

Specifications

Item	Description	
Model	FUR-3	
Measuring method	Difference operation of transit time	
Fluid conditions	Measured fluid	water supply, agricultural/industrial water, river water, seawater, pure water, etc.
	Fluid temperature range	0°C to 60°C (non-freezing)
	Fluid turbidity	10,000 degrees (10,000 ppm) and less
Applicable pipe	Pipe material	Steel, cast iron, ductile cast iron, SUS, vinyl chloride resin, FRP
	Inner lining	Mortar, tar epoxy, polyethylene, etc.
	Diameter (Large)	300 – 6,000 mm (used with a large diameter type sensor)
	Diameter (Small)	50 – 250 mm (used with a small diameter type sensor)
	Installation conditions (D: diameter)	Straight pipe: upstream 10D and longer, downstream 5D and longer (30D – 50D and longer from an upstream pump)
Measuring range	Flow velocity range	–30 – 30 m/s
	Measurement accuracy	0.8 - 30 m/s: +/-1.0% of reading, 0 - 0.8 m/s: +/-0.008 m/s
	Flow settings	Unit of flow: m ³ , L, t, kg, Unit of time: h, min, s selectable
	Traverse	1 traverse or 2 traverse or 4 traverse
	Measuring range	2 ranges maximum for forward and reverse flow each, automatic/remote switching selectable
Ambient condition	Ambient temperature	Converter: – 10°C to 60°C, sensor: – 20°C to 60°C
	Ambient humidity	Converter: 90 % RH and less (non-condensing)
Display	Indicator	LCD: 240 x 128 dots, backlit display
	Displayed parameters	Instantaneous flow, instantaneous flow velocity, total flow (forward/reverse), self-diagnosis and other information
Output signal	Electrical output	4 - 20 mA DC: 2 points, load resistance: 1 kΩ max.
	Contact output	Open collector, no-voltage contact: six points, contact capacity: 30 VDC/0.25A Forward/reverse total flow pulse, flow direction, self-diagnosis etc.
	Total flow setting	Pulse width: 1 - 200 ms, totalized multiplier factor: 0.01 - 1,000, flow volume unit: m ³ , L, t, kg selectable
	Digital output	RS232C, RS422: transmits instantaneous flow, total flow and other data
Self-diagnosis	Upper/lower limit alarm, errors in sonic wave reception, power supply, memory etc.	
Surge absorber	Built-in lightning arrester elements in the power supply and signal lines	
Power supply	100 VAC, 115 V +/-10%	
Power consumption	15 VA max.	
Design	Converter	IP67 (immersion proof type)
	Sensor	IP67 (immersion proof type)*
Installation method	Converter	Wall mounted, stanchion mounted
	Sensor	V or Z method
Housing material	Converter	AC4C cast aluminum alloy
	Sensor	SCS13 (cast stainless), acrylic resin
Weight	Converter	Approx. 11 kg
	Sensor	Large diameter type: approx. 5 kg, small diameter type: approx. 4 kg/unit (5-m non-detachable cable included)
Connection cable	Dedicated coaxial cable (length: 300 m max.)	
System components	Converter, sensor, junction box, dedicated cable (refer to the model FUR-3 CS sheet for details.)	

*:IP68 (submersible type) specifications is required, please contact us.

Notice: For proper operation, follow the instruction manual when using the instrument.

Specifications in this catalog are subject to change with or without notice, as Hitachi High-Tech Solutions Corporation continues to develop the latest technologies and products for our customers.

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Model FUR-3

Hitachi Ultrasonic Flowmeter



The inherited and evolving technology

No need to cut pipes, easily mounted on existing pipes—
The ultrasonic flowmeter is now easier to use.

