

Model Selection

Model	Suffix Code								Description
N410-	1	2	3	4	5	6	7	8	Batch Controller
Input Signal	P								NPN, open collector, reed-switch, active pulse signals
Communication		CB							Rs232 communication - Modbus RTU
		CH							Rs485 communication- 2wire- Modbus RTU
		CX							None
Panel Mount Front Enclosure			HB						Aluminum front panel - IP67(NEMA4X).
Additional Input Signal				IR					Remote control input to start, hold, reset, keypad lock and external alarm
Digital Output Signals					OR				2 field replaceable, mechanical relays(NO-NC) and 1 passive transistor output
Power Requirements						PG			24V DC and 110-230Vac, both with sensor supply
Hazardous Area							XX		Safe areas only
Other Options								ZS	PNP input signal instead of NPN input signal
								ZX	None

Example

N410- 1 P 2 CH 3 HB 4 IR 5 OR 6 PG 7 XX 8 ZS

- 1 P: NPN, open collector, reed-switch, active pulse signals
- 2 CH: RS485 communication- 2wire- Modbus RTU
- 3 HB: Aluminum front panel - IP67
- 4 IR: Remote control input to start, hold, reset, keypad lock and eternal alarm
- 5 OR: 2 field replaceable, mechanical relays(NO -NC) and 1 passive transistor output
- 6 PG: 24VDC and 110-230Vac, both with sensor supply
- 7 XX: Flange DIN PN16
- 8 ZS: PNP input signal instead of NPN input signal



Ultrasonic Flow Meter

TUF-2000H



Hand-held Ultrasonic Type

TUF-2000H works on the transit time method. This is based on the principle that sound waves traveling with the flow will move faster than those traveling against it. The resulting difference in transit time is directly proportional to the flow velocity of the liquid and consequently to the flow rate.

TUF-2000P



Portable Ultrasonic Type

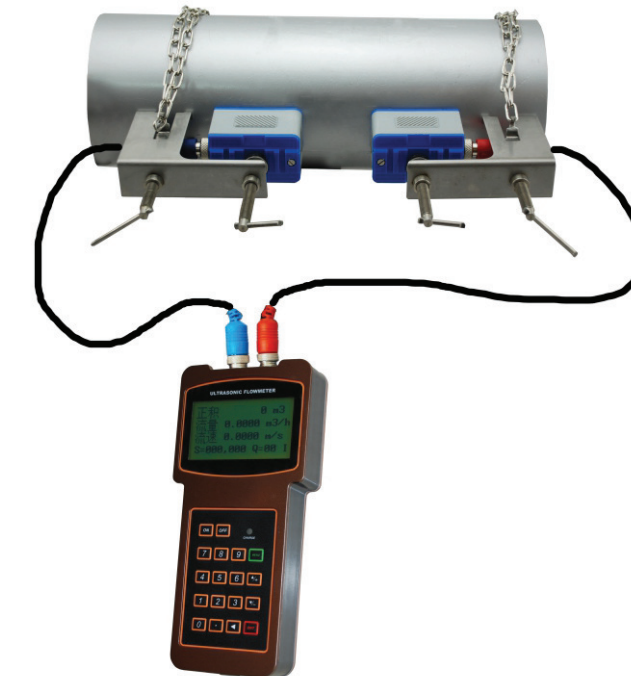
TUF-2000P is available in a variety of configuration that permit the user to select an ultrasonic meter with feature suitable to meet particular application requirements. It could also provides the data printed service. Built-in min thermal printed with instant and timing print function and uplink over 20 measuring data to computer or internet.

TUF-2000S



Wall mounted Ultrasonic Type

TUF-2000S is a fixed mounted transit-time ultrasonic flowmeter, with clamp-on transducers for non-invasive liquid measurement. Our microprocessor based, user friendly, field programmable flow measurement technique allows no interruption of the process flow and has low installation cost.



