

# FL 104

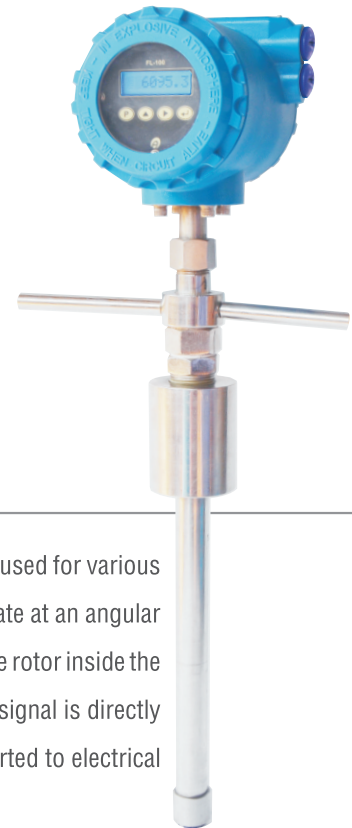
## INSERTION TYPE TURBINE FLOW METER

### Features

- 2 Wire System
- Simple & Cost Effective Construction
- Local Display as 8X1 LCD
- Suitable for Conductive and Non Conductive Liquids
- Insertion Type
- Durable & Versatile
- Maintenance Free
- Protection Class : IP-66

### Description

**E**lectronet series FL-104 are 2 wire insertion type turbine flow transmitter specially used for various industrial applications. The flowing media engages a vaned rotor causing it to rotate at an angular velocity proportional to flow rate. The pick-up coil senses the spinning motion of the rotor inside the pipe & converts it into a pulsating electrical signal. Summation of the pulsating electrical signal is directly related to the total flow. The frequency is linearly proportional to flow rate which is converted to electrical signal 4 – 20 mA .

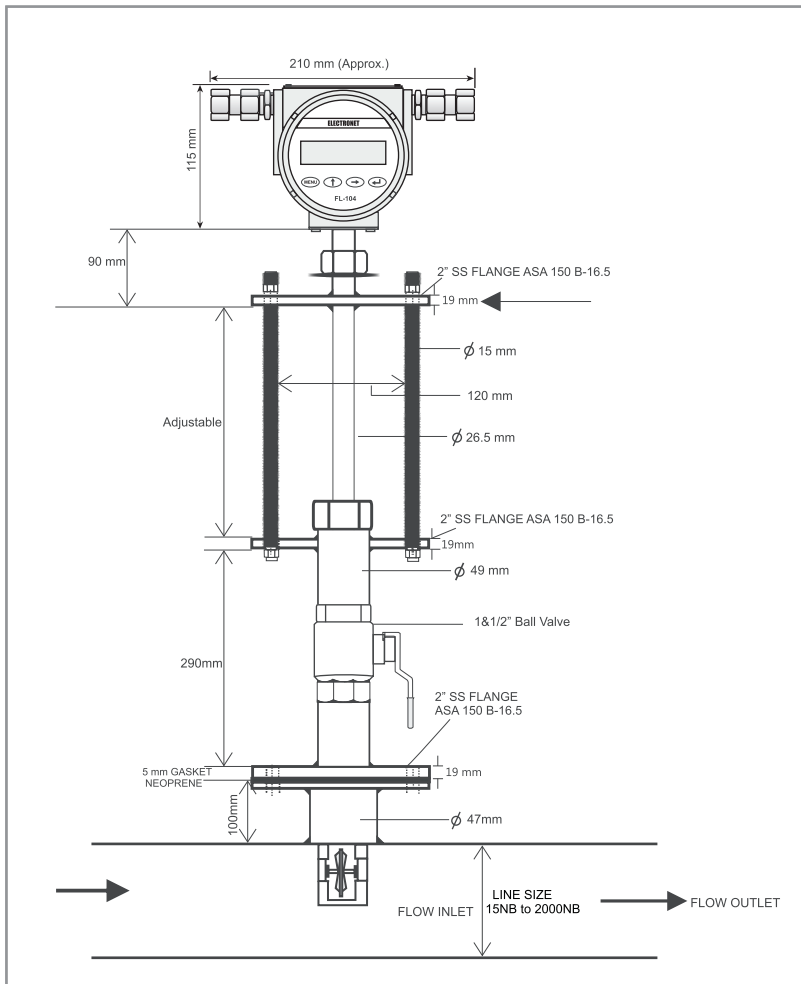


### Technical Specifications

Media	Liquids (Clear)
Line Size	15 NB to 1000NB
Electronics	Integral / Remote
Viscosity	100 cp max
Display	8 X 1LCD display – 4 Digit for Flow Rate and 8 Digit for Totalizer Flow (Flow Rate & Totalised Flow will be visible through Toggle Key)
Type of Output	4 to 20 mA DC, 2 Wire
Calibration Range	As per requirement (Factory Calibrated)
Accuracy	+/- 2% of F. S. @ Velocity > 0.5 m/s
Linearity	+/- 2% of F. S.
Repeatability	+/- 2% of F. S.
Pressure Drop	Approx. 0.28 kg/cm <sup>2</sup> @ max. Flow
Turn Down Ratio	10 : 1 to 100 : 1
Process Temperature	-20 to 120° C max
Temperature Coefficient	+/- 0.01% per ° C
Process Pressure	0 to 10 kg/cm <sup>2</sup> max
Material of construction	1) Bearings – V Jewel
	2) Rotor – SS 410
	3) Shaft – Tungsten Carbide
	4) Body / Support / Flange – SS
	5) Retractable Assembly – MS / SS

