

## GENERAL

THE SMARTMEASUREMENT ALSONICEG is a fixed-mount, transit-time ultrasonic flow and BTU meter, with clamp-on transducers for non-invasive liquid flow measurement. Our microprocessor based, user friendly, field programmable flow and energy measurement technique creates no interruption of the process flow and provides for all installation costs.

## FEATURES

- 4 line LCD display with flowrate, totalizer & diagnostics
- Stores up 64 Day/month's totalizer daily values
- Batch control function
- Temperatures of up to (230°F) 110°C
- Transducers for pipe size from 1" ~ 48" (25 ~ 1200mm)
- Available with clamp on or insertion
- High accuracy of  $\pm 1\%$  of reading
- Transducers include magnetic insert, for installation on metal pipe without mounting belt
- Data logger function; includes date, totalizer, signal condition & diagnostic code status
- Response time of less than 1 second



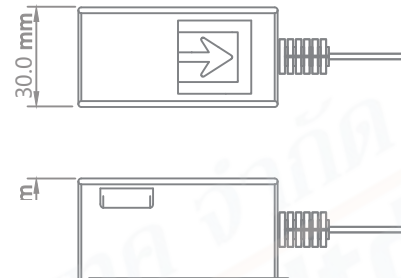
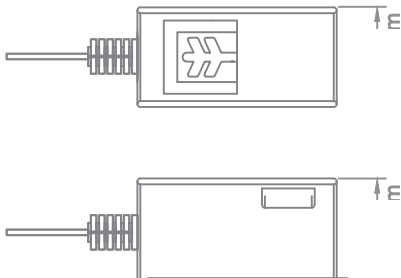
## SPECIFICATIONS

- |                        |   |                        |  |
|------------------------|---|------------------------|--|
| • Measuring Principle: | Transit time ultrasonic   | • Response Time:       | Less than 1 second   |
| • Pipe sizes:          | SC1: 1" ~ 31" (25mm ~ 800 mm)<br>SC2: 20" ~ 48" (500 mm ~ 1200 mm)                          | • Flow Velocity:       | 1 ~ 33ft/s (0.3 ~ 10m/s)   |
| • Pipe Material:       | Cast Iron, Stainless Steel, Ductile Iron, Copper, PVC, Aluminum, Asbestos, Fiberglass, etc. | • Resolution:          | 0.0001m/s  |
| • Display:             | 4 line LCD with backlight0  | • Ambient Temperature: | -4 ~ 140°F (-20 ~ +60°C)   |
| Flowrate               | 5 digits with decimal point   | • Mounting:            | Wall mounting, panel, local or DIN Rail                              |
| Totalizer              | 8 digits, forward, reverse & net values   | • Max. Cable Length:   | 330' (100m)  |
| Engineering Units      | Million Gallon, Cubic Feet, US Barrels, Imperial Barrels, Oil Barrel                        | • Power Consumption:   | Less than 2W   |
| Time Units             | second, minute, hour, day   | • Power Supply:        | Std - 24V <sub>DC</sub><br>Opt - 90 ~ 245V <sub>AC</sub>             |
| Other                  | Velocity, Date, time, signal condition  | • Data Storage:        | Operation parameters, totalization, date are stored by EEPROM        |
| • Accuracy:            | Std - $\pm 1\%$ of reading (0.3 ~ 5 m/s)<br>$\pm 5\%$ of reading (0.1 ~ 10m/s)              | • Power output:        | 4-20 mA, 0-20 mA   |
| • Repeatability:       | $\pm 1\%$ of reading  | • Output:              | 1-9999 Hz  |
| • Communication:       | RS485/Modbus  | • Data Logger:         | 16 GSD card, 64 data points including flowrate, totalizer time, data |
| • Keypad:              | 16 key with tactile action  | • Alarm:               | High/Low with buzzer as option                                       |
|                        |   | • Protection:          | Converter - IP65; Sensor - IP68                                      |

