



■ Ultrasonic Flowmeter RUF100

Suitable to measure different types of liquid flow in running water, water conservation, metallurgy, chemical industry, machinery, etc. for production monitoring, water balance testing, thermal equilibrium, energy monitoring and various other applications.

Salient Features




- High accuracy up to 1%
- Wide pipe flow measurement: DN15 – DN6000
- High reliability adopting low voltage, multi-pulse radiating circuit
- Anti-interference design with double balanced signal differential transmission
- Powerful memory function up to 10 years with expandable storage card
- Can be used as an Energy Meter by connecting Temperature Sensor
- Available in Clamp-On, Insertion & In-line Sensor Type
- Wall-mount, panel mount & explosion-proof transmitter options

RUF100 Ultrasonic Flowmeter

Technical Parameters







Parameters		Specifications
Transmitter	Principle	Ultrasonic transit-time principle, Four byte IEEE754 Floating-point arithmetic
	Accuracy	±1%
	Display	LCD
	Output	One 4-20 mADC Output, Impedance 0-1K, 0.1% accuracy
		One OCT Pulse Output (Width 6-1000ms, Default 200 ms)
		One Relay Output
Input	Three 4-20mADC, Input accuracy 0.1% (Can collect temperature, pressure, level signals, etc.)	
	Can connect with three-wire Pt100 RTD to measure Heat Flow	
Data Interface	Isolated RS485 interface, can upgrade Flowmeter through PC, supports Modbus	
Signal Transmission		Up to 1000 meters over RS485 Communication/ 4-20 mADC
Applicable Pipe Material	Material	SS, MS, CS, Copper, Aluminium, PVC, FRP, etc. (Liner allowed)
	Diameter	DN15 ~ DN6000 mm
	Installation	Upstream 10D, downstream 5D, 30D away from the pump outlet (D: Diameter)
Medium	Fluid	Water, Sea Water, Acid Liquid, Beer, Alcohol, Oil & any other liquid that can spread sonic
	Temperature	-30 ~ 160° C
	Turbidity	10,000 ppm (with limited bubbles)
	Velocity	0 ~ ±32 m/s
Operating Environment	Temperature	Transmitter: -20 ~ 60° C; Transducer: -30 ~ 160° C
	Humidity	Transmitter: 85%RH
Transmitter Protection Grade		IP68 (Water depth <2m)
Power Supply		8 ~ 36 VDC or 85 ~ 265 VAC
Power Consumption		1.5W












TRANSMITTER OPTIONS

		
Wall Mounted Type	Panel Mounted Type	Explosion-Proof Type
Used to mount on the wall	Used for meter cabin sets installation	Used in hazardous area
Dimension: 170*180*56 mm	Dimension: 152*76 mm	Dimension: 298*298*110 mm
Power Supply: 8-36VDC; 85-265VAC	Power Supply: 8-36VDC; 85-265VAC	Power Supply: 8-36VDC; 85-265VAC
SD MEMORY CARD		



SD Card Memory & Cassette

MEASUREMENT OPTIONS		
Flow Measurement	Heat/ Cold Energy Measurement	Feature
Clamp-On Type 	 <p>Water supply pipe</p> <p>Water return pipe</p>	*Installation without drying up, no pressure loss *Easy installation & maintenance *Mating clamp temperature sensor that can measure the temperature of the outside of tube to achieve heat measurement
Insertion Type 	 <p>Water supply pipe</p> <p>Water return pipe</p>	*Installation without drying up, no pressure loss *Stable & reliable during long-term operation *Mating clamp temperature sensor that can measure the temperature of the outside of tube to achieve heat measurement
Pipe Type 	 <p>Water supply pipe</p> <p>Water return pipe</p>	*Installation require drying off the pipe *High accuracy, stable & reliable during long-term operation *Mating clamp temperature sensor that can measure the temperature of the outside of tube to achieve heat measurement

