ALSONIC-FX

Ultrasonic Flowmeter

Model Alsonic-FX

GENERAL

ALSONIC-FX series is a fixed-mounted,transit-time ultrasonic flowmeter with clamp-on transducers for non-invasive liquid flow rate measurement. Our microprocessor based,user friendly field programmable flow measurement technique creates no interruption of the process flow and has low instalation costs.

FEATURES

- 2 line LCD display with flowrate, totalizer & diagnostics.
- Stores up 64 Day/months totalzier daily values
- Batch control function
- Wide range velocities of 0.03 ~ ± 105 feet/sec.
- Transducers for pipe sizes ranging from ½" to 240" (13 to 6000 mm)
- High accuracy of ±0.5% of reading.
- Transducers include magnetic device for installation on metal pipe without mounting belt.
- Data logger function includes date, totalizer, & signal condition diagnostic
- Response time less than 1 second.

SPECIFICATION

- Measuring Principle : Transit time difference
- Pipe Size : S Type : ½" ~ 4" (15 mm ~ 100 mm)
  : M Type : 2" ~ 28" (50 mm ~ 700 mm)
  : L Type : 12" ~ 240" (300 mm ~ 6000 mm)]
- Pipe Material : Cast Iron, Stainless Steel, Ductle Iron Copper, PVC, Aluminum, Asbestos Fiberglass… etc.
- Liner Material : Tar Epoxy, Rubber, Mortar, Polypropylene, Polystryal, Ploystryene, Polyester, Ebonite, Polyethylene, Teflon… etc.
- Display : 2 Line LCD with backlight
  Flowrate : 5 digit with decimal point
  Totalizer : 8 digit, Forward, Reverse & Net values.
  Engineering Units : M^3, Liter, US gallon, Imperial gallon, Million gallons, Cubic feet, US Barrels, Imperial barrels, Oil barrels
  Time Units : Second, Minute, Hour, Day.
  Other Parameters : Velocity, Date, Time, Signal condition.
- Accuracy : ± 1% ~ ± 2% of reading (1.5 ~ 100 feet/sec.)
  : ± 0.5% of reading (online calibration)
- Repeatability : ±0.2% of reading
- Keypad : 16 Key with tactile action
- Response Time : Less than 1 second
- Flow Velocity : 0.03 ~ ± 105 feet/sec.
- Resolution : 0.0001 m/s
- Ambient Temperature : -5 ~ 122 °F
- Mounting : wall mounting, panel, local
- Max. Cable Length : 500'
- Power Consumption : Less than 2W
- Power Supply : 90 ~ 260V_{AC} 50/60 Hz
- Data Storage : Operation parameters and totalization date are stored by EEPROM for more than 10 years
- Output : 4-20 mA or 0-20 mA
- Pulse Output : 1- 9999 Hz
- Data Logger : 64 data include flowrate, totalizer, time, date.
- Alarm : High/Low with buzzer
- Communication : RS-232
- Dimensions : 9.25" x 8.07" x 3.75"
- Weight : 3.3 lbs.
- Protection
  Converter : IP65
  Sensor : IP68(Submersible)

SmartMeasurement
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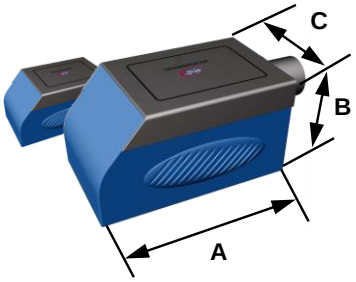
TRANSDUCER SPECIFICATION



• Standard-Transducers

Fluid Temperature : -22 ~ 195 °

Accuracy: ±1%

Model	SCS (Small Size)	SCM (Medium Size)	SCL- (Large Size)
Pipe Size	½" ~ 4"	2" ~ 40"	12" ~ 240"
A×B×C	1.75" x 0.90" x 1.00"	2.50" x 1.25" x 1.38"	3.86" x 1.75" x 1.93"

• Insertion Transducers

Fluid Temperature : -40 ~ 320 °

Accuracy: ±1%

Model	SIS (Standard)	SIL (Large Size)
Pipe Size	3" ~ 40"	12" ~ 240"

