

TUF2000F Flanged Ultrasonic Flowmeter

Specification




- High Accuracy
Up to 1% accuracy, 0.5% for the Linearity and 0.2% for the Repeatability.
- Wide Measuring Range
Available for the flow measurement of DN15 ~ DN1500 pipelines (customizable).
- Easy Operation
Support the menu operation using the mag bar or keyboard
- Powerful Memory Capacity
Automatic memory of the accumulated flow data of the last 512 days, 128 months and 10 years, and the last 64 times calls and blackouts and flow, as well as the flowmeter working condition of the last 32 days.
- Heat Measurement Available
Built-in temperature sensor available for heat measurement.



Introduction

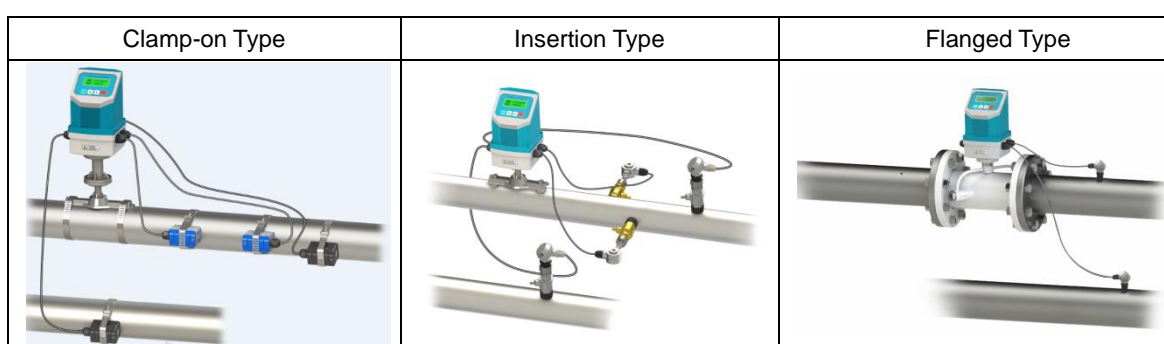
The flowmeter converter part and sensor part are both mounted to the pipeline. It meets IP68 rating. It can be widely used for applications like water resources monitoring, farmland irrigation, etc. It is available for easy operation with a magnetic bar outside the meter, also supports four-key keyboard menu operation. The heat measurement can be achieved by a built-in temperature sensor.

Flow measurement





Clamp-on Type	Insertion Type	Flanged Type
		

<ul style="list-style-type: none"> ·Installation with no flow cutoff and pressure loss; ·Accuracy can reach 1%; ·Easy installation and maintenance, users can install it by themselves; ·Wide measured range; ·Suitable for environments with good working conditions. 	<ul style="list-style-type: none"> ·Installation with no flow cutoff (installation under pressure), no pressure loss; ·Accuracy can reach 1%; ·Users can use the special hole tapper to install the product by themselves after training; ·Wide measured range ·Stable and reliable long-term operation. 	<ul style="list-style-type: none"> ·Installation with no flow cutoff and pressure loss; ·Accuracy can reach 1%; ·Convenient installation and maintenance, users can install it by themselves; ·The larger the measurement pipeline diameter is, the higher the cost will be; ·Stable and reliable long-term operation.
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Heat Measurement



Temperature Sensors(Optional)

Picture	Type	Model	Pipeline	Temp. Range	Installation	Accuracy
	Three-wire PT100 Clamp-on Mounted Temperature Sensor	CT-1	≥DN50	-40℃~160℃	With no cutoff	100℃ ±0.8℃, after matched ≤0.1℃
	Three-wire PT100 Insertion Mounted Temperature Sensor	TCT-1	≥DN50	-40℃~160℃	Cutoff needed	
	Three-wire PT100 Insertion Mounted Temperature Sensor (installation under pressure)	PCT-1	≥DN50	-40℃~160℃	With no cutoff (Installation Under Pressure)	
	Small Size 3-wire PT100 Insertion Mounted Temperature Sensor	SCT-1	<DN50	-40℃~160℃	Cutoff needed	

<http://www.microsensor.cn>

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麦克传感器股份有限公司
MICRO SENSOR CO.,LTD.

