

ULTRASONIC FLOW METER

Features

- Ultrasonic Measurement using Transit Time Technology
- EMI / EMC Compliant
- Single / Dual / Quad beam technology for precise measurements
- Excellent Long Term Stability and Reliability
- Inline / Hot retractable sensor assembly
- Multiple Outputs : 4 to 20mA, 4 to 20mA with HART, RS 232 & RS 485
- Empty Pipe Indication
- Protection Class : Electronics –IP 66, Flow Tube–IP 68
- No Pressure Drop



Description

Electronet series ASIONIC®-200 is a micro-controller based full bore type Ultrasonic Flow Meter, specially used for various industrial applications. These flow meters accurately measures the flow rate of liquid in closed pipes. Due to its simple & rigid design, the flow meter is an obstruction-less and maintenance free instrument in place of conventional mechanical Flow measuring devices. The system is well suited to most environments. Programming of the flow meter is simple and can be accomplished with 4 keys available on instrument, It provides access to an extensive range of diagnostic information. ELECTRONET manufactures several flow meter consoles to meet the specific requirements of various applications.

Technical Specifications

Media	Sonically Conductive Liquids			
Line Size	50 NB to 2000 NB			
Electronics	1) Integral 2) Remote			
Viscosity	200 cp maximum			
Turbidity	Smaller than 10,000ppm (mg/ltr) with a low level of air bubble content			
Display	LCD Display – 6 digit for Flow Rate & 8 digit for Totalised Flow			
Calibration Range	As per requirement (Factory Calibrated)			
Acoustic Paths	Single, Dual & Four Path			
Accuracy	Line Size	±0.5% of MV	±1% of MV	±2% of MV
	50 to 300NB	Single Path	----	----
	350 to 600NB	Dual Path	Single Path	----
	650 to 2000NB	Four Path	Dual Path	Single Path
Linearity	± 0.5% of M.V.			
Repeatability	± 0.2% of M.V.			
Temperature Coefficient	± 0.05% per °C			
Process Temperature	–20°C to 85°C maximum			
Process Pressure	15 kg/cm ² maximum			
Material of Construction	Flow tube – SS / MS / CS			
Power Supply	1) 230V AC, 50 Hz 2) 24V DC, +20%, –15% / 20 Watts Max.			
Communication Port	RS-485 MODBUS RTU			
Analog Output	4 – 20 mA			
Response Time	Less than 1 Sec.			
Transmitter Enclosure	Die Cast Aluminum IP-66, Flow Tube IP-68			
Certification				

Process Connections	ANSI 150 Flanged (As per table B 16.5)
Operating Conditions	Temperature -20 to 75°C / Humidity 5 to 95% Non Condensing
Data Logging	For 10 Years (Per day 1 Sample) – Optional
Sensor Pair	As per Requirement
Sensor MOC	SS 316
Note :- For process conditions other than above, please consult factory.	