## ■ STANDARD TRANSDUCER

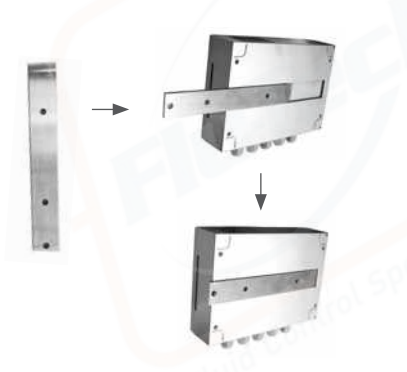
Fluid Temperature: -22 ~ 167°F (-30 ~ +75°C)  
-22 ~ 230°F (-30 ~ +110°C)

Accuracy: 1%



Model	SC1 (Medium Size)	SC2 (Large Size)
Pipe Size	1" ~ 32" (DN25 ~ 800mm)	20" ~ 48" (DN500 ~ 1200mm)

## ■ PRODUCT ACCESSORIES



mounting plate



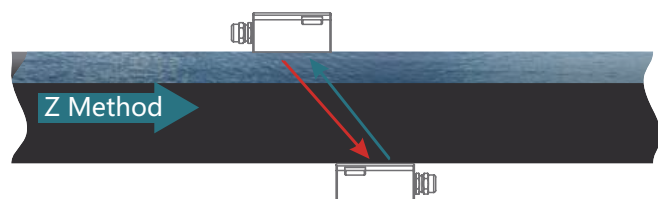
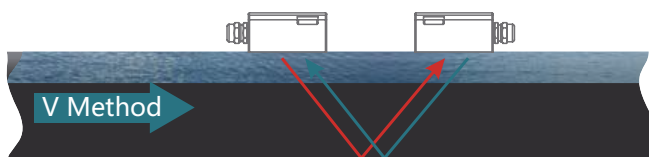
Cable



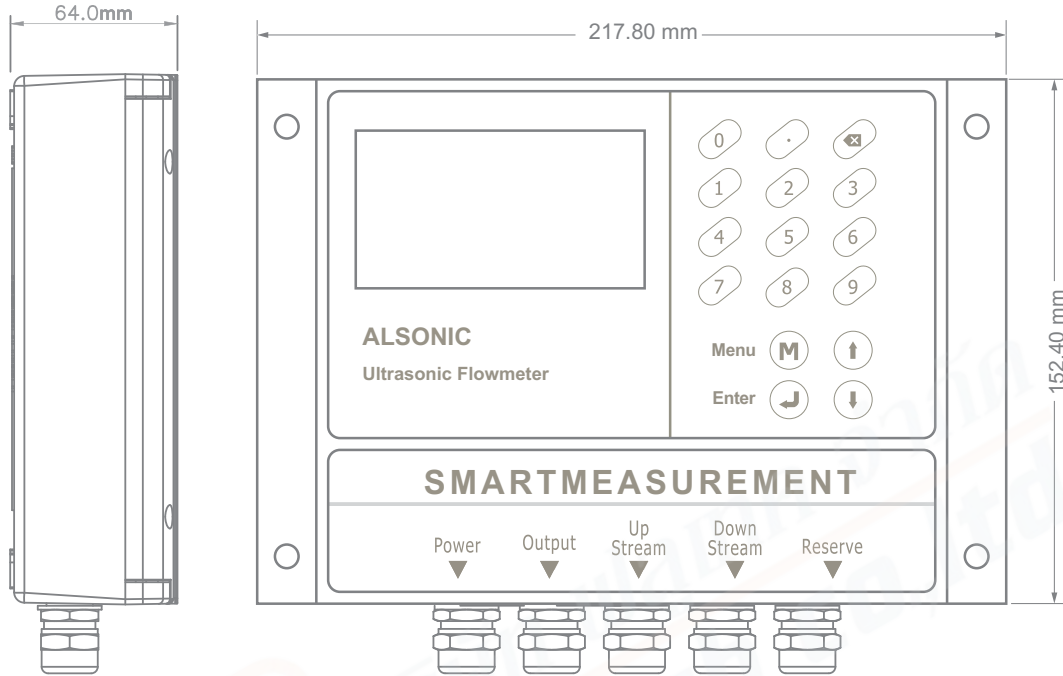
Worm Gear Clamp

## ■ MEASURING PRINCIPLE

The ultrasonic signal from the transducer is transmitted and received through the moving liquid. The difference between the upstream and downstream transit time, is directly proportional to Fluid Velocity, used to calculate flow rate and velocity.

