

FlowT



ULTRASONIC FLOW METER FT101



Introduction

Ft101 is a wall-mount, clamp-on type ultrasonic flowmeter which use the transfer time technology. Clamp on type ultrasonic flowmeter is easy to install and no need to cut off the pipe, that saves you lots of troubles and cost. At the same time FT101 has our unique calculate software to ensure the high accuracy and low velocity response.



Ft101 could add the RTD model and temperature sensor become an energy meter to monitoring the energy use, help to save the energy.

Application

FT101 ultrasonic flowmeter widely application in oil industry, water treatment, pure water, chemical and etc.,



Specification

Performance

Flow range	$\pm 0.09\text{ft/s} \sim \pm 40\text{ft/s}$ ($\pm 0.01\text{m/s} \sim \pm 12\text{m/s}$)
Accuracy	$\pm 0.5\%$ of reading (for $\pm 1.5\text{ft/s} \sim \pm 40\text{ft/s}$)
Repeatability	0.15% of measured value
Linearity	$\pm 0.5\%$
Pipe size	1" to 200" (25mm to 5000mm). Pipe size under 1" is an option

Function

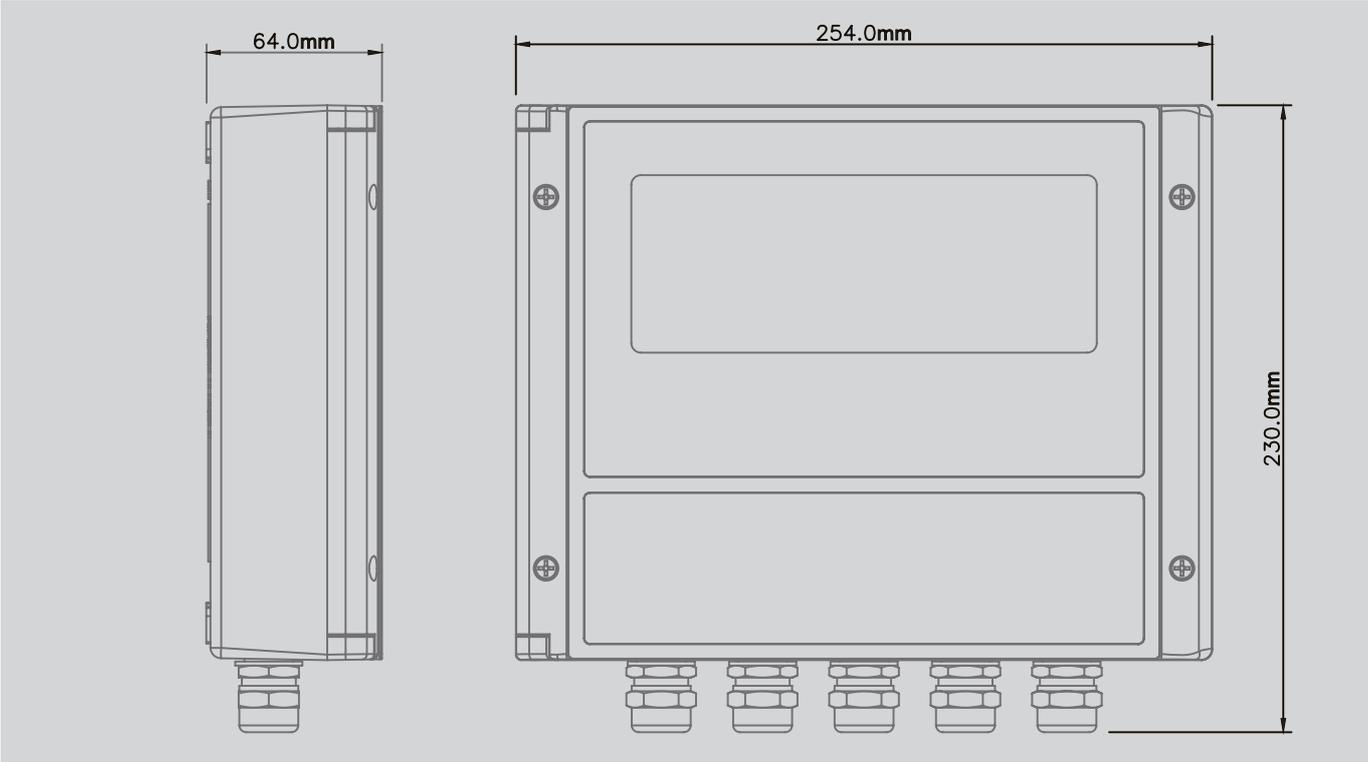
Outputs	Analog output: 4~20mA, max load 750 Ω . Pulse output: 0~9999Hz, OCT, (min. and max. frequency is adjustable) Relay output: SPST, max 1Hz, (1A@125VAC or 2A@30VDC)
Communication	RS232&RS485
Memory	TF card (Standard 8G)
Power supply	90 to 245 VAC, 48 to 63 Hz. Or 10 to 36VDC
Display	240*128 back lit LCD
Temperature	Transmitter: -40°F ~ 140°F (-40°C ~ 60°C) Transducer: -40°F ~ 176°F (-40°C ~ 80°C, standard)
Humidity	Up to 99% RH, non-condensing

