

FL 204

FOUR WIRE TURBINE FLOW METER WITH LED DISPLAY

Features

- 4 wire system
- Simple & Cost Effective Construction
- Suitable for Conductive and Non-Conductive Liquids
- LED Display
- Batch / High / Low Relay contact output
- Easy Maintenance
- Electronics Protection Class : Weatherproof IP 67 & Flameproof (CMRI IIA IIB Certified)



Description

Electronet series FL-204 are 4 wire turbine flow transmitters 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
Line Size	15 NB to 200 NB
Electronics	Integral (Remote) / Remote
Viscosity	100 cp max
Display	LED Display : 4 Digit for Flow Rate & 8 Digit for Totalised Flow
Pick off Type	Magnetic Sensor
Remote Electronics Cable	15 Meters Max.
Type of Output	1) 4 to 20 mA DC 2) Pulse (Open collector)
Calibration Range	As per requirement (Factory Calibrated)
Accuracy	< ± 0.5% of F. S. ± 5mm /sec for Velocity Range 0.3 m/s to 6 or 12 m/s
Linearity	+/- 0.5% of F. S.
Repeatability	+/- 0.5% of F. S.
Temperature Coefficient	+/- 0.01% Per °C
Pressure Drop	Approx. 0.28 kg/cm ² @ max. Flow
Turn Down Ratio	10 : 1
Process Temperature	-20 to 120 °C max.
Process Pressure	0 to 10 kg/cm ² max
Material of construction	1) Bearings – Tungsten Carbide Sleeve / V Jewel 2) Rotor – SS410 / 17.4 PH 3) Shaft – Tungsten Carbide 4) Body / Support / Flange – SS
Power Supply	24 V DC (+/-10%)
Power Consumption	< 1 VA
Electrical Connection	1) M20 *1.5 F 2) 1/2 Inch NPT F 3) Pluggable Connector
Certification	CE

Response Time	< 100 mSec
Electronic Protection Class	Field Mount Weather Proof IP-67 Flameproof (CMRI IIA IIB Certified)
Process Connections	1) ASA 150 RF, flanged as per table B 16.5 (15 to 200 NB) 2) Threaded (15 to 50 NB) 3) SS Tri-Clover (15 to 100 NB)
Mounting	In-Line Horizontal / Vertical
Ambient Conditions	Temperature -20 to 120°C / Humidity 5 to 95% non condensing
Alarm or Relay Output	1 Relay Output, 2 Relay Outputs (Max. 2 Alarms or 2 Relays)

Assembly Overview

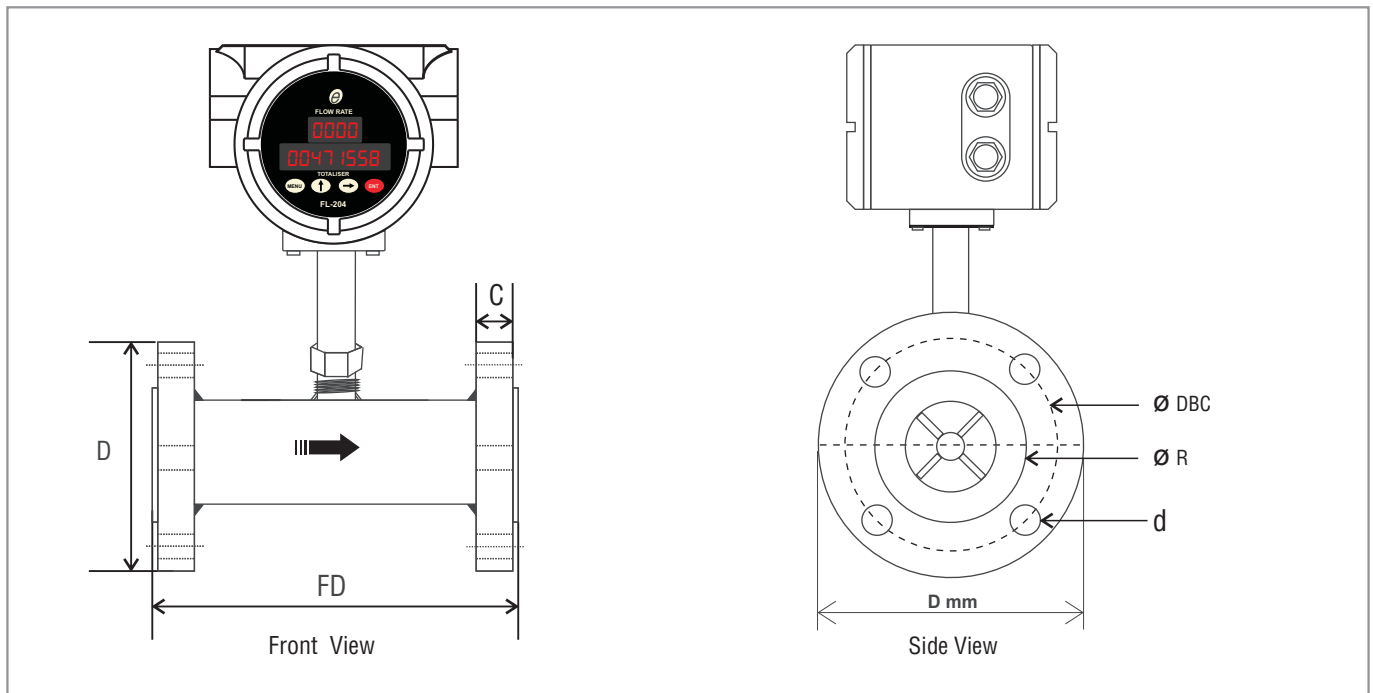


TABLE -1 : Dimensional Details (Flow Meter with ANSI 150 Flange)

