



# ALSONIC-HL

## Hand-held Transit-Time Ultrasonic Flowmeter

### Model ALSONIC-HL Series

## GENERAL

SMARTMEASUREMENT's Alsonic-HL series is a hand-held, portable transit-time ultrasonic flowmeter with clamp-on transducers for non-invasive liquid measurement of liquids with less than 1-2% bubbles/solids. 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  $\pm 1.0\%$
- Compact, lightweight design
- Wide range of fluid velocities (0.5 ~  $\pm 12$  m/s)
- Ni-MH Battery life for up to 16 hours continuous operation
- Transducers for pipe sizes of 1" ~ 48" (25 to 1200mm)
- High accuracy of  $\pm 1.0\%$  of reading (or  $\pm 0.2\%$  of reading)
- Transducers include magnetic device, which can install on Metal pipe without mounting belt
- Response time less than 1 second



## SPECIFICATIONS

- |                        |  |                        |  |
|------------------------|--|------------------------|--|
| • Measuring Principle: | Transit time Ultrasonic  | • Keypad:              | 16 Key with tactile action                           |
| • Transducers:         | 1" ~ 48" (25-1200 mm)  | • Response Time:       | Less than 1 second                                   |
| • Pipe Material:       | Cast Iron, Stainless Steel, Ductile Iron, Copper, PVC, Aluminum, Asbestos, Fiberglass...etc                              | • Fluid velocity:      | 1.6~ $\pm 39$ ft/s (0.5 ~ $\pm 12$ m/s)              |
| • Liner Material:      | Tar Epoxy, Rubber, Mortar, Polypropylene, Polystyryl, Polystyrene, Polyester, Ebonite, Polyethylene, Teflon...etc        | • Resolution:          | 0.0003 ft/s (0.0001 m/s)                             |
| • Display:             | 2 Line LCD with backlight  | • Ambient Temperature: | -4~ $\pm 122$ °F (-20~ $\pm 50$ °C)                  |
| Flow rate:             | 5 digit with decimal point   | • Ambient Humidity:    | 90% RH or Less                                       |
| Totalizer:             | 7 digit, Forward, Reverse&Net values   | • Built-in battery:    | Ni-MH Battery  |
| Eng. Units:            | m <sup>3</sup> , Liter, US Gallon, Imperial Gallon, Million Gallon, Cubic Feet, US Barrels, Imperial Barrels, Oil Barrel | • Operation Time:      | > 12 Hours   |
| Time Unit:             | Second, Minute, Hour, Day  | • Data Logger:         | flow rate, totalizer, time, date, etc...             |
| Other:                 | Velocity, Date, Time, Signal condition   | • Communication:       | M-bus, Modbus  |
| • Accuracy:            | $\pm 1\%$ of reading (0.5 ~ $\pm 12$ m/s)  | • Charger:             | 90 ~ 260V <sub>AC</sub> 50/60 Hz, 8-12 Hour charging |
| • Repeatability:       | $\pm 0.2\%$ of reading   | • Output:              | RS485  |
|                        |  | • Alarm:               | High/Low with buzzer                                 |
|                        |  | • Power consumption:   | Less than 2W   |
|                        |  | • Dimension:           | 3.25" x 3.50" x 1.18" (183mm * 92mm * 35mm)          |
|                        |  | • Weight:              | 9lbs (4kg) (Including Carrying Case)                 |
|                        |  | • Enclosure:           | IP65   |
|                        |  | Converter:             | IP65, IP68 (optional)                                |
|                        |  | Sensor:                | IP65, IP68 (optional)                                |

# TRANSDUCERS

## STANDARD TRANSDUCER

Fluid Temperature : -40~+80 °F (-30~+80 °C)

Model	SCS (Small Size)	SCM (Medium Size)	SCL (Large Size)
Pipe Size	½"-4" (DN15-100mm)	2"-40" (DN50-1000mm)	12"-240" (DN300-6000mm)



## HIGH TEMPERATURE TRANSDUCER

Fluid Temperature : -40~+230 °F (-30~+140 °C)

Model	SHS (Small Size)	SHL (Medium Size)
Pipe Size	½"-4" (DN15-100mm)	2"-40" (DN50-1000mm)



## STANDARD-MOUNTING TRACK TRANSDUCER

Fluid Temperature : -40~+80 °F (-30~+80 °C)

Model	MCS (Small Size)	MCM (Medium Size)
Pipe Size	½"-4" (DN15-100mm)	2"-12" (DN50-300mm)



