



ALSONIC-FX2

Ultrasonic Flowmeter

ALSONIC SERIES



GENERAL

THE SMARTMEASUREMENT ALSONICFX2 is a fixed-mount, transit-time ultrasonic flowmeter, with clamp-on transducers for non-invasive liquid flow measurement. Our microprocessor based, user friendly, field programmable flow measurement technique creates no interruption of the process flow and enables very low installation costs.

FEATURES

- 4 line LCD display with flowrate, totalizer & diagnostics
- Stores up 64 Day/month's totalizer daily values
- Temperatures of up to (230°F) 110°C
- Transducers for pipe size from 1/2" ~ 48" (15 ~ 1200mm)
- Available with clamp on or insertion installation options
- High accuracy; $\pm 1\%$ of reading
- Transducers include magnetic insert, for installation on metallic pipe without mounting belt
- Data logger function; includes date, totalizer, signal condition & diagnostic code status
- Response time of less than 1 second



SPECIFICATIONS

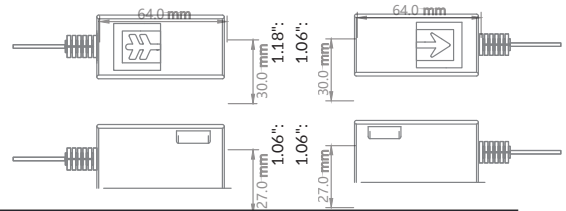
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|------------------------|---|------------------------|--|
| • Measuring Principle: | Transit time ultrasonic | • Keypad: | 16 key with tactile action |
| • Pipe sizes: | SC1: 1" ~ 31" (25mm ~ 800 mm)
SC2: 20" ~ 48" (500 mm ~ 1200 mm)
MC0: 1/2" ~ 1" (15mm ~ 25 mm) | • Response Time: | Less than 1 second |
| • Pipe Material: | Cast Iron, Stainless Steel, Ductile Iron,
Copper, PVC, Aluminum,
Asbestos, Fiberglass | • Flow Velocity: | 1 ~ 33ft/s (0.3 ~ 10m/s) |
| • Display: | 4 line LCD with backlight | • Resolution: | 0.0001m/s |
| Flow rate: | 5 digits with decimal point | • Ambient Temperature: | -4 ~ 140°F (-20 ~ +60°C) |
| Totalizer: | 8 digits, forward, reverse & net values | • Mounting: | Wall mounting, panel |
| Volumetric Units: | Million Gallon, Cubic Feet, US
Barrels, Imperial Barrels, Oil Barrel | • Max. Cable Length: | 330' (100m) |
| Time Units: | Seconds, minutes, hours, days | • Power Consumption: | Less than 2W |
| Other: | Velocity, date, time, signal condition | • Power Supply: | Std - 24V _{DC}
Opt - 90 ~ 245V _{AC} |
| • Accuracy: | Std - $\pm 1\%$ of reading (0.3 ~ 5 m/s)
$\pm 5\%$ of reading (0.1 ~ 10m/s) | • Data Storage: | Operation parameters, totalization,
date are stored by EEPROM |
| • Repeatability: | $\pm 1\%$ of reading | • Analog output: | 4~20mA, max load 750Ω |
| • Communication: | RS485/Modbus | • Pulse output: | 0~10KHz |
| | | • Data Logger: | 16 Gb SD card, 64 data points |
| | | • Alarm: | High/Low with optional buzzer |
| | | • Protection: | Converter - IP65; Sensor - IP68 |

250":

250":

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)

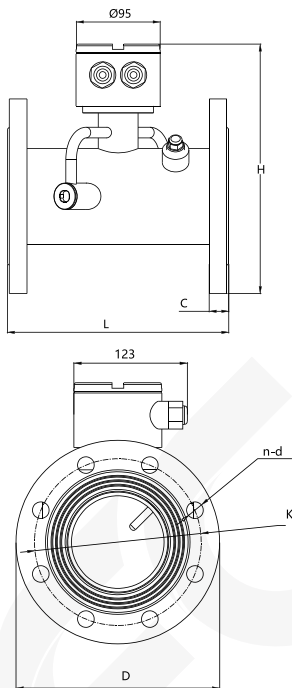
SMALL TRANSDUCER

Fluid Temperature: 32°F ~ 140°F (0°C ~ +60°C)
 Accuracy: ±1%



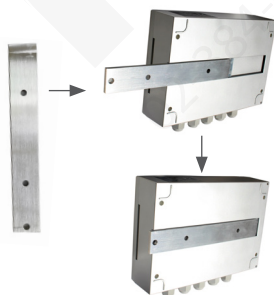
Size	MC0 (Mounting track Small)
Pipe Size	1/2" ~ 1" (DN15 ~ DN25)

INLINE TRANSDUCER (std SS# 304)



Model	L (mm)	H (mm)	D (mm)	K (mm)	C (mm)	n-d (mm)	Pressure (MPa)
DN50	200	223	165	125	20	4-ø-18	1.6MPa
DN65	200	247	185	145	20	4-ø-18	
DN80	250	262	200	160	20	8-ø-18	
DN100	250	283	220	180	22	8-ø-18	
DN125	280	311	250	210	22	8-ø-18	
DN150	300	342	285	240	24	8-ø-22	
DN200	350	401	340	295	24	12-ø-22	
DN250	450	461	405	355	26	12-ø-26	
DN300	500	514	460	410	28	12-ø-26	
DN350	550	588	520	470	35	16-ø-26	
DN400	600	643	580	525	38	16-ø-30	0.6MPa
DN450	700	700	640	585	42	20-ø-30	
DN500	800	762	715	650	46	20-ø-33	
DN600	1000	875	840	770	52	20-ø-36	
DN700	1000		860	810	40	24-ø-26	
DN800	1200		975	920	44	24-ø-30	
DN900	1200		1075	1020	48	24-ø-30	
DN1000	1200		1175	1120	52	28-ø-30	
DN1200	1200		1405	1340	60	32-ø-33	