Assembly Overview

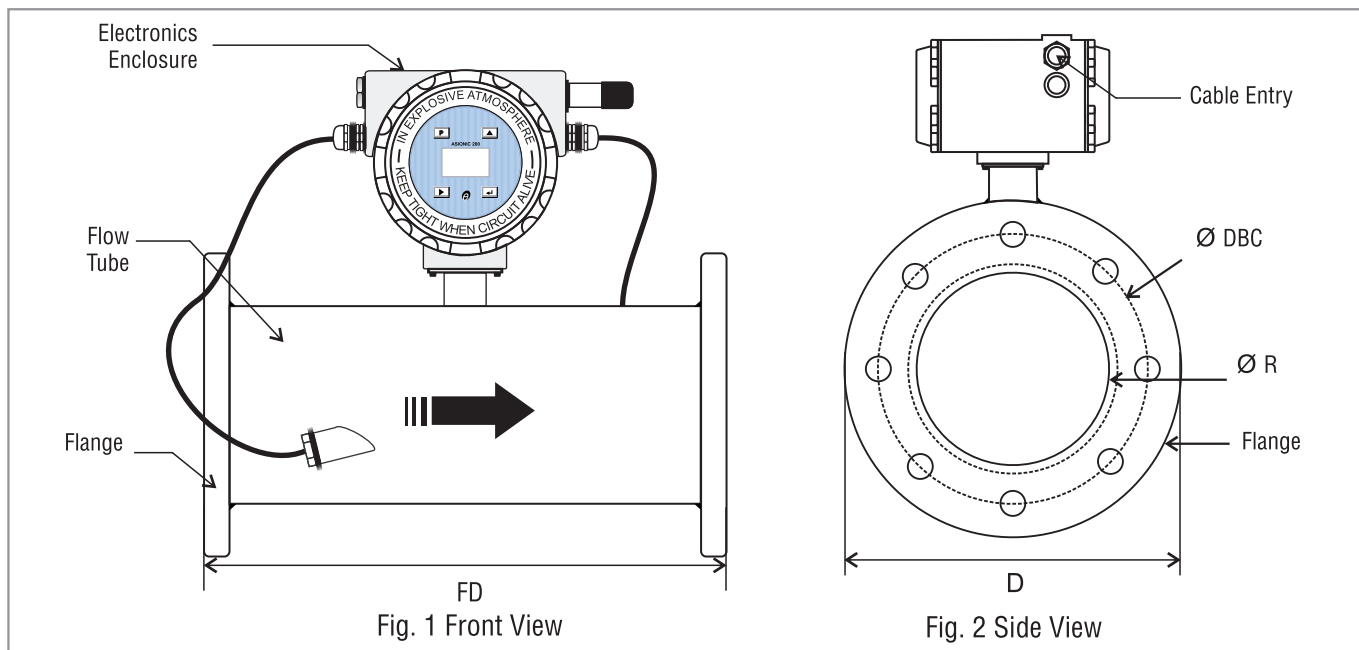


TABLE : Dimensional Details Of Flange, as Per ASA 150 # B-16.5

Refer Drg. Fig.1 & 2

Line Size	Inch	NB	Flange Diameter D (mm)	Diameter of Raised Face R (mm)	Diameter of Bolt Hole Circle DBC (mm)	Diameter of Bolt Hole (mm)	No. of Holes	Thickness of Flange	Flange Distance 'FD'		Flow Range (m³/hr) at 0.3m/s to 6m/s	
									Fixed Inline	Hot Retractable Insertion	Min.	Max.
1/2"		15	88.9	34.9	60.3	15.9	4	11.1	200	–	0.19	3.817
1"		25	107.9	50.8	79.4	15.9	4	14.3	200	–	0.53	10.602
1 1/2"		40	127.0	73	98.4	15.9	4	17.5	250	–	1.35	27.143
2"		50	152.4	92.1	120.6	19.0	4	19.0	300	490	2.12	42.4115
2 1/2"		65	177.8	104.8	139.7	19.0	4	22.2	350	510	3.58	71.675
3"		80	190.5	127.0	152.4	19.0	4	23.8	350	530	5.42	108.573
4"		100	228.5	157.2	190.5	19.0	8	23.8	360	560	8.48	169.646
5"		125	254.0	185.7	215.9	22.2	8	23.8	400	580	13.25	265.071
6"		150	279.4	215.9	241.3	22.2	8	25.4	420	610	19.085	381.703
8"		200	342.9	269.9	298.4	22.2	8	28.6	470	670	33.929	678.584
10"		250	406.4	323.8	361.9	25.4	12	30.2	550	730	53.014	1060.28
12"		300	482.6	381.0	431.8	25.4	12	31.8	620	780	76.340	1526.81
14"		350	533.4	412.7	476.2	28.6	12	34.9	680	820	103.908	2078.16
16"		400	596.9	469.9	539.7	28.6	16	36.5	750	880	135.716	2714.33
18"		450	635.0	533.4	577.8	31.7	16	39.7	800	930	171.766	3435.33
20"		500	698.5	584.2	635.0	31.7	20	42.9	870	990	212.057	4241.15
24"		600	812.8	692.1	749.3	34.9	20	47.6	1000	1100	305.362	6107.25

Note : Flange to flange distance (FD) Tolerance : 1) 1/2"(15NB) to 6"(150NB) : +/-3mm 2) 8"(200NB) to 24"(600NB) : +/-5mm

- All dimensions are in 'mm'
- For dimensions of line size above 600NB, please consult factory.
- Typical mounting dimensions are for reference only.

