



ALSONIC-PL

Ultrasonic Flowmeter

Model ALSONIC Series

GENERAL

THE ALSONIC-PL is a portable transit-time ultrasonic flow and energy meter with clamp-on transducers for non-invasive liquid flow rate measurement. Our microprocessor based, user friendly, field programmable flow measurement technique creates no interruption of the process flow and has low installation costs.

FEATURES

- 2 line LCD display with flow rate, totalizer & diagnostics
- Stores up 512 days of data w/recording interval of 1 to 3600 seconds
- Velocity range of $\pm 0.98 \text{ ft/s} \sim \pm 32 \text{ ft/s}$ ($\pm 0.1 \sim \pm 10 \text{ m/s}$)
- Pipe sizes from 1-48" (25~1200) mm
- Bracket-type transducers for easy installation without mounting belt
- Data logger includes date, totalizer, signal condition & diagnostic code status
- Response time of less than 1 second

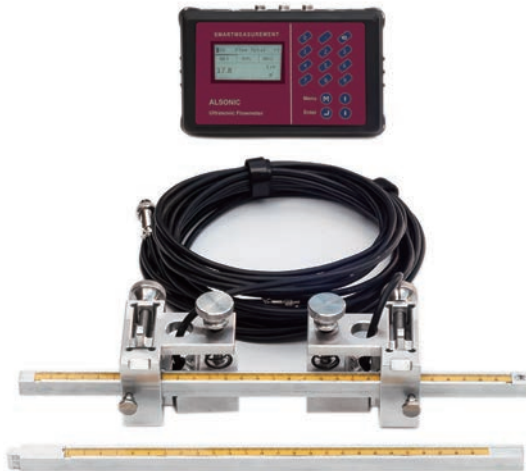


SPECIFICATIONS

- | | | | |
|-----------------------|--|---------------------|---|
| • Flow range: | $\pm 0.98 \text{ ft/s} \sim \pm 32 \text{ ft/s}$ ($\pm 0.1 \sim \pm 10 \text{ m/s}$) | • Power supply: | Rechargeable lithium battery, 3000mAh (16 hours continuous operation) |
| • Pipe size : | Clamp-on: 1"~48" (25mm~1200mm) | • Temperature: | Ambient: $-40^{\circ}\text{F} \sim +140^{\circ}\text{F}$ ($-40^{\circ}\text{C} \sim +60^{\circ}\text{C}$) |
| • Fluid: | Clean liquids w/up 1% particles/bubbles | • Temperature: | Process $-40^{\circ}\text{F} \sim +176^{\circ}\text{F}$ ($-40^{\circ}\text{C} \sim +80^{\circ}\text{C}$) and up to 230°F (130°C) optional |
| • Accuracy | $\pm 1\%$ of reading ($0.3 \sim 5 \text{ m/s}$);
$\pm 5\%$ of reading ($0.1 \sim 10 \text{ m/s}$) | • Humidity: | Up to 99% RH, non-condensing |
| • Pipe material: | Carbon steel, stainless steel, PVC, copper, PVDF, polypropylene | • Transmitter: | NEMA3S, IP54 |
| • Outputs: | Analog output: 4~20mA, Max 750 Ω .
Modbus/RS485 | • Transducer: | Encapsulated design, IP68 |
| • SD card: | 16Gb for data-logger | • RTD (options): | PT100, PT500, PT1000 |
| • Measuring Interval: | User set 1 ~ 99999 sp seconds | • Transducer cable: | Standard cable length: (16ft) 5m |
| • Display: | 240*128 back-lit LCD | • Keypad: | Membrane type |

■ ACCESSORIES

- Carrying Case
- Flow computer (transmitter)
- Transducers
- Mounting track, ST or DT type
- Mounting straps
- Coupling compound (silicone), battery charger, output cable and measuring Tape



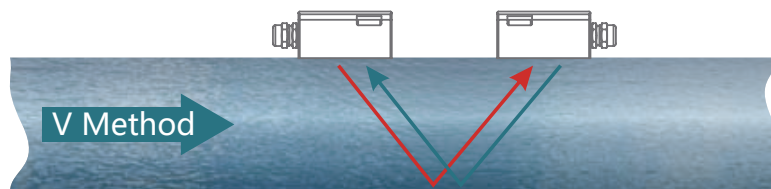
Single guide mounting bracket (ST)



Dual guides mounting bracket (DT)

