

FLOWSONIC ULTRASONIC FLOWMETERS

FS-300H/FS-301SW/FS-400L SERIES FLOWMETERS



SPECIFICATIONS

- Flowsonic flowmeters with Transit-Time operation feature have 3 different models: FS-300H / Hand Type, FS-301SW / Panel type indicator and FS-400L / Local display.
- Flowsonic Clamp-On flowmeters can be used in pipelines in different materials such as steel, stainless steel, casting, cement, PVC, aluminum.
- Transit-time flowmeters are used for pure liquids, solid warfare and not containing much air, water, oil, diesel, chemical liquids,
- They can be used in the measurement of liquid liquids such as food, solvent.
- FS-300H is Portable Model and Clamp-On / Pipe-top type. FS-400L is a model with local indicator and it is the model with In-Line / Pipeline Mounted Flange connection sensor
- FS-301SW Panel type indicator model is available with both Clamp-On and In-Line sensors.

APPLICATIONS

- Ultrasonic flowmeters are primarily used in flow measurement applications in systems where the flow in closed pipelines is desired to be measured over the pipe without cutting the pipeline or where the installation place is not sufficient for a normal flow meter,
- Flows in multiple pipelines in applications that require mobile control at certain times,
- In applications where aggressive liquids, high pressure and high temperature flows in pipelines must be measured,
- In applications where the flow rate information measured at certain time intervals is recorded in the memory as hour / day / month and this information is used.

FLOWSONIC ULTRASONIC FLOWMETERS

Flowsonic Ultrasonic Flowmeters are economical and easily assembled flowmeters that operate according to the Transit-Time measurement principle, generally used in the measurement of pure water and industrial liquids, and do not make any pressure drop.

Flowsonic Clamp-On type Ultrasonic flowmeters, measurements can be made in pipes between DN15-DN6000 (depending on sensors). Standard sensors are -20°C / $+90^{\circ}\text{C}$ and special sensors are -30°C / $+160^{\circ}\text{C}$ and have IP68 protection class.

Flanged sensor body in In-Line type models; Cast Steel / SS 304 or SS 316 can be chosen. Standard sensors; -20°C / $+120^{\circ}\text{C}$ and have IP67 / IP68 protection class.

Flowsonic Ultrasonic flowmeters have 3 different models listed below according to their application locations.

ULTRASONIC FLOWMETER TYPES



FS-300H Series / Portable Hand Held Ultrasonic Flowmeters

- S-300 H is a hand-held, portable measuring Clamp-On type flow meter.
- Before each measurement, the necessary settings are entered into the Hand Terminal to reach the required measurement precision, after that the measurement is made.
- With 3 different sized sensors, it can measure over pipes in diameters from DN15 to DN6000 and in different structures.
- It saves the measured values in the data logger in its memory and can be transferred to the PC / laptop later.
- It has a working life of at least 12 hours with a rechargeable battery.



FS-301SW Series / Wall Mount Ultrasonic Flowmeters

- FS-301 Wall Mount ultrasonic flowmeters with both Clamp-on sensors (2 sensors mounted on the pipe) and In-Line type sensors
- It has 2 different mounting options as Flanged sensor connected to the pipeline. Wall Mount indicator has IP67 protection class.
- Clamp-On type has 3 different sensor sizes according to different pipe diameters. (S-M-L)



FS-400L Series / Local Indication Ultrasonic Flowmeters

- FS-400L model ultrasonic flowmeters are In-Line type, it is mounted on the pipeline with its flanged sensor. In this way, the customer does not need to make any calibrations or adjustments.
- The protection class of this model ultrasonic flowmeters is IP68.
- It also has pulse and 4-20mA outputs.
- Carbon steel or SS 304 material can be selected for the body material of these model flow meters.

