



# ALSONIC-DHL

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

## GENERAL

The *Alsonic-DHL* series is a hand-held transit-time ultrasonic flowmeter with a built-in data logger and clamp-on transducers for non-invasive liquid measurement. Our microprocessor based, user friendly, field programmable signal processor allows for installation with no interruption of the process flow, resulting in low installation costs.

## FEATURES

- ❑ 4 line LCD display with flow rate, totalizer & diagnostics
- ❑ 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 of continuous operation.
- ❑ Transducers for pipe sizes ranging from 1"-48" (25 to 1200 mm)
- ❑ Transducers include magnetic base; allows for mounting on metal pipes without mounting belt or clamps
- ❑ Data logger records parameters including flowrate, date, total flow, and diagnostics
- ❑ Response time less than 10 seconds



## SPECIFICATION

- |                       |   |                       |   |
|-----------------------|---|-----------------------|---|
| ● Measuring Principle | : Transit time ultrasonics  | ● Keypad              | : 23 Key with tactile action                                |
| ● Transducers         | : 1" ~ 48" (25 ~ 1200 mm)   | ● Response Time       | : Less than 10 second                                       |
| ● Pipe Material       | : Cast Iron, Stainless Steel, Ductile Iron<br>Copper, PVC, Aluminum, Asbestos<br>Fiberglass   | ● Fluid velocity      | : 1.5~40 feet/sec (0.5 ~ $\pm 12$ m/s)                      |
| ● Liner Material      | : Epoxy, Rubber, Mortar, Polypropylene,<br>Polystryal, Polystyrene, Polyester, Ebonite,<br>Polyethylene, Teflon... etc.                           | ● Resolution          | : 0.05 m/s  |
| ● Display             | : 4 Line LCD with back-light  | ● Ambient Temperature | : 14~ 140 °F (-10 ~ +60 °C)                                 |
|                       | Flowrate : 5 digit with decimal point   | ● Ambient Humidity    | : 90% RH, non-condensing                                    |
|                       | Totalizer : 9 digit, Forward, Reverse & Net values.   | ● Built-in battery    | : 11.1V <sub>DC</sub> Ni-MH Battery                         |
|                       | Volumetric Units : m <sup>3</sup> , Liter, US Gallon, Imperial Gallon,<br>Million Gallon, Cubic Feet, US Barrels,<br>Imperial Barrels, Oil Barrel | ● Operation Time      | : > 16 Hours  |
|                       | Time Units : Second, Minute, Hour, Day  | ● Data Logger         | : 2Gb SD card<br>flow rate, totalizer,<br>time, date, etc.. |
| Additional Parameters | : Velocity, Date, Time, Signal condition  | ● Output              | : 4-20mA, maximum 750Ω<br>Data logger (FAT16)               |
| ● Accuracy            | : $\pm 1\%$ ~ $\pm 2\%$ of reading (0.5 ~ 12 m/s)   | ● Charger             | : 110 ~ 240V <sub>AC</sub> 50/60 Hz, 4-6 Hour charge tim    |
| ● Repeatability       | : $\pm 0.3\%$ of reading  | ● Power consumption   | : Less than 2.5W  |
|                       |   | ● Dimensions          | : 8.07" x 4.17" x 1.37" (205 * 106 * 35 mm)                 |
|                       |   | ● Weight              | : 1.4 lbs (0.65 Kg)   |
|                       |   | ● Enclosure           |   |
|                       |   | Converter             | : IP54, NEMA 13   |
|                       |   | Transducer            | : IP68  |

➤ **TRANSDUCER SPECIFICATIONS**

• **Standard-Transducers**

Fluid Temperature : 14~176 °F (-10 ~ 80 °C)

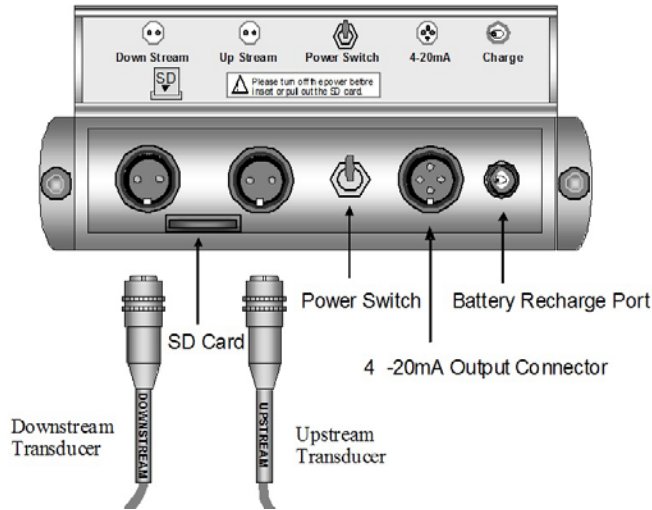
Pipe Size: 1"~48" (DN25~DN1200)