Power Supply	24 V DC
Power Consumption	Less than 0.5 VA
Response Time	Less than 100 mSec.
Transmitter Enclosure	Die Cast Aluminum IP 65
Process Connections	1) ASA 150 RF, Flanged as per table B 16.5 2) Threaded (Upto 50 NB)
Mounting	Insertion (Vertical perpendicular to flow)
Operating Conditions	Temperature -20 to 75°C / Humidity 5 to 95% non condensing
Certification	<b>CE</b>
<b>Note :-</b> For process conditions other than above please consult factory.	

Assembly Overview



Line Size		Flow Range		
Inch	NB	0.3m/s (m <sup>3</sup> /hr)	2m/s (m <sup>3</sup> /hr)	10m/s (m <sup>3</sup> /hr)
1/2"	15NB	0.19	3.275	6.36
3/4"	20NB	0.34	5.825	11.31
1"	25NB	0.5301	9.100	17.67
1 1/4"	32NB	0.87	14.91	28.95
1 1/2"	40NB	1.36	23.3	45.24
2"	50NB	2.12	36.4	70.69
2 1/2"	65NB	3.58	61.52	119.46
3"	80NB	5.43	93.19	180.96
4"	100NB	8.48	145.61	282.74
5"	125NB	13.25	227.52	441.79
6"	150NB	19.09	327.63	636.17
8"	200NB	33.93	582.45	1130.97
10"	250NB	53.01	910.08	1767.15
12"	300NB	76.34	1311.01	2544.69
14"	350NB	103.91	1783.61	3463.61
16"	400NB	135.72	2329.80	4523.89
18"	450NB	171.77	2948.66	5725.55
20"	500NB	212.06	3640.32	7068.58
24"	600NB	305.36	5242.06	10178.76
28"	700NB	415.63	7135.02	13854.42
32"	800NB	542.87	9319.22	18095.57
36"	900NB	687.07	11794.44	22902.21
40"	1000NB	848.23	14561.28	28274.33

Ordering Information

Sample Order Code : 01A-07B-09B-10B-15A-16B-22A-23B-49A-66B-67C-70A-71A-75A-82A-83B-94A

Parameter	Code	Value		Parameter	Code	Value			
01	Line Size	01A	15 NB	01M	250 NB	66	Process Connection	66A	Threaded
		01B	20 NB	01N	300 NB			66B	Flanged
		01C	25 NB	01O	350 NB			66E	Tri Clover
		01D	32 NB	01P	400 NB	67	MOC Flange	67C	SS316
		01E	40 NB	01Q	450 NB			67D	SS304
		01F	50 NB	01R	500 NB			67X	Other
		01G	65 NB	01S	600 NB			67Z	NA
		01H	80 NB	01T	700 NB	70	Flange Standard	70A	ANSI
		01I	100 NB	01U	800 NB			70B	DIN
		01J	125 NB	01V	900 NB			70C	AWWA
		01K	150 NB	01W	1000 NB			70X	Other
		01L	200 NB					70Z	NA
07	Area Classification	07A	Weather Proof		71	Flange Rating	71A	ANSI 150	
		07B	Flame Proof				71B	ANSI 300	
09	Electronics	09A	Integral				71C	ANSI 600	
		09B	Remote				71D	DIN 10	
10	Remote Cable Length	10A	2 Meter				71E	DIN 16	
		10B	5 Meter				71F	DIN 40	
		10C	10 Meter				71X	Other	
		10D	15 Meter				71Z	NA	
		10Z	NA		75	MOC Sensor Assembly	75A	SS304	
15	Process Temperature	15A	-20 to 120 °C				75X	Other	
		15X	Other		82	MOC Rotor	82A	SS410	
16	Process Pressure Range	16A	150 psi				82B	17-4PH	
		16B	300 psi				82X	Other	
		16C	600 psi		83	Bearings	83A	TG Sleeve	
		16D	900 psi				83B	V Jewel	
		16X	Other				83X	Other	
22	MOC Electronics Enclosure	22A	Die Cast Aluminium		94	Retractable Assembly	94A	MS	
		22B	SS316				94B	SS	
		22C	ABS Plastic				94Y	None	
23	Cable Entry	23A	M20 X 1.5		<b>Note :</b> <ul style="list-style-type: none"> <li>Due to our continuous product revisions, design specification and model numbers are subject to change without notice.</li> <li>Accuracy defined at Lab Conditions.</li> <li>For other requirement please consult factory.</li> <li>To be used for industrial applications.</li> </ul>				
		23B	½" NPTF						
		23X	Other						
49	Output	49A	4 to 20mA						
		49B	4 to 20mA with HART						
		49Y	None						

Applications

Food Industry	Chemical Industry	Atomic Energy	Manufacturing Industry
Automation Industry	Thermal Power Energy	Process Industry	Water Treatment Industry

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