Physical

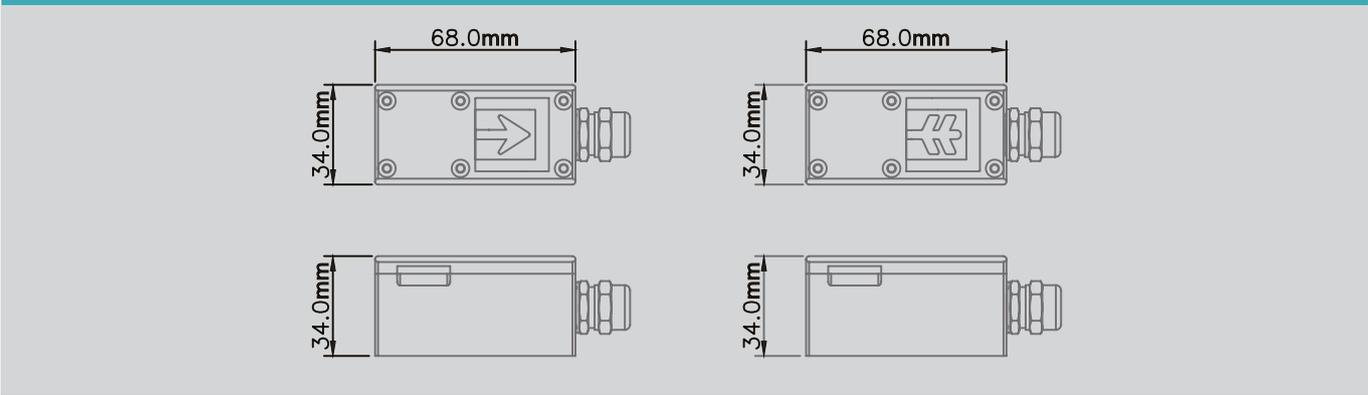
Transmitter	IP65
Transducer	IP68 Encapsulated design Double-shielded transducer cable Standard/maximum cable length: 30ft/900ft (9m/274m)

Product size

Transmitter size

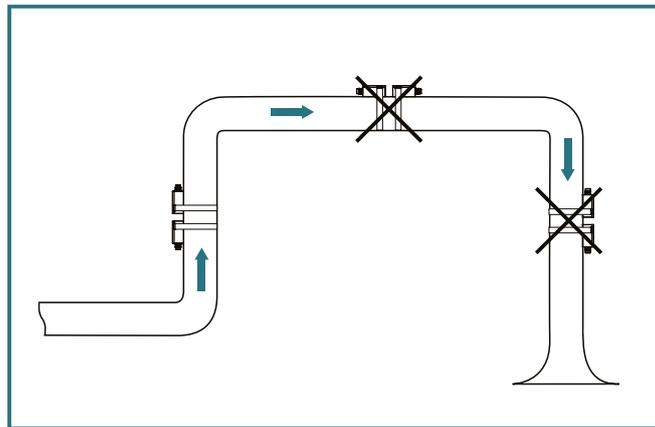


Transducer size

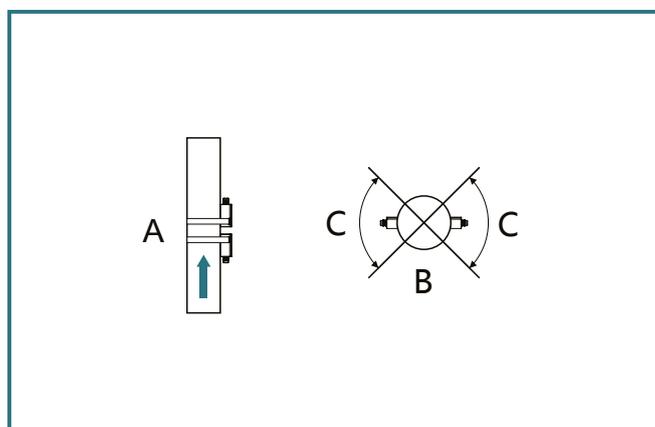


Installation site selection

The first condition for ultrasonic flow meter is the pipe must be full of liquid, the bubbles will greatly influence the accuracy of the measurement, please avoid the follow installation position:



