



ALSONIC-HL

Hand-held Transit-Time Ultrasonic Flowmeter
Model ALSONIC-HL Series

GENERAL

The *Alsonic-HL* series is a portable 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

- 2 line LCD display with flow rate, totalizer & signal condition.
- The flowmeter is designed for high accuracy +/-1.0%.
- Small sized and light
- Wide range, Velocities (0.3 ~ +/- 32 m/s).
- Ni-MH Battery life for up to 12 hours continuous operation.
- Transducers for pipe sizes of 15 to 6000 mm.
- High accuracy of +/-0.5% of reading (or +/-0.2% of reading)
- Transducers include magnet devise, which can install on Metal pipe without mounting belt.
- Response time less than 1 second



SPECIFICATION

- Measuring Principle : Transit time Ultrasonic
- Transducers : SCS : 15 mm ~ 100 mm
SCM: 50 mm ~ 1000 mm
SCL: 300 mm ~ 6000 mm
SHS: 15 mm ~ 100 mm
SHL: 50 mm ~ 1000 mm
- Pipe Material : Cast Iron, Stainless Steel, Ductile Iron
Copper, PVC, Aluminum, Asbestos
Fiberglass... etc.
- Liner Material : Tar Epoxy, Rubber, Mortar, Polypropylene,
Polystyryl, Polystyrene, Polyester, Ebonite,
Polyethylene, Teflon... etc.
- Display : 2 Line LCD with illumination.
Flow rate : 5 digit with decimal point
Totalizer : 7 digit, Forward, Reverse & Net values.
Engineer Unit : M3, Liter, US Gallon, Imperial Gallon,
Million Gallon, Cubic Feet, US Barrels,
Imperial Barrels, Oil Barrel.
Time Unit : Second, Minute, Hour, Day.
Other : Velocity, Date, Time, Signal condition.
- Accuracy : +/- 1% ~ +/- 2% of reading(0.5 ~ 30 m/s)
+/- 0.5% of reading (online calibration)
- Repeatability : +/-0.2% of reading
- Keypad : 16 Key with tactile action
- Response Time : Less than 1 second
- Flow velocity : 0.3 ~ +/- 32 m/s
- Resolution : 0.03 m/s
- Ambient Temperature : -20 ~ +50 °C
- Ambient Humidity : 90% RH or Less
- Built-in battery : Ni-MH Battery
- Operation Time : > 12 Hours
- Data Logger : flow rate, totalizer,
time, date, etc...
- Communication : M-bus, Modbus, Data logger
- Charger : 90 ~ 260Vac 50/60 Hz, 8-12 Hour charging
- Output : RS485
- Alarm : High/Low with buzzer
- Power consumption : Less than 2W
- Dimension : 183 * 92 * 35 mm
- Weight : 0.35 Kg
- Enclosure : Converter : IP65
Sensor : IP65, IP68 (option)

Smartmeasurement™

2960 Polk St. Suite 12, San Francisco, CA 94109 USA
TEL : +1- 415 - 673 - 0143 FAX : +1- 415 - 673 - 4416

Page 1

URL : <http://www.smartmeasurement.com>
E-mail : sales@smartmeasurement.com

➤ TRANSDUCER SPECIFICATION

• **Standard-Transducers**

Fluid Temperature : -30 ~ +80 °C

Model	SCS (Small Size)	SCM (Medium Size)	SCL (Large Size)
Pipe Size	DN15-100mm	DN50- 700mm	DN300-6000mm



• **High Temperature Transducers**

Fluid Temperature : -30 ~ +140 °C

Model	SHS (Small Size)	SHL (Medium Size)
Pipe Size	DN15-100mm	DN50- 700mm



• **Standard-Mounting Track Transducers**

Fluid Temperature : -30 ~ +80 °C

Model	MCS (Small Size)	MCM (Medium Size)
Pipe Size	DN15-100mm	DN50-300mm

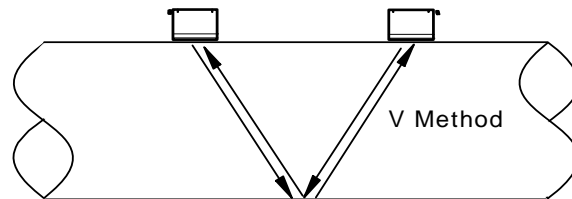
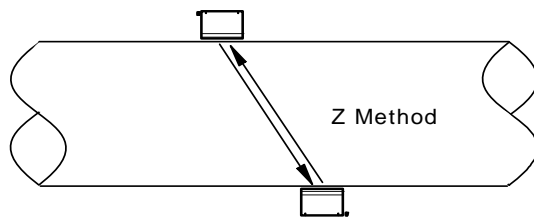


