

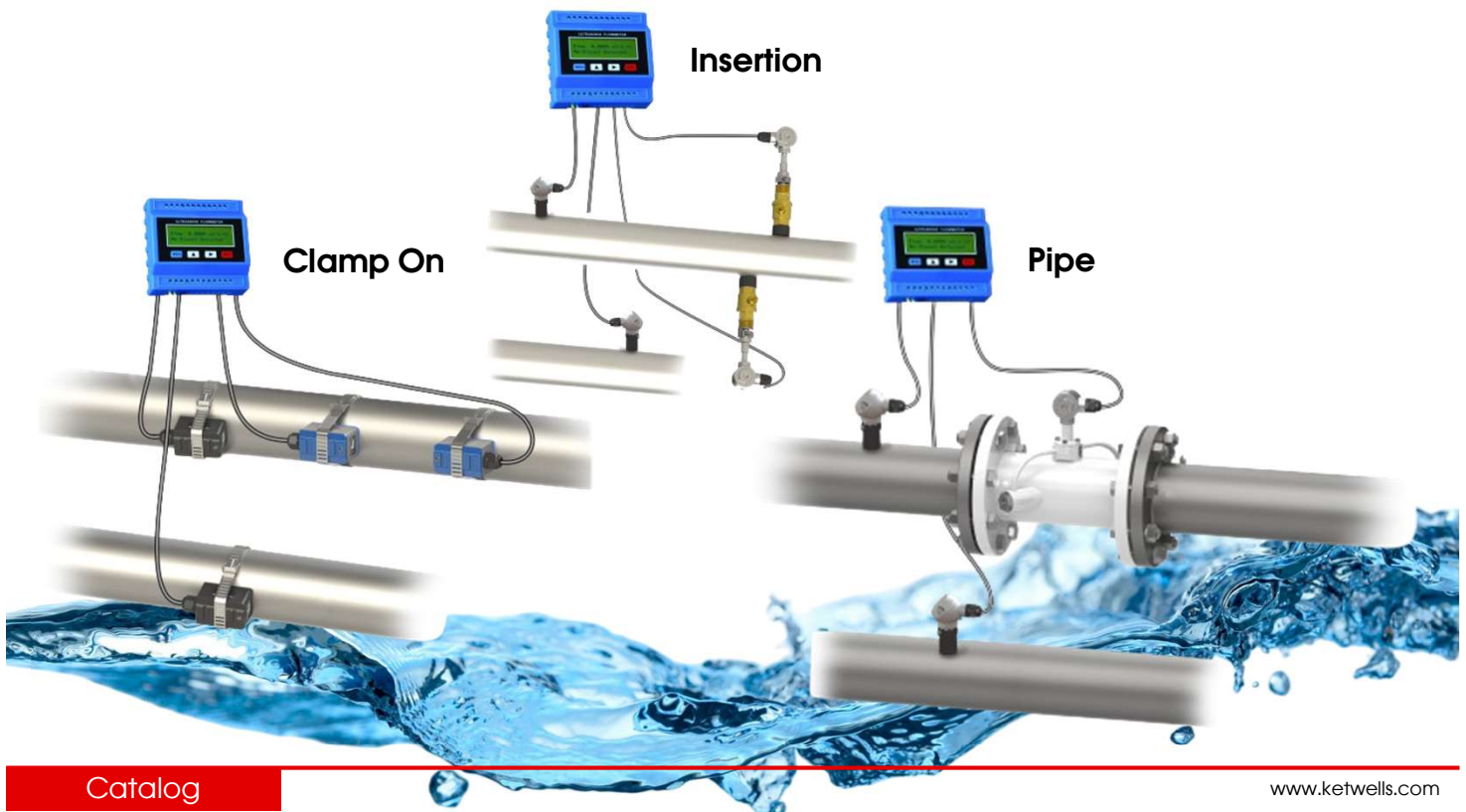
ULTRASONIC FLOW METER

KWF-2000M SERIES

This ultrasonic module is inline measurement for long-term. The convertor and transducer are installed fixing on the pipe, with the advantages of small.



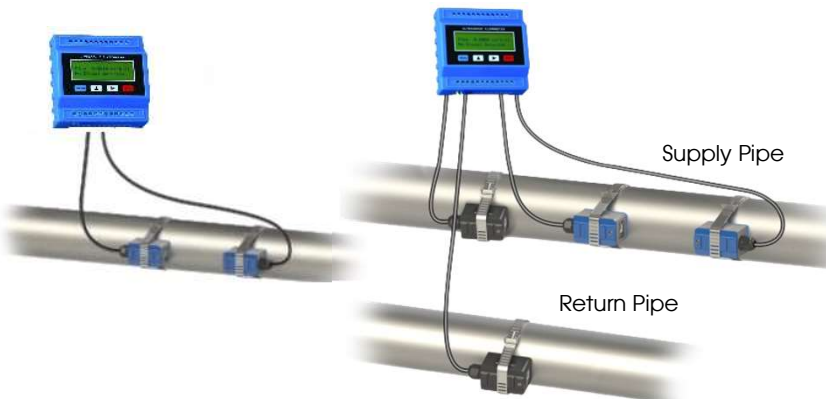
- High Accuracy
- Wide Measuring Range
- High Reliability
- Strong Anti-interference
- Powerful Recording Function
- Far transmission distance, easy for networking
- Support SD Card Memory