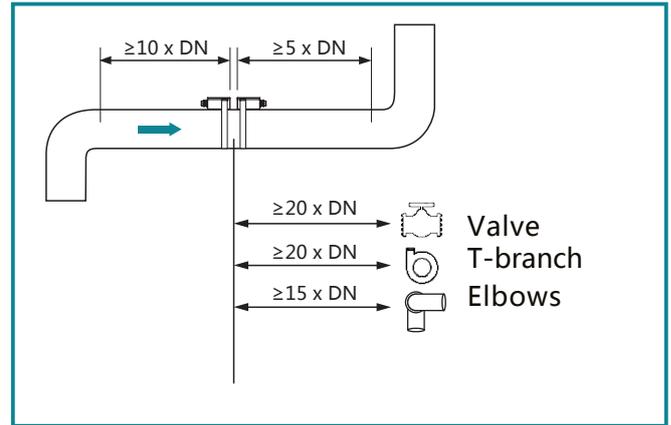
The suggestion installation area is as following:



- A is for upright pipeline, please notice the water direction is from the bottom to top.
- B is for horizontal pipeline, the transducers need to be installed inside the C area, angle for area C, max 120°.

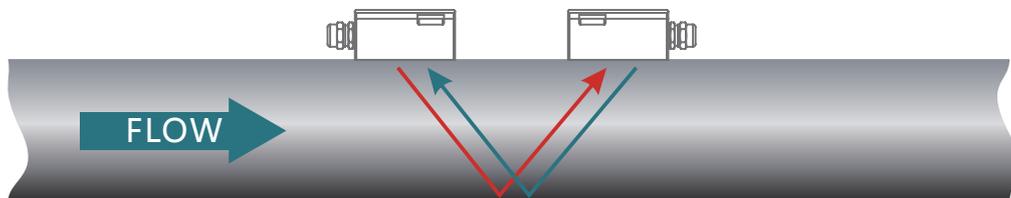
Straight pipe demand

We suggest avoiding the valve, T-branch pipe and elbows if the condition allow. Please satisfied the hardest position installation requirements when you face more than one interfering resource.



Measuring principle

Transfer time technical means the ultrasonic signal from the transducer is transmitted and received through the moving liquid, there will be a difference between the upstream and downstream transit time, which can be used to calculate flow and velocity.



Ordering confirmation

Model	Transmitter
FT101	Ultrasonic flowmeter Wall mount Flow range : $\pm 0.01\text{m/s} \sim \pm 12\text{m/s}$ Accuracy : $\pm 0.5\%$ of the measure value Repeatability : 0.15% of the measure value Display : 240*128 backlit LCD Power supply : 90-250VAC , 48-63Hz or 10-36VDC Output : 4-20Ma , OCT , Relay Communication : RS232/RS485 , Modbus
Code	Output
1	OCT, Relay, RS232/RS485, 4-20mA
2	OCT, Relay, RS232/RS485, 4-20mA , RTD
Code	Transducer
C1	Clamp-on, IP68. Operating temperature: $-40^{\circ}\text{F} \sim +176^{\circ}\text{F} (-40^{\circ}\text{C} \sim +80^{\circ}\text{C})$
C1U	Clamp-on, IP68. Operating temperature: $-40^{\circ}\text{F} \sim +266^{\circ}\text{F} (-40^{\circ}\text{C} \sim +130^{\circ}\text{C})$
C1H	Clamp-on, IP68. Operating temperature: $32^{\circ}\text{F} \sim +356^{\circ}\text{F} (0^{\circ}\text{C} \sim +180^{\circ}\text{C})$
W1	Insertion, IP68. Operating temperature: $-40^{\circ}\text{F} \sim +266^{\circ}\text{F} (-40^{\circ}\text{C} \sim +130^{\circ}\text{C})$
W1H	Insertion, IP68. Operating temperature: $32^{\circ}\text{F} \sim +356^{\circ}\text{F} (0^{\circ}\text{C} \sim +180^{\circ}\text{C})$
XXX	Transducer cable length
030	Standard length 30ft (9m)
XXX	Max length to 900ft (274m)
Code	Temperature sensor
PT1000	Pt1000 temperature sensor

Standard model: FT101-1-C1-030

Description: Standard ensure clamp-on type ultrasonic flowmeter, OCT, Relay, RS485, 4-20mA, 30ft cable.