• **High Temperature Mounting Track Transducers**

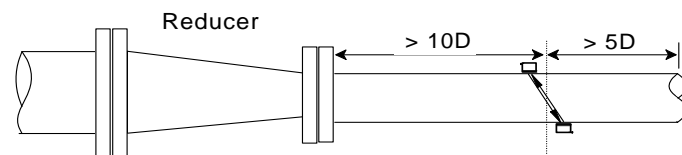
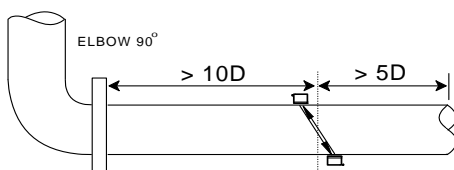
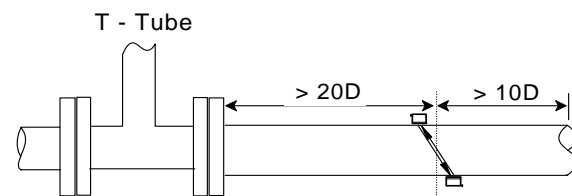
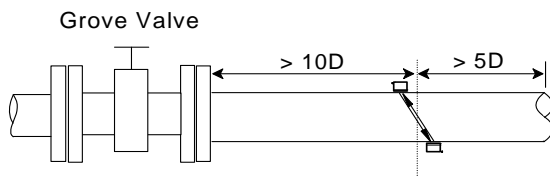
Fluid Temperature : -30 ~ +140 °C

Model	MHS (Small Size)	MHL (Medium Size)
Pipe Size	DN15-100mm	DN50-300mm

➤ INSTALLATION



➤ STRAIGHT RUN PIPING REQUIREMENT



COMBINATION FOR ULTRASONIC FLOWMETER



OTHER ACCESSORY



**** Please contact your local SMC application engineer**

You also need to provide the following information:

Type of Fluid	We need the name of your fluid, including operating density and viscosity
Line Size	pipe size and sensor connection type (insertion, clamp, etc..)
Process Pressure and Temperature	We calibration your Flowmeter as close to your application as possible
Type of Electronics	output and install type (compact, wall mount, pane mount,etc..)
Pipe Material	We need the name of your pipe material

➤ Model Selection Guide

Alsonic-HL						
Example : Alsonic-HL-SCS-C1-DL						
Alsonic-	**	**	**	**		Description
Handheld HL Basic Model, Include: * Alsonic-HL Handheld * 1 set * Power Adaptor (90-264 Vac, 50/60Hz) * 1 set * RS232 communication cable * 1 set * Waterproof Carrying Case	HL					Handheld Flowmeter
No transducers required		NTS				Transducers
Small clamp sensor, 15 ~ 100 mm		SCS				
Middle clamp sensor, 50 ~ 700 mm		SCM				
Large clamp sensor, 300 ~ 6000 mm		SCL				
High Temperature clamp sensor (-30-160°C), 15 ~ 100 mm		SHS				
High Temperature clamp sensor (-30-160°C), 50 ~ 700 mm		SHL				
Mounting track Small clamp sensor, 15 ~ 100 mm		MCS				
Mounting track Middle clamp sensor, 50 ~ 300 mm		MCM				
Mounting track High Temperature clamp sensor, 15 ~ 100 mm		MHS				
Mounting track High Temperature clamp sensor, 50 ~ 300 mm		MHL				
None cable needed			NC			Signal Cable Length
5M, 2 Cables			C1			
10M, 2 Cables			C2			
15M, 2 Cables			C3			
None option				NN		Option
thickness gauge				TT		
Extra single cable. 10m * 2				Cable		
Mounting Belt. 6m * 2				MS		
Protection IP68 for transducer				68		