• High Temperature Transducers

Fluid Temperature : -22 ~ 320 °

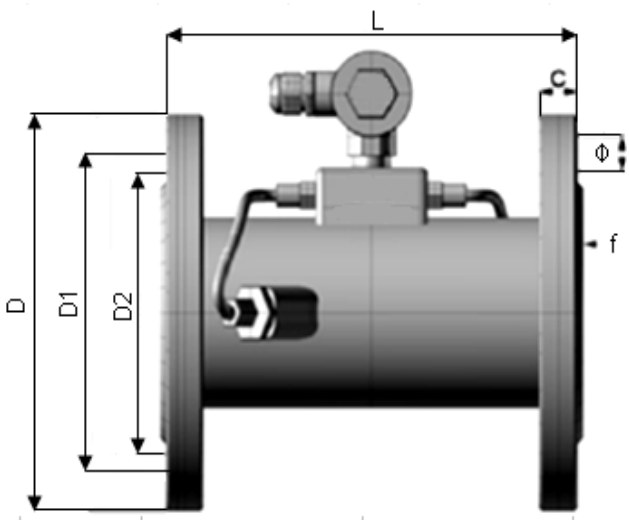
Accuracy: ±1%

Model	STS (Small Size)	SHL (Medium Size)
Pipe Size	½" ~ 4"	2" ~ 40"

• Inline Type

Fluid Temperature : -40 ~ 320 °

Accuracy: ±0.5%



Note:all dimensions are in inches unless otherwise stated

Pipe Size	L	D	D1	Φ×n	D2	f	C
2"	7.87	6.50	4.92	0.71×4	3.90	0.12	0.79
2 ½"	7.87	7.28	5.71	0.71×4	4.65	0.12	0.79
3"	8.86	7.87	6.30	0.71×4	5.20	0.12	0.79
4"	9.84	8.66	7.09	0.71×8	6.14	0.12	0.87
5"	9.84	9.84	8.27	0.71×8	7.24	0.12	0.87
6"	11.81	11.22	9.45	0.87×8	8.31	0.12	0.94
8"	13.78	13.39	11.61	0.87×12	10.47	0.12	0.94
10"	17.72	15.94	13.98	1.00×12	12.56	0.12	1.02
12"	19.69	18.11	16.14	1.00×12	14.57	0.16	1.10
14"	21.65	20.47	18.50	1.00×12	16.89	0.16	1.18
16"	23.62	22.83	20.67	1.00×16	18.90	0.16	1.26
18"	27.56	25.20	23.03	1.18×20	21.57	0.16	1.34
20"	31.50	28.15	25.59	1.30×20	23.98	0.16	1.42
24"	39.37	33.07	30.31	1.42×20	28.35	0.20	1.50
28"	43.31	35.83	33.07	1.42×24	31.26	0.20	1.57
32"	47.24	40.35	37.40	1.54×24	35.47	0.20	1.65
36"	51.18	44.29	41.34	1.54×28	39.41	0.20	1.73
40"	55.12	49.41	46.06	1.65×28	43.78	0.20	1.81

OTHER ACCESSORIES

Measuring Tape

Stretcher

Silicone grease

Thinkness gague

Cable

DIMENSIONS

Wall Mount

cast aluminium

IP65

Size: 7.08" x 6.70" x 22.05"

Setting data: flow unit, zero, clear total flow, K-factor, passwords, date, linearity factor

Input: 3 channel 4-20mA analog input, 2 channel resistance signal input

Output: Isolation RS232/RS485 output, 2 channel isolation OCT output, 1 channel isolation 4-20mA output (tow-wire)

Panel Mount

Size: 6.50" x 6.30" x 3.15"

Setting data: flow unit, zero, clear total flow, K-factor, passwords, date, linearity factor

Input: 3 channel 4-20mA analog input, 2 channel resistance signal input

Output: Isolation RS232/RS485 output, 2 channel isolation OCT output, 1 channel isolation 4-20mA output (tow-wire)

Mini

Size: 4.17" x 1.88" x 1.34"

Display: 1. state, 2. error time, 3. temperature different, 4. temperature, 5. energe flow, 6. total flow, 7. flow rate, 8. positive total flow

