



# ALSONIC-FX2

## Ultrasonic Flowmeter

### ALSONIC SERIES

## GENERAL

**THE SMARTMEASUREMENT ALSONICFX2** 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. For BTU/Energy applications both clamp-on and insertion RTDs are available.

## FEATURES

- 3 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 RTDs for BTU/Eenergy applications
- 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



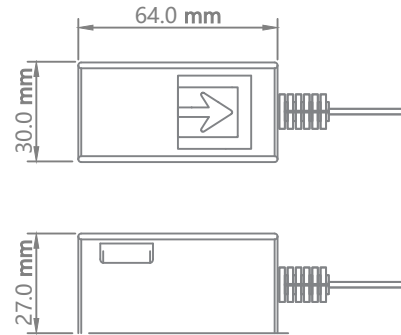
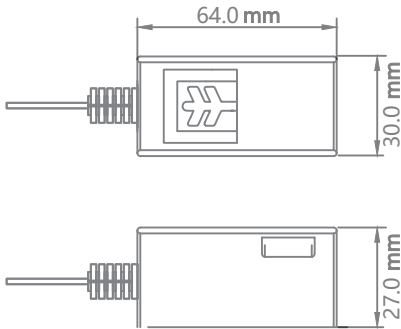
## SPECIFICATIONS

- |                               |   |                               |  |
|-------------------------------|---|-------------------------------|--|
| • <b>Measuring Principle:</b> | Transit time ultrasonic   | • <b>Response Time:</b>       | Less than 1 second   |
| • <b>Pipe sizes:</b>          | M: 1" ~ 31" (25mm ~ 800 mm)<br>L: 20" ~ 47" (500 mm ~ 1200 mm)                              | • <b>Flow Velocity:</b>       | 1 ~ 33ft/s (0.3 ~ 10m/s)   |
| • <b>Pipe Material:</b>       | Cast Iron, Stainless Steel, Ductile Iron, Copper, PVC, Aluminum, Asbestos, Fiberglass, etc. | • <b>Resolution:</b>          | 0.0001m/s  |
| • <b>Display:</b>             | 2 line LCD with backlight   | • <b>Ambient Temperature:</b> | -5 ~ 122°F (-20 ~ +60°C)   |
| <b>Flowrate</b>               | 5 digits with decimal point   | • <b>Mounting:</b>            | Wall mounting, panel, local or DIN Rail                              |
| <b>Totalizer</b>              | 8 digits, forward, reverse & net values   | • <b>Max. Cable Length:</b>   | 330' (100m)  |
| <b>Engineering Units</b>      | Million Gallon, Cubic Feet, US Barrels, Imperial Barrels, Oil Barrel                        | • <b>Power Consumption:</b>   | Less than 2W   |
| <b>Time Units</b>             | second, minute, hour, day   | • <b>Power Supply:</b>        | Std - 24V <sub>DC</sub><br>Opt - 85 ~ 264V <sub>AC</sub> , 50/60 HZ  |
| <b>Other</b>                  | Velocity, Date, time, signal condition  | • <b>Data Storage:</b>        | Operation parameters, totalization, date are stored by EEPROM        |
| • <b>Accuracy:</b>            | Std - $\pm 1\%$ of reading (0.3 ~ 5 m/s)<br>$\pm 5\%$ of reading (0.1 ~ 10m/s)              | • <b>Power output:</b>        | 4-20 mA, 0-20 mA   |
| • <b>Repeatability:</b>       | $\pm 1\%$ of reading  | • <b>Output:</b>              | 1-9999 Hz  |
| • <b>Communication:</b>       | RS485/Modbus  | • <b>Data Logger:</b>         | 16 GSD card, 64 data points including flowrate, totalizer time, data |
| • <b>Keypad:</b>              | 16 key with tactile action  | • <b>Alarm:</b>               | High/Low with buzzer as option                                       |
|                               |   | • <b>Protection:</b>          | Converter - IP65; Sensor - IP68                                      |

## STANDARD TRANSDUCER

Fluid Temperature: -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



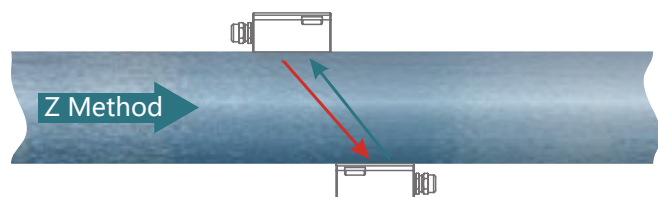
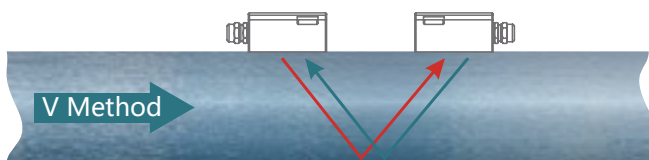
Cable