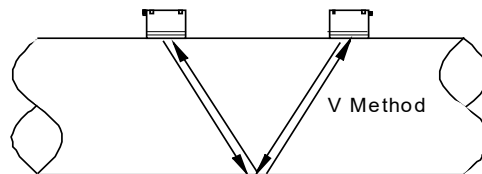
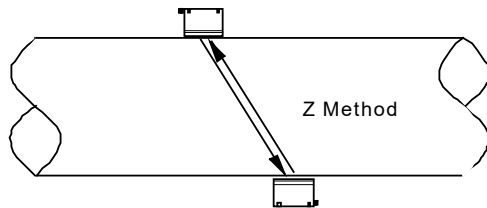
## HIGH TEMPERATURE MOUNTING TRACK TRANSDUCER

Fluid Temperature : -40~+230 °F (-30~+140 °C)

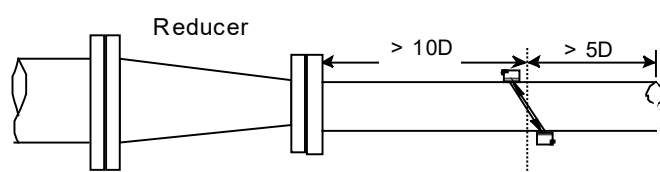
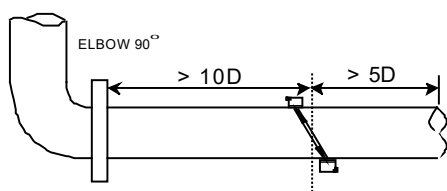
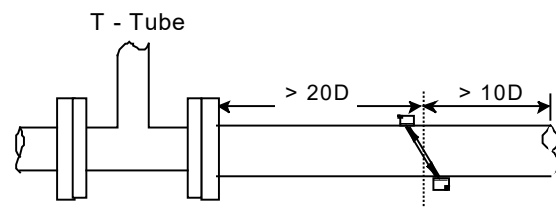
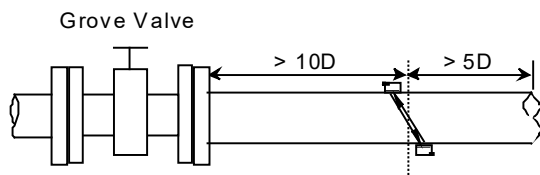
Model	MHS (Small Size)	MHL (Medium Size)
Pipe Size	½"-4" (DN15-100mm)	2"-12" (DN50-300mm)



# INSTALLATION



# STRAIGHT RUN PIPING REQUIREMENT



## COMBINATIONS



## OTHER ACCESSORIES



Measuring Tape



Longer Mounting Belt



Thickness gauge

<b>TYPE OF FLUID</b>	Please provide the name of your fluid, including operating density and viscosity
<b>LINE SIZE</b>	Please provide the pipe size and sensor connection type (insertion, clamp, etc..)
<b>PROCESS PRESSURE &amp; TEMPERATURE</b>	We will calibrate your flow meter as close to your operating conditions as possible
<b>TYPE OF ELECTRONICS</b>	Please specify output and installation type ((compact, wall mount, panel mount, etc.)
<b>PIPE MATERIAL</b>	Please provide the name of your pipe material

**ALSONIC-HL**

**EXAMPLE: ALSONIC-HL-SCS-C1-DL**

ALSONIC-HL	**	**	**	DESCRIPTION
Handheld HL Basic Model, Include: * Alsonic-HL Handheld * 1 set * Power Adaptor (90-264 V <sub>AC</sub> , 50/60Hz) * 1 set * RS232 communication cable * 1 set * Waterproof Carrying Case	HL			Handheld Flowmeter
No transducers required	NTS			Transducers
Small clamp sensor, ½" ~ 4" (15 ~ 100 mm)	SCS			
Middle clamp sensor, 2" ~ 24" (50 ~ 600 mm)	SCM			
Large clamp sensor, 12" ~ 240" (300 ~ 6000 mm)	SCL			
High Temperature clamp sensor, (-30 ~ 140°C); ½" ~ 4" (15 ~ 100 mm)	SHS			
High Temperature clamp sensor, (-30 ~ 40°C); 2" ~ 28" (50 ~ 700 mm)	SHL			
Mounting track Small clamp sensor, ½" ~ 4" (15 ~ 100 mm)	MCS			
Mounting track Middle clamp sensor, 2" ~ 12" (50 ~ 300 mm)	MCM			
Mounting track High Temperature clamp sensor, ½" ~ 4" (15 ~ 100 mm)	MHS			
Mounting track High Temperature clamp sensor, 2" ~ 12" (50 ~ 300 mm)	MHL			
No cable needed		NC		Signal Cable Length
5m length, 2 Cables		C1		
10m length, 2 Cables		C2		
15m length, 2 Cables		C3		
None option			NN	Options
Thickness gauge			TT	
Extra single cable, 10m * 2			Cable	
Mounting Belt, 6m * 2			ST	
IP68 Protection for transducers			68	