TRANSDUCER						
Type	Picture	Specification	Model	Pipe Size	Temperature	Dimension
Standard Clamp-On Type		Small	TS-2	DN15 ~ DN100	-30 ~ 90° C	45x25x32 mm
		Medium	TM-1	DN50 ~ DN700	-30 ~ 90° C	64x39x44 mm
		Large	TL-1	DN300 ~ DN6000	-30 ~ 90° C	97x54x53 mm
High Temperature Clamp-On Type		Small	TS-2-HT	DN15 ~ DN100	-30 ~ 160° C	45x25x32 mm
		Medium	TM-1-HT	DN50 ~ DN700	-30 ~ 160° C	64x39x44 mm
		Large	TL-1-HT	DN300 ~ DN6000	-30 ~ 160° C	97x54x53 mm
Insertion Type		Standard	TC-1	DN80 ~ DN6000	-30 ~ 160° C	190x80x55 mm
		Longer Type	TC-2	DN80 ~ DN6000	-30 ~ 160° C	335x80x55 mm
Pipeline Type		TT	G3	DN15 ~ DN25	-30 ~ 160° C	SS304 Thread
		Standard	G2	DN32/ DN40	-30 ~ 160° C	CS Thread Conn.
		Standard	G1	DN52 ~ DN6000	-30 ~ 160° C	CS Flange Conn.

TEMPERATURE SENSOR					
Specification	Model	Measurement Range	Temperature Range	Installation Requirement	Accuracy
Three Wire PT100 Clamp-On Temperature Sensor	CT-1	>DN50	-40 ~ 160° C	No need to cut flow line	100° C ±0.8°C Temperature difference ≤0.1° C after matching accurately
Three Wire PT100 Insertion Temperature Sensor	TCT-1	>DN50	-40 ~ 160° C	No need to cut flow line	
Three Wire PT100 Pressure Installation Insertion Temperature Sensor	PCT-1	>DN50	-40 ~ 160° C	No need to cut flow line	
Small size three wire Pt100 Insertion Type Temperature Sensor	SCT-1	<DN50	-40 ~ 160° C	Need to cut flow line	

RUF100 Ultrasonic Flowmeter - Model Selection Table									
Transmitter									
	W	Wall Mounted							
	S	Panel Mounted							
	D	Explosion-proof							
Transducer									
		TS-2	Small (Standard Clamp-on type)						
		TM-1	Medium (Standard Clamp-on type)						
		TL-1	Large (Standard Clamp-on type)						
		TS-2-HT	Small (High Temperature Clamp-on type)						
		TM-1-HT	Medium (High Temperature Clamp-on type)						
		TL-1-HT	Large (High Temperature Clamp-on type)						
		TC-1	Standard (Insertion Type)						
		TC-2	Longer Type (Insertion Type)						
		G3	Π (Pipeline Type)						
		G2	Standard (Pipeline Type)						
		G1	Standard (Pipeline Type)						
Diameter									
			DN	15 ~ 6000					
Material									
				0	Carbon Steel				
				1	Stainless Steel				
				2	Cast Iron				
				3	FRP				
				4	PVC				
				5	Cement				
				6	Others				
Nominal Pressure									
				MPa	1.0, 1.6, 2.5, 4.0				
Cable Length between sensor & transmitter									
				X	5 ~ 100 m				
Temperature Sensor									
						N	No Temperature Sensor		
						C	Clamp-On type		
						I	Insertion Type		
						I2	Insertion Installation with pressure		
						S	Small size temperature sensor		
SD Card Storage									
							0	With this function	
							1	Without this function	

For Example: RUF100-W-S2-15-0-1-5-N-1

Details:

RUF100: Ultrasonic Flowmeter

W: Wall Mounted Transmitter

S2: Small size standard transducer

15: DN15

0: Carbon Steel Material

1: 1.0 MPa Nominal Pressure

5: 5 meter cable length

N: No temperature sensor

1: Without SD Card Storage function