	Line Size		Flow Range			Flange Details ANSI 150 (B 16.5)					
	Inch	NB	0.3m/s (m ³ /hr)	2m/s (m ³ /hr)	10m/s (m ³ /hr)	D	C	R	DBC	d	FD
Note : D : (OD)Outer Diameter of Flange C : Thickness of flange R : Diameter of Raised face DBC : Diameter of bolt circle d : Size of Bolt Hole FD : Flange to Flange distance No. of Holes: For ½" to 3" = 4 Holes 4" to 6" = 8 Holes *Typical mounting dimensions for reference only *All dimensions are in 'mm'	½"	15NB	0.19	3.275	6.36	88.9	11.1	34.9	60.3	15.9	200
	¾"	20NB	0.34	5.825	11.31	98.4	12.7	42.9	69.8	15.9	200
	1"	25NB	0.5301	9.100	17.67	107.9	14.3	50.8	79.4	15.9	200
	1 ¼"	32NB	0.87	14.91	28.95	117.0	14.0	64	78	14.0	192
	1 ½"	40NB	1.36	23.3	45.24	127.0	17.5	73	98.4	15.9	200
	2"	50NB	2.12	36.4	70.69	152.4	19.1	92.1	120.6	19.0	200
	2 ½"	65NB	3.58	61.52	119.46	177.8	22.2	104.8	139.7	19.0	200
	3"	80NB	5.43	93.19	180.96	190.5	23.8	127.0	152.4	19.0	200
	4"	100NB	8.48	145.61	282.74	228.6	23.8	157.2	190.5	19.0	250
	5"	125NB	13.25	227.52	441.79	254.0	23.8	185.7	215.9	22.2	250
	6"	150NB	19.09	327.63	636.17	279.4	25.4	215.9	241.3	22.2	300
	8"	200NB	33.93	582.45	1130.97	342.9	28.3	269.9	298.4	22.2	350

Product Ordering Information :

Order Code for Flow Transmitter

Sample Order Code : TX 1 B2 C1 D2 E1

Parameter	Code	Description
TX	TX 1	Field Mount Weather Proof IP67
	TX 4	Flameproof (CMRI IIA IIB Certified)
B	B1	Aluminium Die Cast
	B2	SS316
C	C1	M20 *1.5 F
	C2	1/2 Inch NPT F
	C3	Pluggable Connector

Parameter	Code	Description
D	D1	4 to 20 mA
	D2	Pulse (Open Collector)
	DX	NA
E	E1	1 Relay Output
	E2	2 Relay Outputs
	EX	NA

Note :

In case of flameproof version only electronics enclosure is flameproof certified.

Order Code for Flow Tube

Sample Order Code : FT 15 F2 G1 H2 I2 J1 K1 L1 M2

Parameter	Code	Description	Code	Description
FT	FT 15	15 NB	FT 65	65 NB
	FT 20	20 NB	FT 80	80 NB
	FT 25	25 NB	FT 100	100 NB
	FT 32	32 NB	FT 125	125 NB
	FT 40	40 NB	FT 150	150 NB
	FT 50	50 NB	FT 200	200 NB
	F	F1	Integral (Local)	
F2		Remote		
G	G1	5 Meter		
	G2	10 Meter		
	G3	15 Meter		
	GX	NA		
H	H1	IP-67		
	H2	IP-68		
I	I1	Threaded (15 to 50 NB)		
	I2	Flanged (15 To 200 NB)		
	I3	Triclover (15 to 100 NB)		
	I4	SMS Union (25 to 100 NB)		
	IY	Other		
J	J1	SS304		
	J2	SS316		
	JY	Other		

Parameter	Code	Description
K	K1	ANSI 150 B16.5
	K2	ANSI 300 B16.5
	K3	ANSI 600 B 16.5
	K4	DIN PN 10 EN 1092-1
	K5	DIN PN 16 EN 1092-1
	K6	DIN PN 25 EN 1092-1
	K7	DIN PN 40 EN 1092-1
	KY	Other
L	L1	SS410
	L2	17.4 PH
	LY	Other
M	M1	Tungsten Carbide Sleeve Bearing
	M2	V Jewel Bearing
	MY	Other

Note : • Due to our continuous product revisions, design specification and model numbers are subject to change without notice.
 • To be used for industrial applications.
 • Accuracy defined at Lab Conditions.
 • For other requirement please consult factory.

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