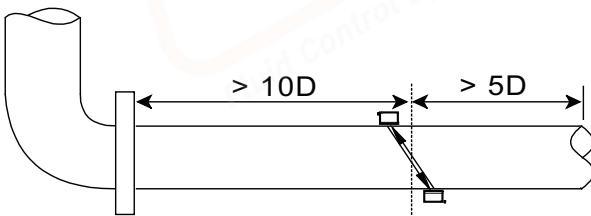


■ DIMENSION

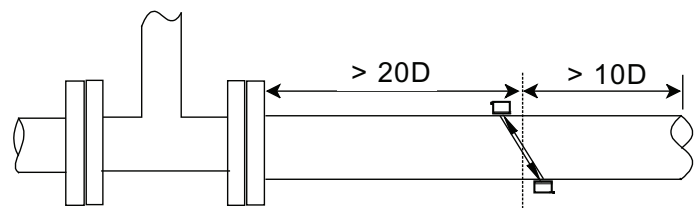


<b>Size:</b>	8.58" x 5.98" x 2.52" (218*152*64mm)	<b>Outputs:</b>	Isolated RS232/RS485 output 1 channel OCT, 1 channel 4 ~ 20mA output 1 relay output, SD card data logger (optional)
<b>Setting</b>	Flow unit, zero, clear total flow, K- factor	<b>Protection:</b>	IP65
<b>Parameters:</b>	Passwords, data linearity factor		
<b>Inputs:</b>	2 channel 4 ~ 20 mA analog input (heat/energy) Three-wire PT100 resistor input (heat/energy)		

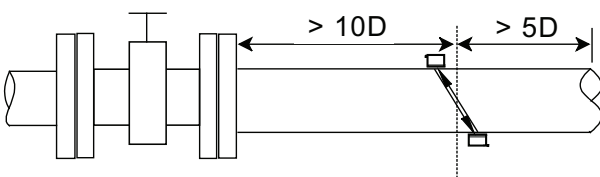
**ELBOW 90°**



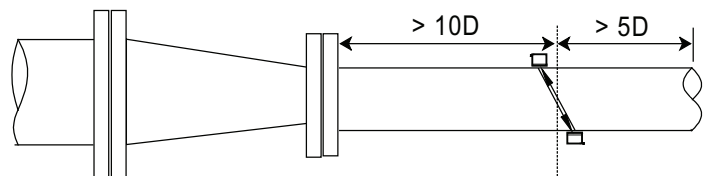
**Tee Fitting**



**Valve**



**Reducer**



<b>TYPE OF FLUID</b>	Please provide the name of your fluid, including operating density and viscosity
<b>FULL-SCALE FLOW RATE</b>	Please provide the max, min and nominal flow rates.
<b>LINE SIZE</b>	Please provide the line size
<b>PRESSURE &amp; TEMPERATURE</b>	We will calibrate your flow meter as close to your operating conditions as possible

ALSONIC-EG SERIES							
EXAMPLE: ALSONIC-EG-SC1-C1-NN							
ALSONIC	**	**	**	**	DESCRIPTION		
Standard wall mount energy meter with display, 4-20mA, RS485	EG						
Middle clamp sensor (-30~+75°C), 25~800 mm		SC1				Transducers	
Large clamp sensor (-30~+75°C), 500~1200 mm		SC2					
High Temperature clamp sensor (-30~+110°C), 25~500 mm		HC1					
Standard insertion sensor (-30~+110°C), 80~1200 mm		IC1					
304SS inline sensor (-30~+110°C) with pipe size **		DN					
Other transducer		**					
No Cables				NC		Signal Cable Length	
5m x 2 Cables				C1			
**m cables up to +75 deg C				C**			
**m cables up to +110 deg C				H**			
Standard power supply : 10~36V <sub>DC</sub> /1A.					DC	Power Supply	
Option power supply: 90~245V <sub>AC</sub> , 50/60Hz					AC		
None option						NN	Options
Worm gear steel mounting belt - please offer line size <DN500						SM	
thickness gauge						TT	
Clamped on PT1000 with 5m cable, a pair						RTD	
Clamped on PT1000 with **m cable, a pair						R**	
Data logger for wall mount						DL	
Ex proof chassis for wall mount transmitter						EX	