

# FBTU2X

Wall Mounted Ultrasonic Flow Meter

www.3wire.my



## INTRODUCTION

**FBTU2X** is a cost effective flow meter (Optional BTU) which can be used in a wide range of long-term Flow & BTU measurements. It comes with IP67 protection for the Converter and IP68 protection for the transducer.

A wide variety of liquid can be effectively and accurately measured, including ultra-pure liquids, potable water, chemicals, raw sewage, reclaimed water, cooling water, river water, plant effluent etc.











## MEASURING DIAGRAM

	Flow Measurement	Heat Measurement	Features
CLAMP ON			<ul style="list-style-type: none"> <li>No need to cut off water, no pressure loss.</li> <li>Connect clamp on temperature transducer, can finish the heat/energy measurement.</li> <li>Easy for installation</li> </ul>
INSERTION			<ul style="list-style-type: none"> <li>No need to cut off water, no pressure loss.</li> <li>Stable and reliable for long term operation.</li> <li>Connect Pt100 temperature transducer, can finish the heat/energy measurement.</li> </ul>
PIPE			<ul style="list-style-type: none"> <li>Need to cut off pipe</li> <li>With high accuracy and stability</li> <li>Connect Pt100 temperature transducer, can finish the heat/energy measurement.</li> </ul>







## OPTIONAL 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	DN25~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		π 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

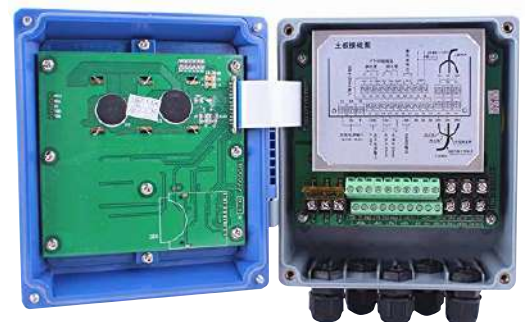
Connect the temperature transducer can finish the heat/energy measurement











Picture	Specification	Model	Meas. Range	Temperature	Cut of water	Accuracy
	Clamp on temperature Transducer Pt100	CT-1	≥DN50	-40~160℃	No	100℃ ± 0.8℃
	Insertion temperature Transducer Pt100	TCT-1	≥DN50	-40~160℃	Yes	
	Insertion Pt100 Installation with pressure	PCT-1	≥DN50	-40~160℃	No	
	Insertion Pt100 Small size pipe diameter	SCT-1	< DN50	-40~160℃	Yes	

## OPTIONAL SD CARD MEMORY

Convenience for long-term and large data storage. Available to do the data processing like tabulation, statistical, data analysis, printing reports and production flow curve by using data analysis software.

# FBTU<sub>EX</sub>



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## DATASHEET

ITEMS	PERFORMANCE & PARAMETER		
<b>Convertor</b>	Principle	Transit-time ultrasonic flowmeter	
	Accuracy	± 1%	
	Display	2× 20 character LCD with backlight, support the language of Chinese, English, Italy, Turkish	
	Signal Output	1 way 4~20mA output, electric resistance 0~1K, accuracy 0.1%	
		1 way OCT pulse output (Pulse width ~1000ms, default is 200ms)	
		1 way Relay output	
	Signal Input	3 way 4~20mA input, accuracy 0.1%, acquisition signal such as temperature, press and liquid level	
Connect the temperature transducer Pt100, can finish the heat/energy measurement			
Data Interface	Insulate Rs485 serial interface, upgrade the flowmeter software by computer, support the MODBUS		
<b>Special Cable</b>	Twisted-pair cable, generally, the length under 50 meters; Select the RS485, transmission distance can over 1000m		
<b>Pipe Installation Condition</b>	Pipe Material	Steel, Stainless steel, Cast iron, Copper, Cement pipe, PVC, Aluminum, Glass steel product, liner is allowed	
	Pipe Diameter	25~6000mm	
	Straight Pipe	Transducer installation should be satisfied: upstream 10D, downstream 5D, 30D from the pump	
<b>Measuring Medium</b>	Type of Liquid	Single liquid can transmit sound wave, such as Water (hot water, chilled water, city water, sea water, waste water, etc.); Sewage with small particle content; Oil (crude oil, lubricating oil, diesel oil, fuel oil, etc.); Chemicals (alcohol, etc.); Plant effluent; Beverage; Ultra-pure liquids, etc.	
	Temperature	-30~160℃	
	Turbidity	No more than 10000ppm and less bubble	
	Flowrate	0~±7m/s	
<b>Working Environment</b>	Temperature	Convertor: -20~60℃; Flow Transducer: -30~160℃	
	Humidity	Convertor: 85% RH; Flow Transducer: can measure under water, water depth ≤ 2m (transducer sealed glue)	
<b>Power Supply</b>	Dc8~36V or Ac85~264V (optional)		
<b>Power Consumption</b>	1.5W		
<b>Dimension</b>	132*150*85 mm (convertor)		