Sensor



Cables



Charger (Power Supply)



Mounting device



Aluminum Alloy Box

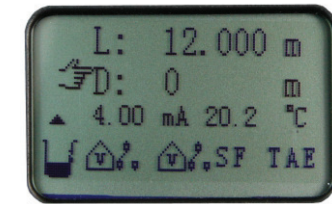
Model Selection

Model	Suffix Code		Description
	①	②	
TUF-2000			Ultrasonic Flowmeter
Host Type	S		Wall Mounted Type
	H		Handheld Type
	P		Portable Type
Sensor Type	TS		DN15-DN100mm; -40...+90°C
	TM		DN50-DN700mm; -40...+90°C
	TL		DN300-DN6000mm; -40...+90°C
	HTS		DN15-DN100mm; -40...+160°C
	HTM		DN50-DN700mm; -40...+160°C



Optional: Thickness Gauge

Ultrasonic Level Flow Meter



Specification

Liquid Types	Most clean liquids; liquids containing small amounts of suspended solids or gas bubbles	
Measuring Principle	Transit-Time	
Converter Model	TUF-2000P	Portable with Printer
	TUF-2000H	Hand-Held
	TUF-2000S	Wall-Mounted
Pipe Size	DN15...DN6000	
Sensor Model	TS	DN15...DN100
	TM	DN50...DN700
	TL	DN300...DN6000
	HTS	DN15...DN100
	HTM	DN50...DN700
Max.Fluid Temperature	TS; TM; TL: -40...+90°C	
	HTS; HTM: -40...+160°C	
Accuracy	±1%~±2% value of reading (0.5-30m/s)	
	±0.5% value of reading(online calibration)	
Power Supply and Output (Depending on Model)	(1) Rechargeable Battery(RS232)	
	(2) 110-230Vac(4-20mA/Pulse/RS485)	
	(3) 24V DC(4-20mA/Pulse/RS485)	
Pipe Material	Cast Iron; Stainless Steel	
	Ductile Iron Copper; PVC; Aluminum, Asbestos Fiberglass...etc	
Liner Material	Tar Epoxy, Rubber, Morta	
	Polypropylene,Polystyrol	
	Polystyrene,Polyester,Ebonite	
	Polyethylene,Teflon...etc	
Language	English;Chinese(Other's on request)	
Engineer Unit	M³;Liter;US Gallon	
	Gallon;Million Gallon;Cubic Feet	
Totalizer	US Barrels;Imperial Barrels; Oil Barrel	
Flow Rate	7 digit; Forward; Reverse & Net Values	
Host Material	5 digit with decimal point	
Host Material	Cast Aluminium	
Weight	Around 7 KG/PCS	

Description

This instrument determines the height from the bottom to the surface of the liquid under test by measuring the air propagation time, the time required for an ultrasonic wave emitted from the detector installed above the tested liquid to reflect on the level of the liquid, and then return to the detector. This product can be widely used for a high degree of measurement of the level of a variety of liquid; solid materials can also be used for distance measurement.

Model Selection

Model	Suffix Code					Description
	①	②	③	④	⑤	
ULM-						Ultrasonic Level Meter
Diameter	XX					05: 5m
						10: 10m
						15: 15m
						30: 30m
Power Supply		AC				220Vac
		DC				24V DC
Output Signal			1			2-wire 4-20mA
			2			4-wire 4-20mA
Communication				1		None
				2		RS485
Relay Output					1	None
					2	One Relay Output
					3	Two Relay Output

① ② ③ ④ ⑤
ULM 05 AC 1 1 1

- ① 05: 0...5 meter
- ② AC: 240Vac power supply
- ③ 1: 2 wire 4-20mA output
- ④ 1: No communication
- ⑤ 1: No relay output

Technical Data

Maximum Measurable Distance (Depending on the model)	(1)05m
	(2)10m
	(3)15m
	(4)20m
	(5)25m
	(6)30m
Accuracy	±0.25% of Rate
	±0.5% of Rate
Resolution	(1)Range< 10m:05m
	(2)Range >10m:10m
Frequency	40 KHz
Output Signal	4-20mA/RS485(Optional)
Power Supply	220Vac/24V DC
Case Material	PA6/ABS
Blind Area	0.2-0.9m
Maximum Load	750Ω
Ambient Temperature	-20...+55°C

Feature

- Provides reliable, accurate, and non-contact level measurement
- Non-contact technology offers no moving parts to wear, jam, corrode
- FM approved explosion-proof making it ideal for use in hazardous locations
- Easy programming with 6 digit LCD display and simple menu structure
- Output range is adjustable with choices of inputting tank dimensions or by filling and emptying the tank while calibrating and it automatically and scaling to levels it senses
- Window cover allows easy viewing of display
- Fail-safe output options and diagnostic capabilities