Measuring Diagrams

Clamp On

Features



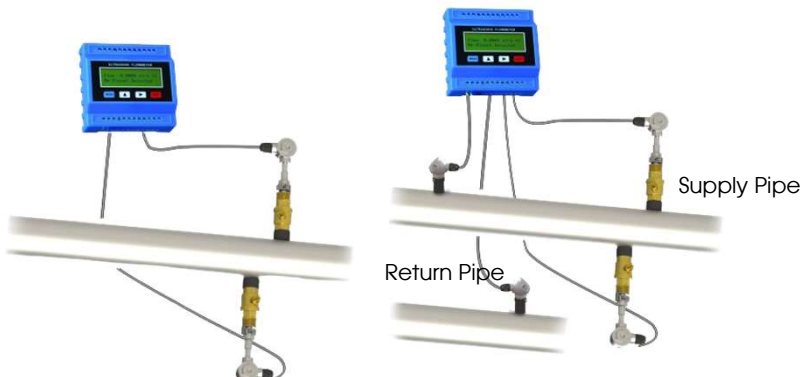
- No need to cut off water, no pressure loss.
- Easy for installation.
- Connect clamp on temperature transducer, can finish the heat/energy measurement.

Flow Measurement

Heat Measurement

Insertion

Features



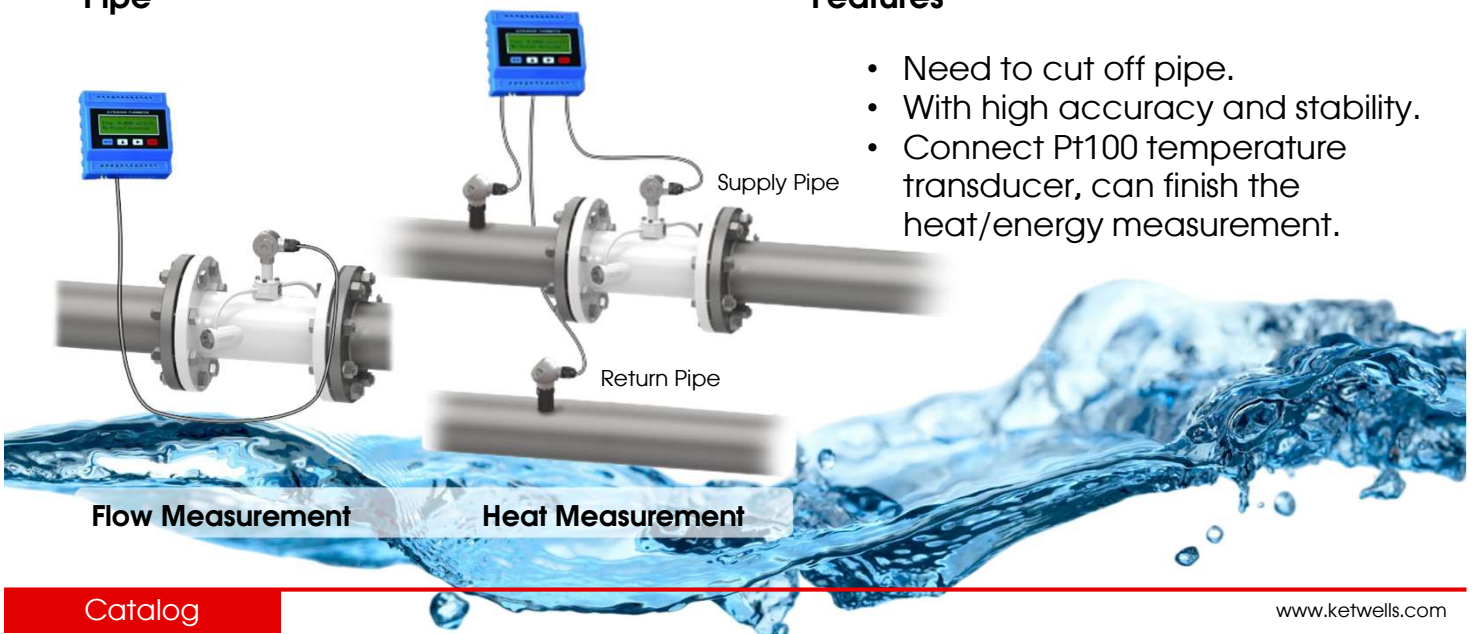
- No need to cut off water, no pressure loss.
- Stable and reliable for long term operation.
- Connect Pt100 temperature transducer, can finish the heat/energy measurement.

Flow Measurement

Heat Measurement

Pipe

Features









- Need to cut off pipe.
- With high accuracy and stability.
- Connect Pt100 temperature transducer, can finish the heat/energy measurement.