- Wet Calibrated on IEC/ISO/EN17025 Accredited Calibration Rig.
- Flow meter should be selected with the help of Nomograph (recommended full scale velocity).
- Flow indication of 6 digit max. up to 999999.

Ordering Information

Sample Order Code : 01A-06A-07A-09B-10C-11A-12A-22A-23B-24B-50B-51Y-53A-54Y-66A-67C-70B-71C-72D-81A-87B

Parameter		Code	Value	
01	Line Size	01A	15 NB	01P 400 NB
		01B	20 NB	01Q 450 NB
		01C	25 NB	01R 500 NB
		01D	32 NB	01S 600 NB
		01E	40 NB	01T 700 NB
		01F	50 NB	01U 800 NB
		01G	65 NB	01V 900 NB
		01H	80 NB	01W 1000 NB
		01I	100 NB	01AA 1100 NB
		01J	125 NB	01AB 1200 NB
		01K	150 NB	01AC 1400 NB
		01L	200 NB	01AD 1500 NB
		01M	250 NB	01AE 1600 NB
		01N	300 NB	01AF 1800 NB
		01O	350 NB	01AG 2000 NB
06	Temperature Range	06A	0 to 100°C	
		06X	Other	
07	Area Classification	07A	Weather Proof	
		07B	Flame Proof	
09	Electronics	09A	Integral	
		09B	Remote	
10	Remote Cable Length	10A	2 Meter	
		10B	5 Meter	
		10C	10 Meter	
		10D	15 Meter	
		10Z	NA	
11	Number of Paths	11A	Single	
		11B	Dual	
		11C	Four	
12	Spool Piece	12A	With Spool Piece	
		12B	Without Spool Piece	
22	MOC Electronics Enclosure	22A	Die Cast Aluminium	
		22B	SS316	
		22C	ABS Plastic	
23	Cable Entry	23A	M20 X 1.5	
		23B	½” NPTF	
		23X	Other	
24	Power Supply	24A	90 – 250 VAC	
		24B	24 VDC	
50	Output 1	50A	4 to 20mA	
		50B	4 to 20mA with HART	
		50Y	None	

Parameter		Code	Value	
51	Output 2	51A	Pulse	
		51B	Freq (o to 1 KHz)	
		51Y	None	
53	Communication Output 1	53A	RS 485	
		53B	RS 232	
		53Y	None	
54	Communication Output 2	54A	GSM	
		54Y	None	
66	Process Connection	66A	Threaded	
		66B	Flanged	
		66E	Tri Clover	
		66Z	NA	
		67	MOC Flange	67A
67B	CS			
67C	SS316			
67D	SS304			
67E	PVC			
70	Flange Standard	67Z	NA	
		70A	ANSI	
		70B	DIN	
		70C	AWWA	
		70X	Other	
71	Flange Rating	70Z	NA	
		71A	ANSI 150	
		71B	ANSI 300	
		71C	ANSI 600	
		71D	DIN 10	
		71E	DIN 16	
		71F	DIN 40	
		71X	Other	
72	MOC Flow Tube	71Z	NA	
		72B	SS304	
		72C	PVC	
		72D	SS316	
		72E	MS	
81	Pressure Rating	72Z	NA	
		81A	0 to 16 Bar	
87	Sensor Construction	81X	Other	
		87A	Fixed Inline	
		87B	Hot Retractable Insertion	
Note : • Due to our continuous product revisions, design specification and model numbers are subject to change without notice.				
• Accuracy defined at Lab Conditions.				
• For other requirement please consult factory. • To be used for industrial applications.				

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