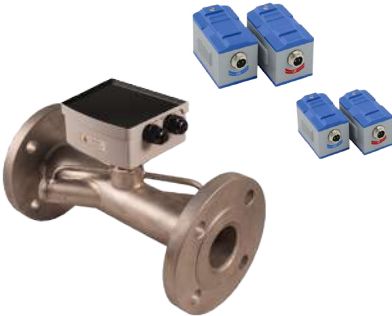
TECHNICAL SPECIFICATIONS



REGISTER SPECIFICATIONS

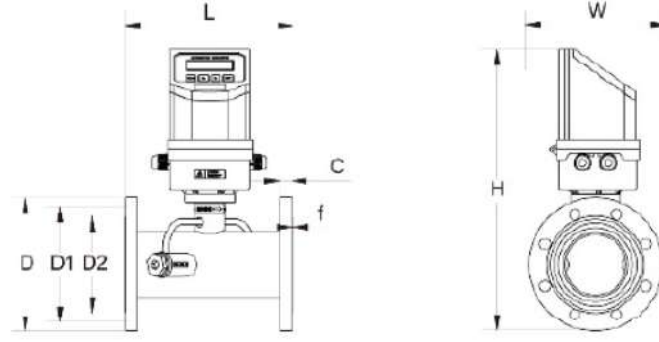
Models	FS-300H	FS-301SW	FS-400L
Measuring System	Transit Time		
Register Type	Handheld	Wall Mounted	Local Mounted
Display	LCD		
Display Info	Flowrate / Total		
Velocity	0 -7 m/s		
Accuracy	% 1	% 1	% 0,50
Repeatability	%0,2		
Ambient Temperature	-20°C + 60°C		
Output	OCT	4-20mA / OCT / RELAY	
Data Logger	Var	N/A	N/A
Communication Interface	RS232	RS485	RS485
Protection Class	IP65	IP67	IP68
Supply Power	Rechargeable Lithium Battery	24 VDC / 220 VAC	24 VDC

SENSOR SPECIFICATIONS



	15-6000	15-6000	15-1000
Pipe Diameters Measured (mm)	"S" : 15-100mm "M" : 50-700mm "L" : 300-6000mm	Clamp-On Model "S" : 15-100mm "M" : 50-700mm "L" : 300-6000mm In-Line Model 15-1000mm	In-Line : 15-1000mm
Working Temperature	Standard : -30°C ~ +90°C (Clamp-On) Optional : -30°C ~ +160°C (Clamp-On) Standard : -30°C ~ +120°C (In-Line)		
Protection Class	IP68		
Pressure Class	N/A	N/A	PN10/PN16/PN25
Sensor Material	N/A	N/A	Karbon Çelik / 304 SS

DIMENSIONS



Nominal Diameter (DN)	P/N P	Length L	Width W	Height H	Flange Dimension						
					Outer Diameter D	Bolt Hole Centers D1	Bolt Hole X Quantity X n	Sealing Surface Diameter	Flange Thickness c	f	Bolt Specification
40	1.6	300	150	336	150	110	18x4	84	18	2	M16 x 60
50	1.6	300	165	349	165	125	18x4	99	20	2	M16 x 70
65	1.6	300	185	366	185	145	18x4	118	22	2	M16 x 70
80	1.6	225	200	381	200	160	18x8	132	20	2	M16 x 80
100	1.6	250	220	401	220	180	18x8	156	22	2	M16 x 80
125	1.6	275	250	428	250	210	18x8	184	22	2	M20 x 80
150	1.6	300	285	459	285	240	22x12	211	24	2	M20 x 90
200	1.6	350	340	511	340	295	26x12	266	26	2	M22 x 90
250	1.6	450	405	569	405	355	26x12	319	28	2	M22 x 90
300	1.6	500	460	621	460	410	23x16	370	32	2	M22 x 90
350	1.0	550	500	666	500	460	25x16	428	28	4	M20 x 80
400	1.0	600	565	697	565	515	25x20	482	30	4	M22 x 90
450	1.0	700	615	774	615	565	25x20	532	30	4	M22 x 90
500	1.0	800	670	826	670	620	30x20	585	32	4	M22 x 90
600	1.0	1000	780	931	780	725	25x24	685	36	5	M27 x 110
700	0.6	1100	860	1021	860	810	30x24	775	32	5	M22 x 90
800	0.6	1200	975	1129	975	920	30x24	880	32	5	M27 x 100
900	0.6	1300	1075	1229	1075	1020	30x24	980	34	5	M27 x 100
1000	0.6	1400	1175	1329	1175	1120	30x28	1080	36	5	M27 x 110

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