



ALSONIC-HL

Handheld Transit-Time Ultrasonic Flowmeter Model ALSONIC-HL Series

GENERAL

Alsonic-PHL series is a Handheld transit-time ultrasonic flowmeter with clamp-on transducers for non-invasive liquid measurement. Our microprocessor based, user friendly field programmable flow measurement technique creates no interruption of the process flow and has low installation costs.

FEATURES

- ❑ 4 line LCD display with flow rate, totalizer & diagnostics.
- ❑ The flowmeter is designed for high accuracy $\pm 1.0\%$.
- ❑ Small sized (8.25" x 3.50" x 1.48") and lightweight (≈ 1 lb.)
- ❑ Wide range of fluid velocities - 0.9 ~ ± 105 feet/sec. (0.3 ~ ± 32 m/s)
- ❑ Long-life Ni-MH battery for up to 12 hours of continuous operation.
- ❑ Transducers for pipe sizes ranging from $\frac{1}{2}$ " ~ 240" (15 to 6000 mm)
- ❑ High accuracy of $\pm 0.5\%$ of reading (or $\pm 0.2\%$ of reading)
- ❑ Transducers include magnetic device, which can install on metal pipe without mounting belt.
- ❑ Data logger which records flowrate, date, total flow, signal condition, etc.
- ❑ Response time less than 1 second

SPECIFICATIONS

- | | | | |
|-----------------------|---|-----------------------|--|
| ● Measuring Principle | : Transit time ultrasonic | ● Keypad | : 18 Key with tactile action |
| ● Transducers | : SCS : $\frac{1}{2}$ " ~ 4" (15 mm ~ 100 mm) | ● Response Time | : Less than 1 second |
| | : SCM: 2 ~ 38" (50 mm ~ 1000 mm) | ● Flow velocity | : 0.9 ~ 105 feet/sec. (0.3 ~ ± 32 m/s) |
| | : SCL: 12" ~ 240" (300 mm ~ 6000 mm) | ● Resolution | : 0.0003 feet/sec. (0.0001 m/s) |
| | : SHS: $\frac{1}{2}$ " ~ 4" (15 mm ~ 100 mm) | ● Ambient Temperature | : $-4 \sim 122$ °F ($-20 \sim 50$ °C) |
| | : SHL: 2" ~ 38" (50 mm ~ 1000 mm) | ● Ambient Humidity | : 90% RH or Less |
| ● Pipe Material | : Cast Iron, Stainless Steel, Ductile Iron | ● Built-in battery | : Ni-MH Battery |
| | Copper, PVC, Aluminum, Asbestos | ● Operation Time | : > 12 Hours |
| | Fiberglass... etc. | ● Charger | : 90 ~ 260V _{AC} 50/60 Hz, 8-12 Hr charging |
| ● Liner Material | : Tar Epoxy, Rubber, Mortar, Polypropylene, | ● Data Storage | : Operation parameters and totalization |
| | Polystryal, Ploystryene, Polyester, Ebonite, | | data are stored by EEPROM for more |
| | Polyethylene, Teflon... etc. | | than 10 years |
| ● Display | : 4 Line LCD with backlight | ● Operation Time | : > 10 Hours |
| | Flowrate : 5 digit with decimal point | ● Charger | : 90 ~ 260V _{AC} 50/60 Hz, 8-12 Hour charging |
| | Totalizer : 8 digit, Forward, Reverse & Net values. | ● Data Logger | : 64 data include flowrate, totalizer, |
| | Engineering Units : M ³ , Liter, US Gallon, Imperial Gallon, | | time, date. |
| | Million Gallon, Cubic Feet, US Barrels, | ● Alarm | : High/Low with buzzer |
| | Imperial Barrels, Oil Barrel. | ● Power consumption | : Less than 2W |
| | Time Units : Second, Minute, Hour, Day. | ● Dimension | : 3.25" x 3.50" x 1.18" |
| | Other Parameters : Velocity, Date, Time, Signal condition. | ● Weight | : 1.10 lbs. |
| ● Accuracy | : $\pm 1\% \sim \pm 2\%$ of reading (1.5 ~ 100 feet/sec.) | ● Enclosure | |
| | : $\pm 0.5\%$ of reading (online calibration) | | Converter : IP65 |
| ● Repeatability | : $\pm 0.2\%$ of reading | | Sensor : IP68 (Submersible) |



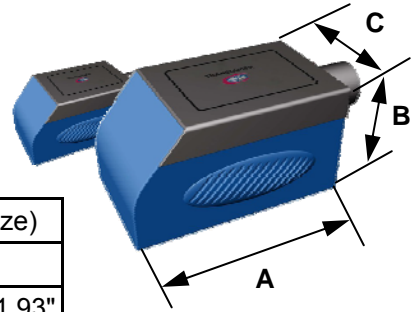
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➤ TRANSDUCER SPECIFICATION