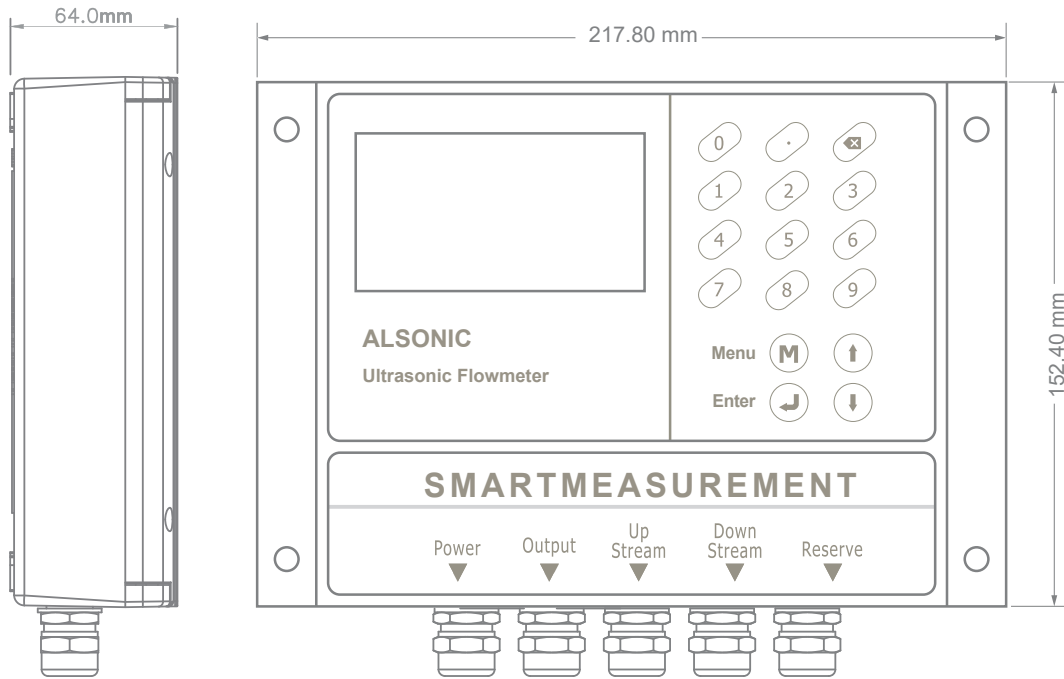
Worm Gear Clamp

## 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.

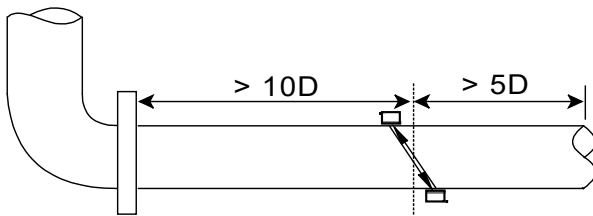


## ■ DIMENSION

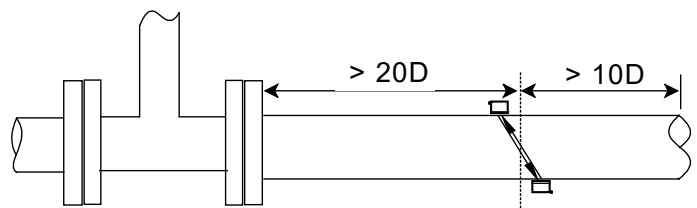


<b>Size:</b>	8.58" x 5.98" x 2.52" (218*152*64mm)	<b>Outputs:</b>	Isolated RS232/RS485 output
<b>Setting</b>	Flow unit, zero, clear total flow, K- factor		1 channel OCT, 1 channel 4 ~ 20mA output
<b>Parameters:</b>	Passwords, data linearity factor		1 relay output, SD card data
<b>Inputs:</b>	2 channel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

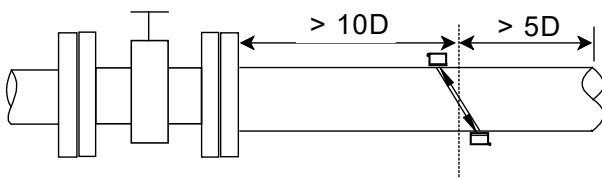
### ELBOW 90°



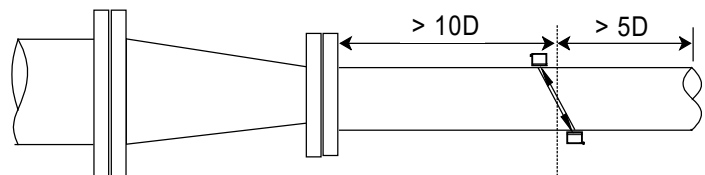
### Tee Fitting



### Valve



### Reducer



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

<b>TYPE OF FLUID</b>
<b>FULL-SCALE FLOW RATE</b>
<b>LINE SIZE</b>
<b>PRESSURE &amp; TEMPERATURE</b>

Please provide the name of your fluid, including operating density and viscosity


Please provide the max, min and nominal flow rates.

Please provide the line size

We will calibrate your flow meter as close to your operating conditions as possible

## ALSONIC-FX SERIES

### EXAMPLE: ALSONIC-FX2-SC1-C1-NN

ALSONIC-FX	**	**	**	**	DESCRIPTION
Wall mount with display and RS485 	2				Flow Meter
Middleclamp sensor(-30 ~ +75°C), 1" ~ 31" (25 ~ 800mm)		SC1			Transducers
Large clamp sensor (-30 ~ +75°C), 20" ~ 48" (500 ~ 1200 mm)		SC2			
High Temperature clamp sensor (-30 ~ +110°C), 1" ~ 20" (25 ~ 500mm)		HC1			
Standard insertion sensor (-30 ~ +110°C), 3" ~ 47" (80 ~ 1200 mm)		IC1			
304SS Inline sensor (-30 ~ +110°C) with pipe size **		DN			
Other transducer		**			
No cable			NC		Signal Cable Length
5M x 2 Cables			C1		
**m cables up to +75°C			C**		
**m cables up to +110°C			H**		
No option				NN	Options
Worm gear steel mounting belt - please offer line size <DN500				SM	
Thickness gauge				TT	
Data logger for wall mount				DL	
Ex proof chassis for wall mount transmitter				EX	