1 Enhanced basic functions

Provides more accurate flow measurement (accuracy: +/-1% of the reading)

2 Wider application range

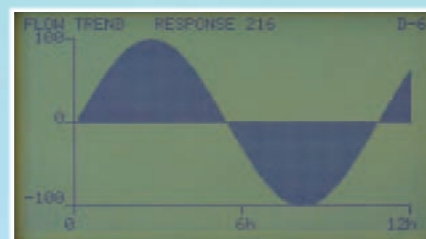
- Ideal for flow measurement of water supply, agricultural/industrial water, river water, and seawater
- Applicable flow velocity range: -30 – 30 m/s
- Applicable diameter range: 50 – 6,000 mm
- Applicable turbidity range: 10,000 degrees and less

3 A variety of display functions

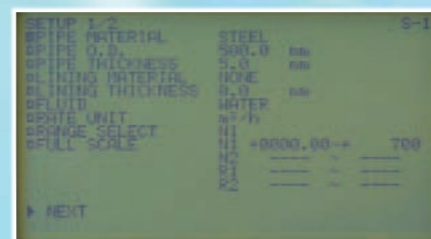
- A large liquid crystal display with improved legibility
- A simplified flow rate trend display is provided as a standard feature
- Settings can be modified via simple operation on the front panel



[Multiple data display]



[Example of a trend display screen]



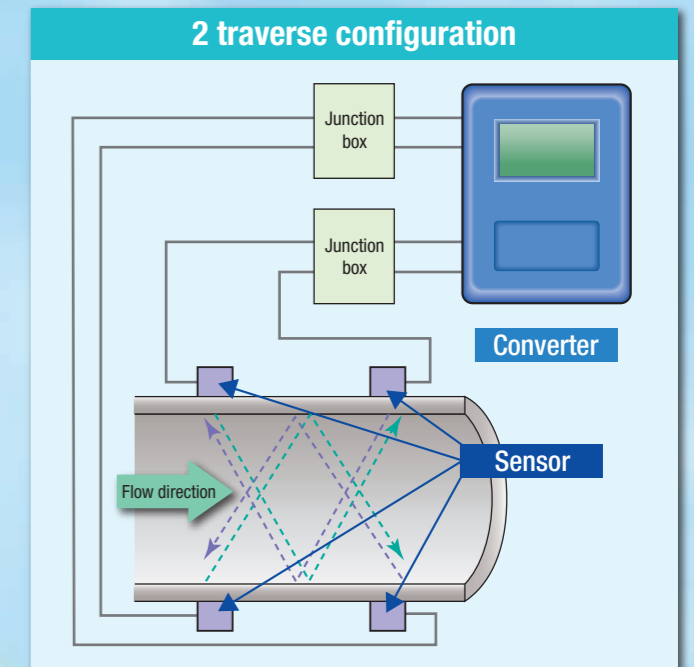
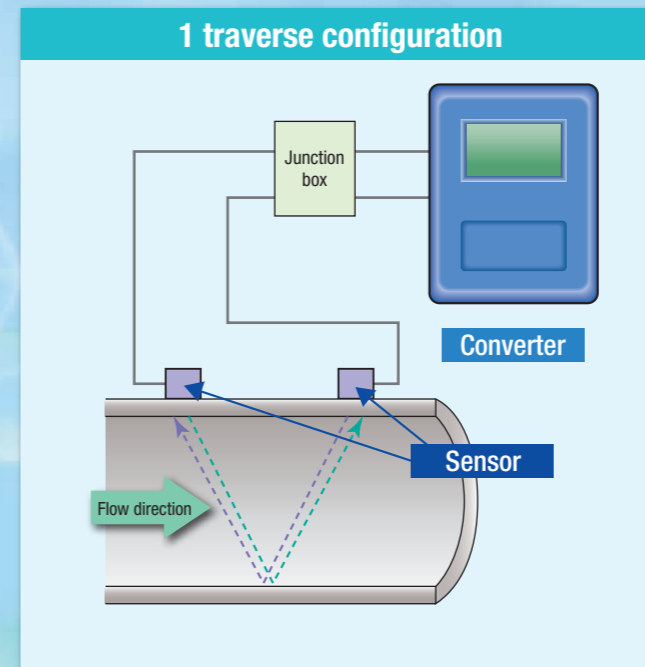
[Piping data setting screen]

4 The technology that has been developed over years is inherited

- High environmental resistance (sensor: IP67, converter: IP67)
- Assured high reliability
- Self-diagnosis function provided as a standard feature

Measurement principle

As shown below, a pair (two pairs) of sensors send and receive ultrasonic pulses in turn. The difference in the transit time of ultrasonic pulses propagating in and against flow direction is measured to obtain the flow rate.



Dimensional drawing

