RIF600S Ultrasonic flow meter for DIN guide installation

PRODUCT NTRODUCTION

The RIF600S Ultrasonic flowmeter module/RTU is designed to work with clamp-on transducers to enable the flow of a liquid within a closed pipe to be measured accurately without needing to insert any mechanical parts through the pipe wall or protrude into the flow system.

Using ultrasonic transit time techniques, it is controlled by a micro-processor system which contains a wide range of data that enables it to be used with pipes with an outside diameter ranging from 15mm up to 6000mm (depending on model) and constructed of almost any material. The instrument will also operate over a wide range of fluid temperatures.

APPLICATION

- Power plant
- Supply heating
- Water supply
- Building Energy Conservation
- Metallurgy
- Petroleum & Chemical

FEATURE

High Accuracy:	Accuracy better than 1%
Measure Range	Measurement range from DN15~DN6000mm
Rechargeable Power Supply	Built-in high-capacity NiMH rechargeable batteries will last more than 10 hours(Fully charged).
Non invasion measurement	Can achieve measurement with clamp on sensors
Data Storage	32K BIT built-in data storage,can store two thousand rows of data
LCD display	LCD dispaly can display the instant flow,total flow,flow velocity and working condition

DESCRIPTION OF PARTS

Front view	**Back view**

Size:92×90×34mm
Display screen size:60×1933
4 keys, easy to operation

installation: Install on lead rail
Lead rail width is 35 mm

Wiring Diagram:

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

INSTALLATION

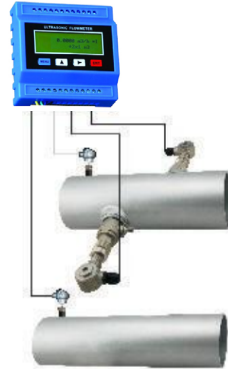| Flow Rate	Heat

Clamp on type
Easy to install without interrupt fluid, no damage for pressure
Install and service clamp sensor conveniently
It can measure the temperature out of the pipe, compute the quantity of heat

Plug in type
Easy to install without interrupt fluid, no damage for pressure Stable operation, contact the temperature sensor which inserted, compute quantity of heat by the temperature sensor.

Pipe type
Install with interrupt flow.
High accuracy, stable operation, contact the temperature sensor which inserted, compute quantity of heat by the temperature sensor.

TRANSDUCER

Due to different liquid, pipeline condition installation circumstance, choose different transducer

Type	Picture	Specification	Model	Pipe size	Temperature	Dimension
Standard Clamp-on type		Small	TS-2	DN15÷100	-30°C...+90°C	45x25x32 mm
		Medium	TM-1	DN50÷700	-30°C...+90°C	64x39x44 mm
		Large	TL-1	DN300÷6000	-30°C...+90°C	97x54x53 mm
High Temperature Clamp-on type		Small	TS-2-Ht	DN15÷100	-30°C...+160°C	45x25x32 mm
		Medium	TM-1-HT	DN50÷700	-30°C...+160°C	64x39x44 mm
		Large	TL-1-HT	DN300÷6000	-30°C...+160°C	97x54x53 mm
Insertion type		Standard	TC-1	DN80÷6000	-30°C...+160°C	190x80x55 mm
		Longer type	TC-2	DN80÷6000	-30°C...+160°C	335x80x55mm
Pipeline type		π	G3	DN15÷25	-30°C...+160°C	SS304 Tread Connection
		Standard	G2	DN32/DN40	-30°C...+160°C	CS Flange Connection
		Standard	G1	DN50÷6000	-30°C...+160°C	CS Flange Connection

Temperature Sensor

Picture	Specification	Model	Pipe size	Temperature	Installation requirement	Accuracy
	Three wire PT100 clamp Temperature sensor	CT-1	≥ DN50	-40°C...+160°C	no need cut flow	
	Three wire PT100 insertion Temperature sensor	TCT-1	≥ DN50	-40°C...+160°C	no need cut flow	100°C ±08°C Temperature difference ≤ 0,1°C after match accurately
	Three wire PT100 pressure installation insertion temperature sensor	PCT-1	≥ DN50	-40°C...+160°C	no need cut flow	
	Small size three wire PT100 insertion type temperature sensor	SCT-1	≥ DN50	-40°C...+160°C	no need cut flow	

TECHNICAL PARAMETERS

Transmitter	**Principle**	Ultrasonic transit-time principle,Four-byte IEEE754 floating-point arithmetic
	Accuracy	Better than ±1%
	Dispaly	LCD display with Chinese,English Display
	Output	One 4-20mA Current output,Impedance0-1K,Accuracy 0.1%
		One OCT Pulse output(Width 6-1000ms,Default200ms)
		One Relays output
	Input	Three 4-20mA Current input,accuracy 0.1%,can collect temperature,pressure,level signals etc.
		Can connect with three-wire PT100 Plastnium resistance to measure heat flow.
	Data interface	Isolated RS485 interface, can upgrade flowmeter through PC,support modbus
Cable		Normal below 50m;Select RS485 Communication,Transmission distance can over thousand meters.
Pipe condition	**Material**	Steel,Stainless steel,Cast iron,copper,PVC,aluminium,FRP etc.(liner allowed)
	Diameter	15~6000mm
	Installation	Upstream 10D,downstream 5D,30D away from the pump outlet(D for diameter)
Medium	**Fluid**	Water,sea water,acid liquid,beer,alcohol,oil and any other liquid that can spread sonic
	Temperature	-30~160 deg C
	Turbidity	10000ppm and with little bubbles
	Velocity	0~±10m s
Operationg enviroment	**Temperature**	Transmitter:-20°~60°C; Transducer:-30°~160°C
	Humidity	Transmitter:85%RH;transmitter protection grade:IP68;Water Depth<2m
Power supply		DC8-36V
Consumption		1.5W

Model Selection

Model	Trnsmitter	Transducer	Diameter	Material	Nominal pressure	Cable lenght	Temperature sensor
RIF600	**[S].....................**	**[M2]........**	**DN [50] mm**	**[1].......................**	**[1] MPa.............**	**[5] m.........**	**[C]...**
	W: wall mounted	S2		0: Carbon steel			N: No temperature sensor
	S: Panel mounted	M2		1: Stainless steel			C: Clamp-on sensor
	D: Ex-proof	L2		2: Cast iron			I: Insertion type
		S2H		3: FRP			I2: Insertion installation with pressure
		M2H		4: PVC			S: Small size temperature sensor
		L2H		5: Cement			
		I2		6: others			
		I2L					
		G					