Flow Measurement

Heat Measurement

Flow Transducers

Type	Picture	Spec.	Model	Measuring Range	Temperature	Dimension
Clamp on		Small	TS-2	DN15...DN100	-30...90 °C	45 x 25 x 32 mm
		Medium	TM-1	DN50...DN700	-30...90 °C	64 x 39 x 44 mm
		Large	TL-1	DN300...DN6000	-30...90 °C	97 x 54 x 53 mm
High Temp. Clamp On		Small	TS-2-HT	DN15...DN100	-30...160 °C	45 x 25 x 32 mm
		Medium	TM-1-HT	DN50...DN700	-30...160 °C	64 x 39 x 44 mm
		Large	TL-1-HT	DN300...DN6000	-30...160 °C	97 x 54 x 53 mm
Insertion		Standard	TC-1	DN80...DN6000	-30...160 °C	190 x 80 x 55 mm
		Extended	TC-2	DN80...DN6000	-30...160 °C	335 x 80 x 55 mm
Pipe		Standard	G1	DN50...DN6000	-30...160 °C	Please refer to detailed pipe dimensions
		Standard	G2	DN32...DN40	-30...160 °C	Please refer to detailed pipe dimensions
		π Type	G3	DN15...DN25	-30...160 °C	Please refer to detailed pipe dimensions

Temperature Transducers

Type / Spec.	Picture	Model	Measuring Range	Temperature	Cut of Water	Accuracy
Clamp On Pt100		CT-1	≥ DN50	-40...160 °C	No	100 °C ± 0.8 °C
Insertion Pt100		TCT-1	≥ DN50	-40...160 °C	Yes	100 °C ± 0.8 °C
Insertion Pt100 with Pressure		PCT-1	≥ DN50	-40...160 °C	No	100 °C ± 0.8 °C
Insertion Pt100 Small Size Pipe Diameter		SCT-1	< DN50	-40...160 °C	Yes	100 °C ± 0.8 °C

Descriptions

Front View



Back View



Wiring Diagram

TX2	T2	GN	T1	TX1	AI5	AI4	AI3	OCT1-	OCT1+	RLY-	RLY+
24V+	24V-	485+	485-	AO-IN	AO	UP+	UP-	GND	DN+	DN-	GND

- Dimensions: 92×90×34mm
- LCD Display: 60×19mm
- 4 keyboard operation
- Installation Method: Guide Rail(width is 35mm)

Specifications

Items	Performance & Parameter	
Convertor	Principle	Transit-time ultrasonic flowmeter.
	Accuracy	±1%
	Operation	4 keyboards operation.
	Signal Output	1 way 4...20mA output, electric resistance 0...1K, accuracy 0.1%
		1 way OCT pulse output (Pulse width 6 - 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.
Special Cable	Twisted-pair cable, generally, the length under 50 meters, select the RS485, transmission distance can over 1000m.	
Pipe Installation Condition	Pipe Material	Steel, stainless steel, cast iron, copper, cement pipe, PVC, aluminum, glass steel product, liner is allowed.
	Pipe Diameter	15...6000mm
	Straight Pipe	Transducer installation should be satisfied: upstream 10D, downstream 5D, 30D from the pump.
Measuring Medium	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 (curde oil, lubricating oil, diesel oil, fuel oil, etc). Chemicals (alcohol, etc). Plant effluent, beverage. Ultra-pure liquids, etc.
	Temperature	- 30...160 °C
	Turbidity	No more than 10000 ppm and less bubble
	Flow Rate	0...±7m/s
Working Environment	Temperature	Convertor: - 20...60 °C; Flow Transducer: - 30...160 °C
	Humidity	Convertor: 85 %RH; Flow Transducer: can measure under water, water depth ≤ 2m (Tansducer sealed glue)
Power Supply	DC8...36V or AC85...264V (Optional)	
Power Consumption	1.5W	
Dimension	95 x 95 x 35mm (Convertor)	

Ordering Code

Series	KWF-2000M		
Flow Transducers	- TS-2	Clamp on, Small	
	- TM-1	Clamp on, Medium	
	- TL-1	Clamp on, Large	
	- TS-2-HT	High Temp. Clamp On, Small	
	- TM-1-HT	High Temp. Clamp On, Medium	
	- TL-1-HT	High Temp. Clamp On, Large	
	- TC-1	Insertion, Standard	
	- TC-2	Insertion, Extended	
	- G1	Pipe, Standard	
	- G2	Pipe, Standard	
	- G3	Pipe, π Type	
Diameter	- XX	DN (mm)	
Pipe material	- 0	Carbon Steel	
	- 1	Stainless Steel	
	- 2	Cast Iron	
	- 3	Glass Fiber Reinforced	
	- 4	PVC	
	- 5	Cement	
	- 6	Other	
Pressure	- 2	Mpa (Mega Pascal)	
Cable Length	- XX	m (Meter)	
Temperature Transducers	- CT-1	Clamp On Pt100	
	- TCT-1	Insertion Pt100	
	- PCT-1	Insertion Pt100 with Pressure	
	- SCT-1	Insertion Pt100 Small Size Pipe Diameter	

Example Order Code : KWF-2000M - TM-1 - 200 - 0 - 2 -10 - CT-1