

# ULTRASONIC FLOWMETER

Ultrasonic flowmeter insertion type



# Floko



## FM-200I

### | Features |

- Measurement accuracy 1%.
- Converter protection class IP67, transducer protection class IP68.
- Wide measurement range, pipe size from DN15mm to DN6000mm.
- Three types installation method: wall mounted, DIN-rail mounted, explosion-proof box mounted.
- Connect the temperature transducer can finish the heat/energy measurement.

IP67

| Introduction |

flowmeter can be virtually applied to a wide range of in long-term online measurement. Converter protection class IP67, transducer protection class IP68. A variety of liquid applications can be accommodated: ultra-pure liquids, portable water, chemicals, raw sewage, reclaimed water, cooling water, river water, plant effluent.etc

| Measuring Diagram |

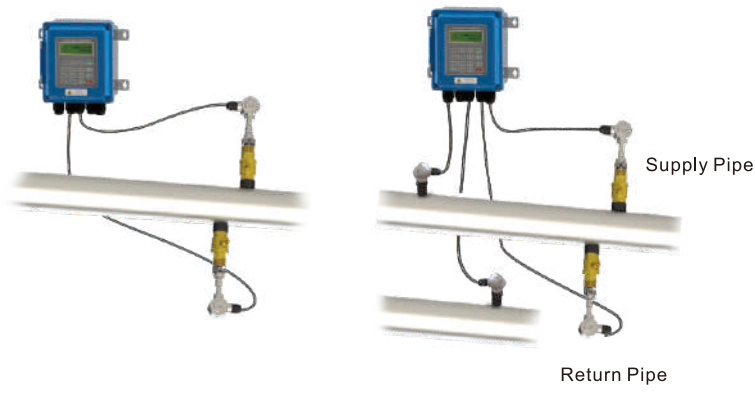
**Flow Measurement      Heat Measurement      Features**

Clamp on



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

Insertion



- 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.

Pipe



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

## | Optional Transducers |

Please choose the suitable transducer, according to different liquid pipe condition and installation method, (please refer to the measuring diagram).

Types	Picture	Spec.	Model	Measurement Range	Temperature	Dimension	
Clamp on		Small Size	TS-2	DN25~DN100	-30~90℃	45×25×32mm	
		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	DN25~DN100	-30~160℃	45×25×32mm	
		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		π type	G1	DN15~DN32	-30~160℃	SUS304 thread connection	Please refer to detailed pipe dimensions
		Standard	G2	DN40~DN1000	-30~160℃	carbon steel thread connection	

## | Optional Temperature Transducers |

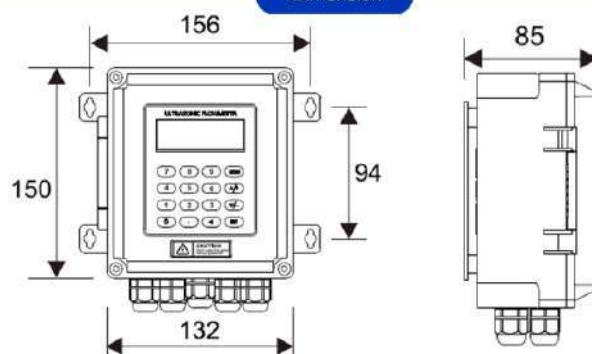
Connect the temperature transducer can finish the heat/energy measurement

Picture	Specification	Model	Meas. Range	Temperature	Cut of water	Accuracy
	Clamp on temperature Transducer Pt100	CT-1	≥DN50	-40~160℃	No	100℃ ± 0.8℃
	Insertion temperature Transducer Pt100	TCT-1	≥DN50	-40~160℃	Yes	
	Insertion Pt100 Installation with pressure	PCT-1	≥DN50	-40~160℃	No	
	Insertion Pt100 Small size pipe diameter	SCT-1	< DN50	-40~160℃	Yes	

### Introduction



### Dimension



## | Datasheet |

Items		Performance & Parameter	
Convertor	Principle	Transit-time ultrasonic flowmeter	
	Accuracy	± 1%	
	Display	2×20 character LCD with backlight, support the language of Chinese, English, Italy, Turkish	
	Signal Output	1 way 4~20mA output, electric resistance 0~1K, accuracy 0.1%	
		1 way OCT pulse output (Pulse width ~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	25~6000mm	
	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 (crude oil, lubricating oil, diesel oil, fuel oil, etc.); Chemicals (alcohol, etc.); Plant effluent; Beverage; Ultra-pure liquids, etc.	
	Temperature	-30~160℃	
	Turbidity	No more than 10000ppm and less bubble	
	Flowrate	0~±7m/s	
Working Environment	Temperature	Convertor: -20~60℃; Flow Transducer: -30~160℃	
	Humidity	Convertor: 85% RH; Flow Transducer: can measure under water, water depth ≤ 2m (transducer sealed glue)	
Power Supply	Dc8~36V or Ac85~264V (optional)		
Power Consumption	1.5W		
Dimension	132*150*85 mm (convertor)		