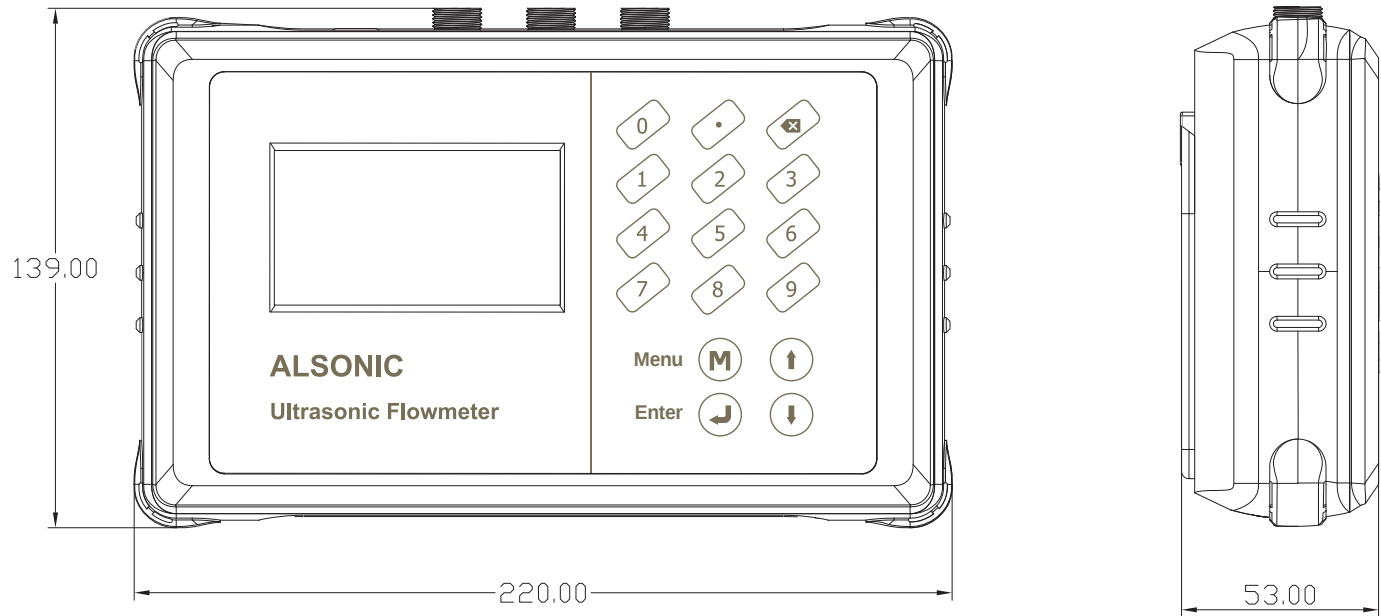
■ MEASURING PRINCIPLE

Flow rate is calculated by measuring the transit times of ultrasonic signals from the transducers transmitted and received through the moving liquid. The difference between the upstream and downstream transit time, is proportional to the flow velocity moving through the pipe.



The Alsonic PL is also capable of measuring heat and energy flow rates used in devices such as heat exchangers. With clamp-on or insertion temperature RTDs, users can measure flow and heat rates of both the inlet and outlet of a system, enabling accurate measurement of energy usage.

■ DIMENSIONS



Size: 8.66" x 5.47" x 2.09" (220*139*53mm)

User Settings: Flow unit, zero, clear total flow, K- factor, Passwords, linearization table

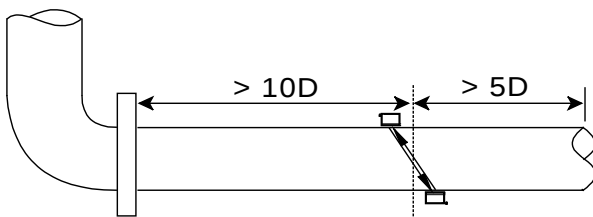
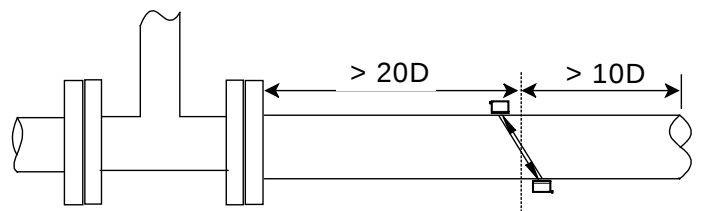
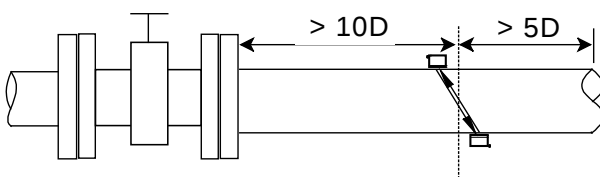
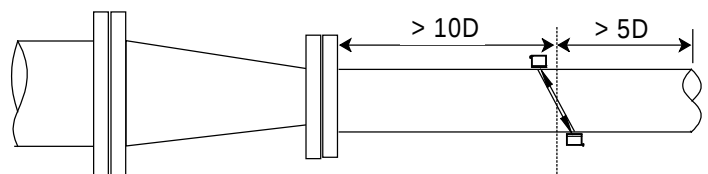
Inputs: 4 ~ 20 mA analog input (temperature)
PT1000 resistor input (temperature)

Outputs: Isolated RS485 output

4 ~ 20mA output

1 relay output,
data logger (optional)

Protection: IP54

ELBOW 90°**Tee Fitting****Valve****Reducer**

Please contact your **SmartMeasurement** application engineer

You also need to provide the following information:

TYPE OF FLUID
FULL-SCALE FLOW RATE
LINE SIZE
PRESSURE & TEMPERATURE

Please provide the name of your fluid, including operating density and viscosity

Please provide the max and min flow rate, normal flow rate also

Please provide the line size and pipe material

We will calibrate your flow meter as close to your operating conditions as possible

ALSONIC-PL SERIES							
EXAMPLE: ALSONIC-PL-SC1-NC-NN							
ALSONIC	**	**	**	**	**	DESCRIPTION	
Standard portable flow meter with display, 4-20mA, RS485	PL					Flowmeter Type	
Standard portable energy meter with display, 4-20mA, RS485	EG-P						
Medium clamp sensor with single mounting track (-30~+75°C), 25~800mm	SC1					Transducers	
Large clamp sensor with single mounting track (-30~+75°C), 500~1200mm	SC2						
High-temp clamp-on sensor with single mounting track (-30~+110°C), 25~500mm	HC1						
Standard insertion sensor (-30~+110°C), 80~1200mm	IC1						
No Cables			NC		Signal Cable Length		
Standard 5m x 2 Cables			C1				
m cables up to +75 deg C			C				
m cables up to +110 deg C			H				
Battery power : 3000mAh				BA		Power Supply	
None option					NN		Options
Thickness gauge					TT		
Dual mounting track for portable, up to DN600					DS		
Clamped on PT1000 with 5m cable, one pair					RTD		
Clamped on PT1000 with **m cable, one pair					R**		
Data logger with 16G SD card					DL		



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