

Heat / Ultrasonic Flowmeter

GENERAL

Heat / Actsonic UT-9100 Series ultrasonic flowmeter is a state-of-the-art universal transit-time flowmeter incorporating the latest developments in digital processing, with clamp-on transducers for non-invasive liquid measurement. While principally designed for clean liquid applications the instrument is tolerant of liquids with a small quantity of air bubbles or suspended solids common in most industrial applications



Actsonic UT-9100 Series

FEATURES & APPLICATIONS

- Daily, monthly and early totalized flow
- Calorimeter calculation function (BTU)
- Batch control function
- Flow velocity +/-0.01~+/-32 m/s
- High accuracy of +/-0.5% of reading
- Clamp-on sensors are simple to install, leading to lower installation and labor costs
- Clamp-on sensors mean no pipe cutting or process interruption and no plant shut-down
- Hygienic measurement, no risk of contamination, suitable for ultra clean liquids
- Measurement is independent of fluid conductivity meaning a wider applicability than magnetic meters
- Liquids Measured
 - Water, sea water and other clean liquids with a content of suspended solids less than 10000ppm (mg / l) and without a high content of air bubbles.
 - -20°C ~ +80°C, without ice in pipes at low temperature

SPECIFICATION

Measuring Principle	Transit time difference
Pipe Size	S1 Type : 15 mm ~ 100 mm M1 Type : 50 mm ~ 1000 mm L1 Type : 300 mm ~ 6000 mm
Pipe Material	Cast Iron, Stainless Steel, Ductile Iron PP, PVC, Aluminum, Asbestos Fiberglass... etc.
Liner Material	Tar Epoxy, Rubber, Mortar, Polypropylene, Polystyrene, Polystyrene, Polyester, Ebonite, Polyethylene, Teflon... etc.
Display	40 character, 2 Line (20*2) 1st line alphanumeric backlit LCD , Velocity, Date, Time, Signal condition.
Flowrate	5 digit with decimal point
Totalizer	8 digit, Forward, Reverse & Net values.
Heat Unit(Btu)	Flow Unit: M3, Liter, US Gallon, Imperial Gallon, Million Gallon, Cubic Feet, US Barrels, Imperial Barrels, Oil Barrel.
Time Unit	Kwh, GJ; [Energy=Volume*(T1-T2)*K factor(Ti)] Second, Minute, Hour, Day.
Flow Velocity	0.01 ~ +/- 32 m/s
Measurement Accuracy	+/- 0.5% of reading (online calibration)
Repeatability	+/- 0.1%~+ 0.5% at +/- 0 ~ +/- 32 m/s Linearity +/- 0.5%
Basic accumulated cycle	500ms

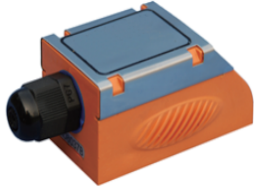
Resolution	0.0001 m/s
Response Time	Less than 1 second
Keypad	16 (4*4) Key with tactile action
Output	0/4-20 max load 750 ohm (precision 0.1%)
Pulse Output	OCT (min 250ms), frequency 0- 9999 Hz (min&max frequency is adjustable)
Relay Output	SPST, max 4hz (1A) @ 125 VAC
Communication	RS-232 & RS-485
Data Logger	64 data include flowrate, totalizer, time
Input (Calorimeter calculation btu function)	0/4-20 mA (PT100, PT500, PT1000)
Power Requirement	
Wall mount type	90 & 260 VAC 50 / 60HZ & 24VDC+10%
Power consumption	Less than 2 W
Portable type	110 & 220 VAC +10%
Mounting	Wall mounting
Enclosure	
convert, IP65; temp sensor, IP68 ; temp	-20 ~ +60 °C ; Humidity:90%RH max
Weigh	-20 ~ +120 °C ; Humidity:100%RH max
	1.3kg

SENSOR SPECIFICATION

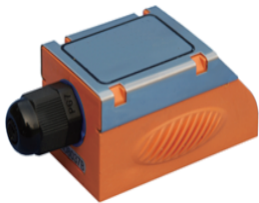
Fluid Temperature: $-20 \sim 110^{\circ}\text{C}$



S1 Type Pipe Size : 15 ~ 100 Mm (1/2" ~ 4")
Dimensions : 200 X 25 X 25mm



M1 Type PIPE SIZE : 50 ~ 1000 mm (2" ~ 40")
Dimensions : 60 x 45 x 45mm

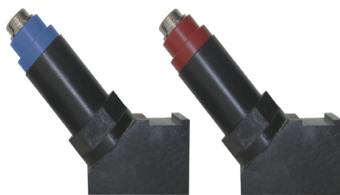


L1 Type PIPE SIZE : 300 ~ 6000 mm (12" ~ 240")
Dimensions : 80 x 70 x 56mm

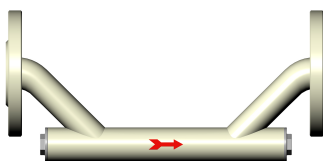
Fluid Temperature: $-20 \sim 160^{\circ}\text{C}$



S1H Type Pipe Size : 15 ~ 100 Mm (1/2" ~ 4")
Dimensions : 90 X 85 X 24mm



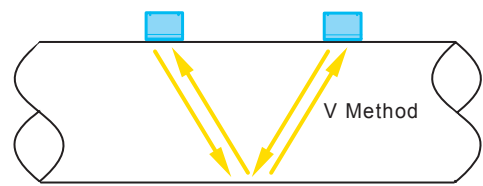
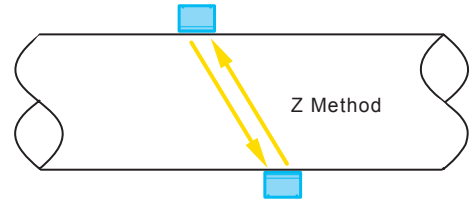
M1H Type PIPE SIZE : 50 ~ 700 mm (2" ~ 28")
Dimensions : 90 x 82 x 29mm



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INSTALLATION



CONDITIONS ON STRAIGHT PIPE

