DATASHEET

Flow

Wall Mounted Ultrasonic Flow Meter
Cast Aluminum Explosion-Proof
Model PWF-U2000W

Description

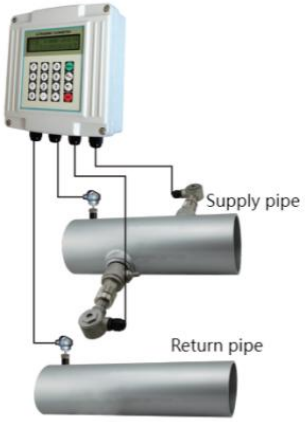
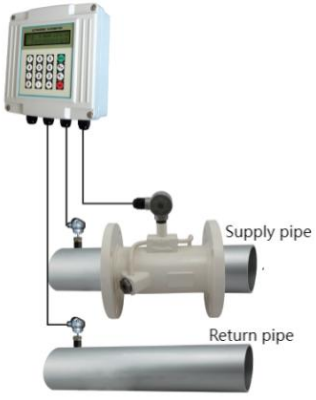
PWF-U2000W ultrasonic flowmeter is widely used in online flow measurement of various liquids in industrial sites. The converter is divided into wall-mounted, panel-mounted, and explosion-proof types. The sensor is divided into clamp-on, insertion, and pipe section types. The temperature sensor can be connected to achieve heat/energy measurement.

It is widely used in tap water, heating, water conservancy, metallurgy, chemical industry, machinery, energy and other industries. It can be used for production monitoring, water balance debugging, heat network balance debugging, and energy-saving monitoring. It is an important flow measurement instrument in the production process.

Features

- Measurement accuracy 1%
- Converter protection level IP65, sensor protection level IP65/IP68
- Wide measurement range, pipe size from DN15 to DN6000
- High reliability: Low voltage, multi-pulse transmission circuit, high measuring accuracy, long service life.
- Can achieve heat/energy measurement if with a temperature sensor
- Strong anti-interference ability: Adopt dual balanced signal differential transmission and receiving circuit, effectively resist strong interference sources such as inverter, TV tower, high-voltage line, etc.
- Powerful memory function: Automatically memorize the cumulative flow of previous 512 days/128 months/10 years, as well as the time and flow of the previous 64 calls and power outages, and automatically memorize whether the working status of the meter flow in the previous 32 days is normal.

Measurement Diagram

Sensor Type	Flow Measurement	Heat Measurement	Features
Clamp on			·No need to cut off water, no pressure loss. ·Accuracy ±1% ·Easy to install and maintain. ·Suitable for good pipe condition.
Insertion			·No need to cut off water, no pressure loss. ·Accuracy ±1% ·After training, user can use hole opener to install. ·Long-time stability and reliable.
Pipe section			·Need to cut off pipe when installation. ·Accuracy ±0.5% ·Larger pipe diameter, higher cost. ·High accuracy, long-time stability.

Flow Sensor

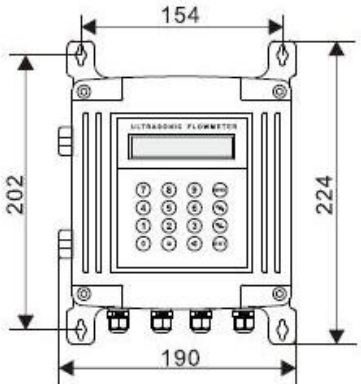
Please choose the suitable sensor, according to different liquids, pipe condition and installation method(please refer to measurement diagram)

Types	Picture	Spec.	Model	Pipe Range	Temperature	Dimension	
Clamp on		Small Size	TS-2	DN15~DN100	-30~90℃	45×25×28mm	
		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	DN15~DN100	-30~160℃	45×25×28mm	
		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 section		π Type	G3	DN15~DN25	-30~160℃	SUS304 thread connection	Please refer to detailed pipe dimensions
		Standard	G2	DN32/DN40	-30~160℃	Carbon steel thread connection	
		Standard	G1	DN50~DN6000	-30~160℃	Carbon steel flange connection	

