot water, cooling water, potable water, sea water etc
Petrochemincal industry
Chemical Industry - chlorine, alcohol, acids, thermal oils etc
Refrigeration and air conditioning systems
Food, beverage and pharmaceutical industry
Power supply - nuclear power plants, thermal & hyropower plants, heat energy boiler feed water etc
Metallurgy & mining applications
Mechanical engineering and plant engineering - pipeline leak detection, inspection, tracking and collection

Water & Waste Water | HVAC | Building | Petrochemical Industry | Metallurgy & Mining

Application Pictures:












INSERTION TRANSIT-TIME ULTRASONIC FLOWMETER

Features:

- Hot-tapped installation, no pipe line flow interrupted.
- No moving parts, no pressure drop, no maintenance.
- Spool-piece transducer for best accuracy and better long-term stability.
- High temp. Insertion transducers are suitable for high temperature of -35°c~ 150°c.
- Wide bi-directional Flow range of 0.01 to 12m/s, and wide range of pipe sizes from DN65 to DN6000.
- Data logger function.
- The heat measurement function by configuring with paired temperature sensors.

Specifications:

Transmitter:

Measurement principle	Ultrasonic transit-time difference correlation principle
Flow velosity range	0.01 to 12m/s, bi-directional
Resolution	0.25mm/s
Repeatability	0.2% of reading
Accuracy	±1.0% of reading at rates >0.3m/s; ±0.003m/s of reading at <0.3m/s
Response time	0.5s
Sensitivity	0.003m/s
Damping of displayed value	0-99s (selectable by user)
Liquid Types Supported	Both clean and somewhat dirty liquids with turbidity <10000 ppm
Power Supply	AC: 85-265V DC: 24V/500mA
Enclosure type	Wall-mounted
Degree of protection	IP66 according to EN60529
Operating temperature	-20°C to +60°C
Housing material	Fiberglass
Display	3.5" colour LCD display, 16 keys
Units	User Configured (English and Metric)
Rate	Rate and Velocity Display
Totalized	gallons, ft^3, barrels, lbs, litres, m^3, kg
Thermal energy	unit GJ, KWh can be optional
Communication	4-20mA, OCT, Relay, RS232, RS485 (Modbus), Datalogger, NB-IoT, GPRS
Size	244(h)*196(w)*114(d)mm
Weight	2.4kg

Transducer:

Degree of protection	IP67 and IP68 according to EN60529
Transducer Size	Type S Φ58*199mm
Suited Liquid Temperature	Std. Temp: -35°C~200°C High Temp: -35°C ~ 150°C
Pipe diameter range	DN65-6000
Material of transducer	SUS304)std. temp); SUS304 + Peek (high temp)
Cable Length	Std: 10m
Temperature Sensor	Pt1000 insertion ot clamp-on Accuracy: ±0.1%

Configuration Code:

Wall-mounted Transit-time Insertion Ultrasonic Flowmeter												
	Power Supply											
	A	85-265VAC										
	D	24VDC										
	S	65W Solar supply										
		Output Selection 1										
		N	N/A									
		1	4-20mA (accuracy 0.1%)									
		2	OCT									
		3	Relay Output (Totalizer or Alarm)									
		4	RS232 Output									
		5	RS485 Output (ModBus-RTU Protocol)									
		6	Data storage function									
		7	GPRS									
			Output Selection 2									
				Same as above								
				Output Selection 3								
					Transducer Type							
					S	Standard Insertion for pipe DN65-DN6000						
						Transducer Temperature						
						S	-35 ~ 85°C					
						H	-35 ~ 150°C					
							Temperature Input Sensor					
							N	None				
							T	PT1000				
								Pipeline Diameter				
								DNXX	e.g. DN65 - 65mm, DN1400 - 1400mm			
									Cable length			
									10m	10m (standard 10m)		
									Xm	Common cable Max 300m (standard 10m)		
									XmH	High temp. cable Max 300m		

A - 1 - 2 - 3 /LTI -S - S - N - DN100 - 10m (example configuration)

Description:
Power supply: 85-260VAC; output:4-20mA; OCT & Relay; transducer type: standard insertion transducer for DN65-6000; transducer temperature: -35 ~ 85°C; without PT1000 temperature sensor; DN100 application; 10m transducer cables.

Dill-Tech

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