Protection: IP68

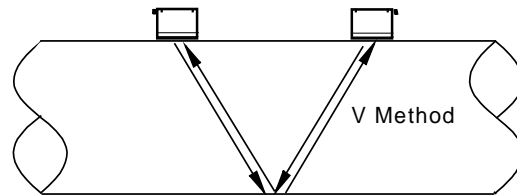
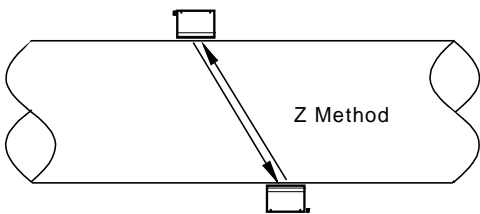
Cable Length: 5m(std), 10m, 15m (opt)



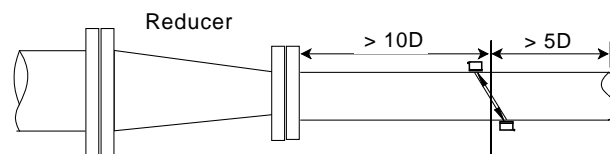
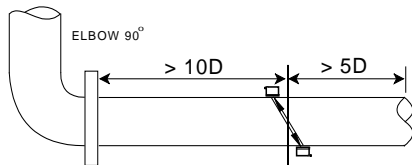
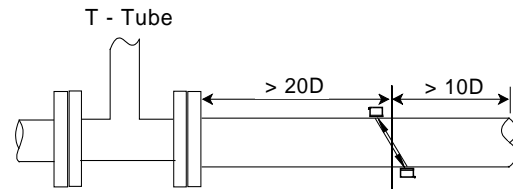
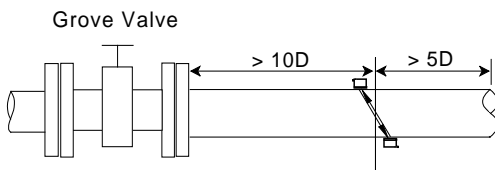
➤ **CONNECTIONS**



➤ **INSTALLATION**



➤ **STRAIGHT RUN PIPING REQUIREMENT**



**CONTENTS OF PORTABLE ULTRASONIC FLOWMETER KIT**



**OTHER ACCESSORIES**



Measuring Tape



Longer signal cable



Thickness gauge



2G SD card

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

**You also need to provide the following information:**

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

**➤ Model Selection Guide**

| <b>Alsonic-DHL</b>   |           |           |           |           |  |                     |
|--|-----------|-----------|-----------|-----------|--|---------------------|
| Example : Alsonic-DHL-DTS-C1-DL  |           |           |           |           |  |                     |
| <b>Alsonic-</b>  | <b>**</b> | <b>**</b> | <b>**</b> | <b>**</b> |  | <b>Description</b>  |
| Handheld DHL<br>Basic Model, Including:<br>* Alsonic-DHL Handheld * 1 set<br>* Power Adapter (110-240 V <sub>AC</sub> , 50/60Hz) * 1 set<br>* 4-20mA cable * 1 set<br>* Waterproof Carrying Case | DHL       |           |           |           |  | Portable Flowmeter  |
| No transducers required  |           | NTS       |           |           |  | Transducers         |
| Standard transducers, 1" ~ 48" (25 ~ 1200 mm)  |           | DTS       |           |           |  |                     |
| No cable needed  |           |           | NC        |           |  | Signal Cable Length |
| 5 m length, 2 Cables   |           |           | C1        |           |  |                     |
| 10 m length, 2 Cables  |           |           | C2        |           |  |                     |
| 15 m length, 2 Cables  |           |           | C3        |           |  |                     |
| None option  |           |           |           | NN        |  | Option              |
| 2Gb SD card  |           |           |           | DL        |  |                     |
| Extra signal cable; 10m * 2  |           |           |           | Cable     |  |                     |
| Digital thickness gauge  |           |           |           | TT        |  |                     |