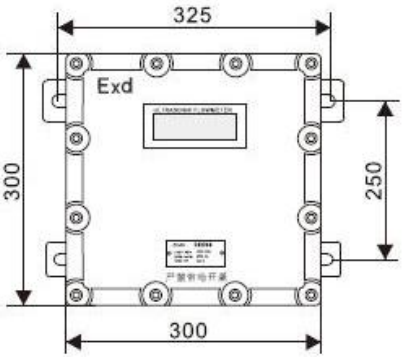
Temperature Sensor

Pictures	Specification	Model	Meas. Range	Temperature	Cut of water	Accuracy
	Clamp on 3-wire PT100 Temperature sensor	CT-1	≥DN50	-40~160℃	No	100℃±0.8℃
	Insertion 3-wire PT100 Temperature sensor	TCT-1	≥DN50	-40~160℃	Yes	
	Insertion 3-wire PT100 with pressure	PCT-1	≥DN50	-40~160℃	No	
	Insertion 3-wire PT100 small diameter pipe	SCT-1	<DN50	-40~160℃	Yes	

Converter Dimensions



Thickness 75mm(Cast Aluminum)



Thickness 165mm(Cast Aluminum)

Specifications

Parameters		Specification
Converter	Principle	Ultrasonic time difference principle, 4-byte IEEE754 floating point operation
	Accuracy	Flow ±1%; Temperature ±2%
	Display	2x20 character LCD with backlight, support the language of Chinese, English and Italy
	Signal output	1 way 4~20mA current output, electric resistance 0~1K, accuracy 0.1%(optional)
		1 way OCT pulse output (pulse width 6~1000ms, default 200ms)
		1 way Relay output
	Signal Input	3 way 4~20mA inputs, accuracy 0.1%, can collect temperature, pressure, liquid level and other signals
		Connect 3-wire PT100 platinum resistor to achieve heat/energy measurement
	Data Interface	Isolated RS485 serial interface, the flow meter can be upgraded through a PC, supporting MODBUS protocols
Special Cable		Twisted-pair cable. Generally the cable length less than 50 meters; Transmission distance can over 1000m for RS485
Pipe Condition	Pipe Material	Steel, stainless steel, cast iron, cement pipe, copper, PVC, aluminum, fiberglass and other dense pipes, lining is allowed
	Pipe ID	DN15~DN6000mm
	Straight Pipe	Sensor installation should follow: Upstream 10D, downstream 5D, 30D from pump.
Measuring Medium	Types	Water, seawater, industrial sewage, acid and alkali solution, alcohol, beer, and other single and uniform liquids that can conduct ultrasonic waves
	Temperature	-30℃~160℃
	Turbidity	<10000ppm and small bubble content
	Velocity	0~±10m/s
Working Environment	Temperature	Converter: -20~60℃; Sensor -30~160℃
	Humidity	Converter: 85%RH; Sensor: Can be dipped in the water≤2 meter(after glue-filling)
Power Supply		DC8~36V or AC85~264V
Power Consumption		1.5W

How to Order

Example Part Number: U2000W TM-1 80 0 06 5 N 1

Model No.	PWF-U2000W	U2000W
Flow Sensor	TS-2 TM-1 TL-1 TS-2-HT TM-1-HT TL-1-HT TC-1 TC-2 G1 G2 G3 (please refer to the Optional Flow Sensor Table)	TM-1
Pipe Inner Diameter (mm)	15=DN15mm 32=DN32mm 50=DN50mm 80=DN80mm 100=DN100mm ... 6000=DN6000mm	80
Pipe Material	0=Carbon Steel 1=Stainless Steel 2= Cast Iron 3=Glass Fiber Reinforced 4=PVC 5=Cement 6=Others	0
Pressure Rating	06=0.6MPa 16=1.6MPa X=Others	06
Cable Length	5=5m 10=10m ...	5
Temperature Sensor	N=None CT-1 TCT-1 PCT-1 SCT-1 (please refer to the Optional Temperature Sensor Table)	N
SD Memory Card	0=With 1=Without	1