• **Standard Transducers**

Fluid Temperature : -40 ~ 230 °F

Model	SCS (Small Size)	SCM (Medium Size)	SCL (Large Size)
Pipe Size	½" - 4"	2" - 40"	12" - 240"
A*B*C	1.75" x 0.90" x 1.00"	2.50" x 1.25" x 1.38"	3.85" x 1.75" x 1.93"

• **High Temperature Transducers**

Fluid Temperature : -40 ~ 320 °F

Model	SHS (Small Size)	SHL (Medium Size)
Pipe Size	½" - 4"	2" - 40"



➤ ACCESSORY (standard package)



Case



Silicone grease

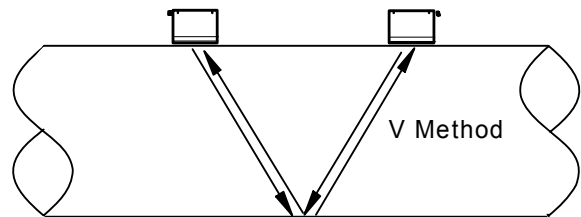
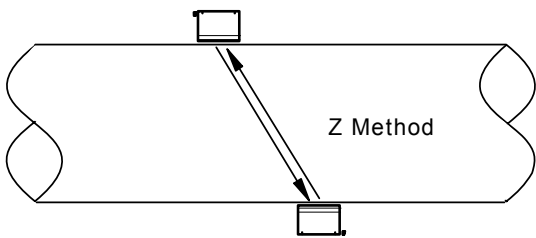


Mounting Belt

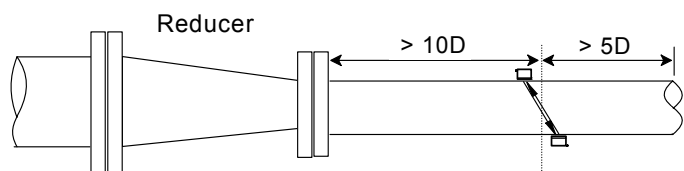
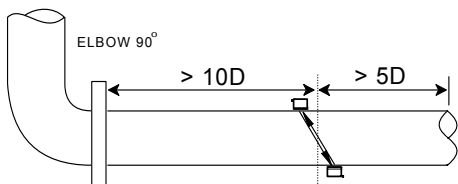
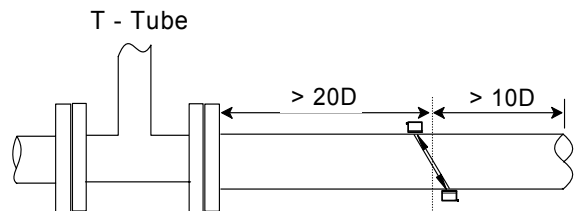
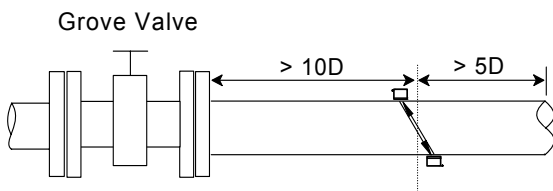


Measuring Tape

➤ INSTALLATION



➤ STRAIGHT RUN PIPING REQUIREMENT



COMBINATION FOR ULTRASONIC FLOWMETER



OTHER ACCESSORIES



Waterproof Case



Mounting Belt



Thickness gauge

**** Please contact your local SMC application engineer****You also need to provide the following information:**

Type of Fluid	Please provide the name of your fluid, including operating density and viscosity
Line Size	Nominal pipe size and sensor connection type (insertion, clamp, etc..)
Process Pressure and Temperature	We will calibrate your flowmeter as close to your operating conditions as possible
Type of Electronics	Output and installation type (compact, wall mount, panel mount, etc..)
Pipe Material	Please provide the name of your pipe material (Copper, PVC, black iron, etc.)

➤ Model Selection Guide

Alsonic-HL						
Example : Alsonic-HL-SCS-C1-NS						
Alsonic-	**	**	**	**		Description
Handheld HL Basic Model, Include: * Alsonic-HL Handheld * 1 set * Power Adaptor (90-264 V _{AC} , 50/60Hz) * 1 set * RS232 communication cable * 1 set * Silicone grease * 1 Box * Aluminum Carrying Case * Measuring Tape	HL					Portable Flowmeter
No transducers required		NTS				Transducers
Small clamp sensor, ½" - 4" (15 - 100 mm)		SCS				
Medium clamp sensor, 2" - 40" (50 - 1000 mm)		SCM				
Large clamp sensor, 12" - 240" (300 ~ 6000 mm)		SCL				
High Temp. clamp sensor; -22 ~ 320 °C, ½" - 4" (15 ~ 100 mm)		SHS				
High Temp. clamp sensor; -22 ~ 320 °C, 2" - 40" (50 ~ 1000 mm)		SHL				
No cable needed			NC			Signal Cable Length
16' (5M), 2 Cables			C1			
32' (10M), 2 Cables			C2			
48' (15M), 2 Cables			C3			
None option				NS		Accessories
Thickness gauge				TT		
Waterproof case				WPC		
Extra single cable. 10m * 2				Cable		
Mounting Belt. 6m * 2				MS		