Output: RS485

Protection: IP68

Compact

Display: 1. state, 2. error time, 3. temperature different, 4. temperature, 5. energe flow, 6. total flow, 7. flow rate, 8. flow rate

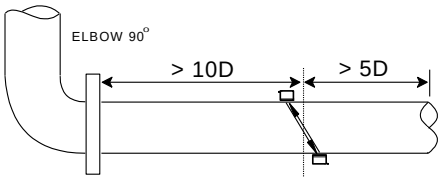
Size: 3.78" x 3.78" x 5.08"

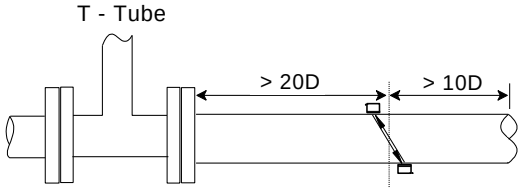
Input: 3 channel 4-20mA analog input, 2 channel resistance signal input

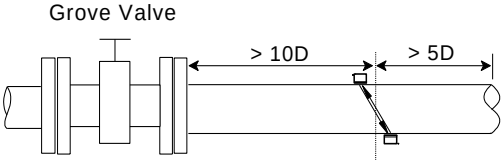
Output: Isolation RS232/RS485 output, 2 channel isolation OCT output, 1 channel isolation 4-20mA output (tow-wire)

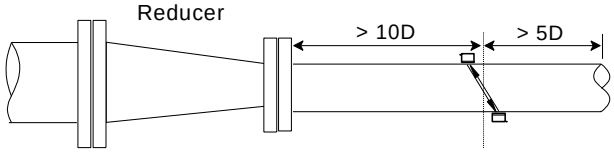
Protection: IP68

STRAIGHT RUN PIPING REQUIREMENT

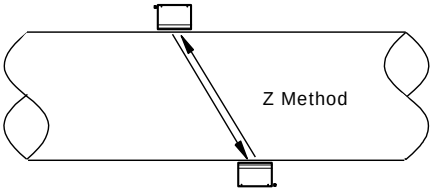


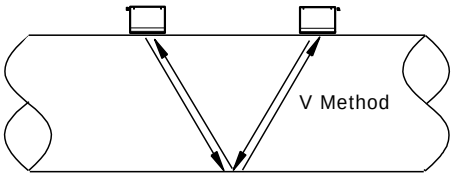






INSTALLATION





**** Please contact your local SMC 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**
Line Size	**Nominal pipe size and sensor connection type (insertion,clamp, etc..)**
Process Pressure and Temperature	**We will calibrate your flowmeter as close to your operating conditions as possible**
Type of Electronics	**Output and installation type (compact, wall mount, panel mount,etc..)**
Pipe Material	**Please provide the name of your pipe material (Copper, PVC, black iron, etc.)**

Model Selection Guide

Alsonic-FX

Example 1: Alsonic-FX-compact-SCS-05-P1

Alsonic-FX-	**	**	**	**	**		Description
Compact type with display and RS485 	MIF						Flow meter
Compact-multichannel with display,RS232/RS485,OCT output,4-20mA output 	CPF						
Wall mount with display, mulitchanel input/outputs 	WLF						
Panel mount with display, multi-channel input/output 	PMF						
Small clamp sensor, ½" - 4" (15 - 100mm)		SCS					Transducers
Medium clamp sensor, 2" - 40" (50 - 1000mm)		SCM					
Large clamp sensor, 12" - 240" (300 ~ 6000 mm)		SCL					
High Temp. clamp sensor; -22-320 °F, ½: - 4" (15 - 100 mm)		SHS					
High Temp. clamp sensor; -22-320 °F, 2" - 40" (50 - 1000mm		SHL					
Standard insertion sensor		SIS					
Long insertion sensor		SIL					
Inline sensor with pipe size **"		SN-**"					
No Cables			NC				Signal Cable Length
15' (5m), 2 Cables			C1				
30' (10m), 2 Cables			C2				
45' (15m), 2 Cables			C3				
Wall mount transmitter 				TW			Transmitter
Panel mount transmitter 				TP			
No transmitter				NN			
Thinkness gague					TT		Options