PRODUCT ACCESSORIES



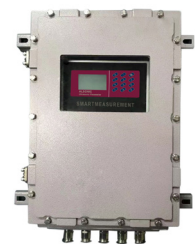
Mounting plate



Transducer with extra cable

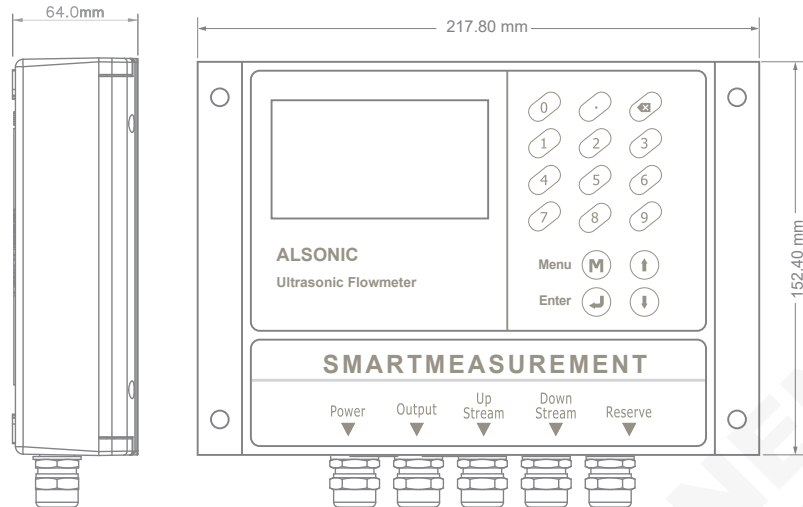


Worm Gear Clamp



Exd Explosion Enclosure (optional)

■ DIMENSION



Size: 8.58" x 5.98" x 2.52" (218*152*64mm)
Setting: Flow unit, zero, clear total flow, K- factor
Parameters: Passwords, data linearity factor
Inputs: 2 channel 4 ~ 20 mA analog input

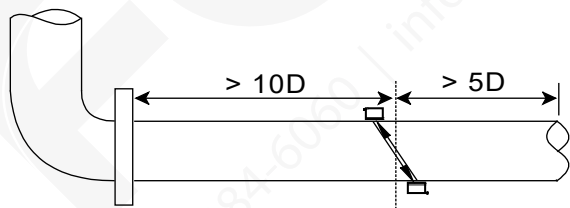
Outputs: Isolated RS232/RS485 output
 1 channel OCT, 1 channel 4 ~ 20mA output
 1 relay output, SD card data
 logger (optional)
Protection: IP65

■ MEASURING PRINCIPLE

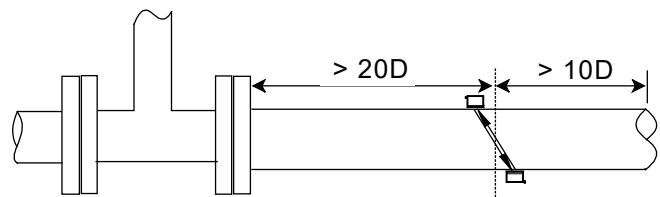
The ultrasonic signal from the transducer is transmitted and received through the moving liquid. The difference between the upstream and downstream transit time which is directly proportional to fluid velocity is used to calculate flow rate and velocity.



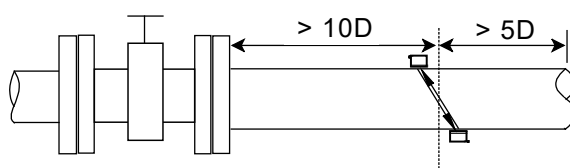
ELBOW 90°



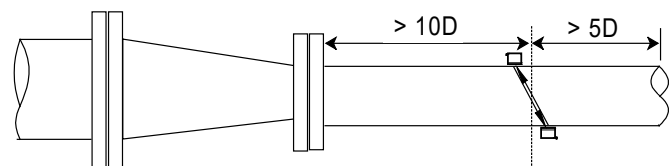
Tee Fitting



Valve



Reducer



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

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

ALSONIC-FX SERIES							
EXAMPLE: ALSONIC-FX2-SC1-C1-NN							
ALSONIC	**	**	**	**	DESCRIPTION		
Standard wall mount flow meter with display, 4-20mA, RS485	FX-2					Flow Meter	
Medium clamp sensor (-30~+75°C), 1"~32" (25~800 mm)		SC1				Transducers	
Large clamp sensor (-30~+75°C), 20"~48" (500~1200 mm)		SC2					
High Temperature clamp sensor (-30~+110°C), 1"~20" (25~500 mm)		HC1					
Standard insertion sensor (-30~+110°C), 3"~48" (80~1200 mm)		IC1					
Mounting track small clamp sensor (0~+60°C), ½"~1" (15~25 mm), 2MHz		MCO					
SS# 304 inline sensor (-30~+110°C) with pipe size **		DN					
Other transducer		**					
No Cables				NC		Signal Cable Length	
9m x 2 Cables				C1			
15m x 2 Cables				C15			
25m x 2 Cables				C25			
m cables up to +75 deg C				C			
m cables up to +110 deg C				H			
Standard power supply : 10~36V _{DC} /1A.					DC	Power Supply	
Option power supply: 90~245V _{AC} , 50/60Hz					AC		
None option						NN	Options
Worm gear steel mounting belt - please offer line size <DN500						SM	
Thickness gauge						TT	
Data logger for wall mount display						DL	
Ex proof enclosure for wall mount transmitter						EX	