Specification

Type	Parameters	
Converter	Principle	Transit-time-difference method
	Accuracy	Flow: 1%; Heat secondary meter(better); repeatability: $\pm 0.2\%$; linearity $\pm 0.5\%$
	Operation	Support 4-key magnetic stick operation or 4-key touch keyboard, simulated keyboard software
	Output	4mA~20mA DC
	Input	Support three-wire temperature sensor to achieve heat measurement
	Interface	RS485 output, MODBUS protocol
Pipe	Material	Dense pipe including steel, stainless steel, cast iron, cement, copper, PVC, aluminum, fiberglass, etc.(can be with lining)
	Diameter	DN15~DN1500
	Straight Pipe	Upstream $\geq 10D$, downstream $\geq 5D$, $\geq 30D$ from the pump outlet
Medium	Type	Ultrasound conductive onefold even medium: water, sewage, sea water, chemical liquid, oil, alcohol, etc.
	Temperature	$-30^{\circ}\text{C} \sim 160^{\circ}\text{C}$
	Turbidity	10000ppm, low bubble content
	Flow Rate Range	$(0 \sim \pm 10)\text{m/s}$
Condition	Temperature	Converter: $-20^{\circ}\text{C} \sim 60^{\circ}\text{C}$; Sensor: $-30^{\circ}\text{C} \sim 160^{\circ}\text{C}$
	Humidity	Converter: 85%RH; Sensor: Water immersion workable, water depth $< 2\text{m}$ (sensor needs to be glue filling)
Power Supply	8V~36V DC(optional) or 85V~264V AC(optional) or 3.6V lithium battery(optional)	
Power Consumption	1.5W	

Order Guide

TUF2000F	Flanged Ultrasonic Flowmeter	
Converter	W	Clamp-on Mounted
	C	Insertion Mounted
	G	Flange Mounted
Heat Meter	N	Without heat meter function
	H	With heat meter function
Sensor Type	B1	TS-2, standard small size, magnetic, DN32~DN65, -30℃~90℃
	B2	TM-1, standard medium size, magnetic, DN80~DN400, -30℃~90℃
	B3	TL-1, standard large size, magnetic, DN450~DN1000, -30℃~90℃
	B4	HTS-1 high-temp small size, DN32~DN65, -30℃~160℃
	B5	HTM-1 high-temp medium size, DN80~DN400, -30℃~160℃
	B6	HTL-1 high-temp large size, DN450~DN1000, -30℃~160℃
	C1	TC-1 standard insertion-type, DN50~DN1200, -30℃~160℃
	C2	TLC-2 extended insertion-type, DN80~DN1500, -30℃~160℃
	N	No Probe (Only for G type flow meter)
T	Customized (Card type or others)	
Nominal Diameter(mm)	XXX	Represent actual diameter, for examples, DN50~050; DN100~100
Pipeline Material	0	Carbon steel
	1	Stainless Steel (not including 316/316L)
	2	Cast Iron
	3	Glass Steel
	4	PVC
	5	Others
Pressure	1.6	MPa(represent actual pressure, default ≤ 1.6 MPa), high pressure needs to be noted
Output	M	Pulse Output
	E	4mA~20mA DC
	R8	RS485 output, Modbus protocol
Power Supply	V1	24V DC
	V2	220V AC
	V3	3.6V lithium battery (For card type, dual channel flanged (DN50-DN150 nodular cast iron, DN150-DN300 carbon steel)]
Sensor to Converter Distance	XXX	m (default: 10-meter cables, 5 meter per cable; special cable length requirement available, but longer than 100m(50m/cable) is not suggested except the flanged type)
Whole Spec.	TUF2000F-G-N-N-100-0-1.6-ER8-V1-10	

Ordering Notes:

1. Measuring medium: _____, Working Pressure: _____MPa, Temperature: _____℃.
2. Flow range: Mini flow: _____, Normal Flow: _____, Max. flow: _____, Nominal diameter: _____(mm).
3. Mounting type: _____, Output type: _____, Supply power: _____V.
4. Standard product is in single channel. For battery power supply, it has dual channels, please contact us for special requirements.

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