

BTU²X

Portable Ultrasonic Flow Meter

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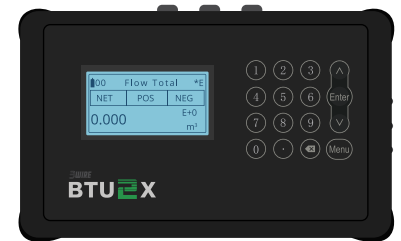


INTRODUCTION

BTU²X Portable Ultrasonic Flow Meter with BTU Function (Optional) is a compact and advanced portable device, use to verify the flow (BTU), datalog system values over an extended time period or even as a permanent deployment. This unit is supplied with clamp-on type **Ultrasonic Flow Sensors** which require NO tapping or cutting. For the BTU version, it is supplied with clamp on PT1000 sensors. Its portability makes it an excellent choice for measuring flow throughout the plumbing infrastructure to verify sensor, pump and valve performance.

FEATURES

- Easy to install, reduced installation time and cost.
- No pressure head loss, No moving parts to maintain or replace.
- BTU function is an option. could be used as a portable ultrasonic energy meter.
- Built-In data storage and supports external data transmission as well.



APPLICATION

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



SPECIFICATIONS

PERFORMANCE SPECIFICATIONS

Flow Range	±0.03 ft/s ~ ±40 ft/s (±0.01 m/s~ ±12 m/s)
Accuracy	±1% of measured value
Pipe Size	Clamp-on:1"-48"(25mm~1200mm)
Fluid	Single medium liquid
Pipe material	Carbon steel, stainless steel, PVC and other compact material pipe

PHYSICAL SPECIFICATIONS

Transmitter	NEMA13, IP54
Transducer	Encapsulated design, IP68
Transducer cable	Standard cable length: 5m (16ft).

FUNCTION SPECIFICATIONS

Outputs	Analog output : 4~20mA, Max 750 Ω. Modbus : RS485
SD card	16G
Interval	1 ~ 99999seconds
Key board	Digital keys
Display	240*128 back lit LCD
Power supply	Rechargeable Lithium Battery Power, 3000mAh (Continuous operation of main battery 16 hours).
Temperature	Transmitter : -40°C~60°C Transducer : -40°C~80°C (-40°C~80°C is standard; -40°C~130°C is an option)
Humidity	Up to 99% RH, non-condensing

PRODUCT PHOTO

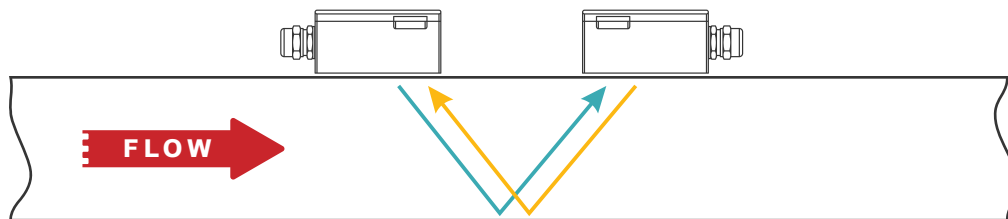


ACCESSORIES

- Carrying Case *1pc
- Transmitter (Electronic) *1pc
- Transducer (Sensor) *1 pair
- Mounting track *1 set
- Pipe straps *2 pairs
- Coupling compound (Grease) *1 pc
- Battery charge *1pc
- Output cable *1pc and Tapeline *1pc

MEASURING PRINCIPLE

Transfer time means the time taken by 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.



An ultrasonic meter equipped with heat flow capabilities measures the rate and quantity of heat delivered or removed from devices such as heat exchangers. By measuring the volumetric flow rate of the heat exchanger liquid, the temperature at the inlet pipe and the temperature at the outlet pipe, the energy usage can be calculated.

ORDERING CODE

MODEL	DESCRIPTION
Pipe material	Portable Ultrasonic Flow Meter Installation method: Handheld Flow Range: ±0.03 ft/s ~ ±40 ft/s (±0.01 m/s ~ ±12 m/s) Accuracy: ±1% of measured value Repeatability: 0.2% Output: 4-20mA, RS485 Internal lithium power supply: 3000mAh Pipe size range: 1"~48" (25mm~1200mm) Transducer: IP68, TT series transducer, 5m cable with mounting kits.
CODE	TYPE OF TRANSMITTER
BTU2X - 1	Ultrasonic Flow Meter
BTU2X - 2	Ultrasonic Energy/Btu Meter function(RTD)
CODE	TYPE OF TRANSDUCERS
TT02	Clamp-on, IP68. Operating temperature: -40°C ~ +176°C(-40°C ~ +80°C)
TT03	Clamp-on, IP68. Operating temperature: -40°C ~ +266°C(-40°C ~ +130°C)
CODE	TYPE OF MOUNTING TRACK
	Dual guides mounting type bracket
CODE	TRANSDUCERS CABLE LENGTH
P5	D Series type of cable Standard 5m (16ft) with mounting track.
PXX	XXX is the length you need for cables, Maximum lengthen to 30m
CODE	TEMPERATURE SENSOR
PT1000	A pair of clamp on PT1000 sensor 9m

Flow meter model (example):

1-TT02-P5

Portable Ultrasonic Flow Meter, TT02 type transducer 5m cables with single guide mounting track.

Energy/ Btu meter model (example):

2-TT02-P5-PT1000

Portable Ultrasonic Energy/Btu Meter , TT02 type transducer 5m cables with single guide typemounting track. A pair of PT1000 clamp on temperature sensor, 9m cables.