

TS2000-EFM

ELECTROMAGNETIC FLOW METER - SWITCH



Features

- Full bore type Electromagnetic Flow Meter
- Potential free relay output for ON/OFF control
- Suitable for Conductive Liquids
- Empty pipe indication
- Suitable for line sizes ranging from DN 15 to DN 300
- Typical Accuracy of $\pm 0.5\%$ of M.V.
- Protection Class: IP68
- Robust SS-316 Construction ensure durability and resistance to corrosion.



Technical Specifications

Performance Characteristics	
Measuring principle	Electromagnetic flow measurement
Media	Liquid (Conductive)
Conductivity	$> 5 \mu\text{S/cm}$
Viscosity	200 cp max
Line Size	15 NB to 300 NB
Accuracy	$\pm 0.5\%$ of M.V.
Excitation	Pulsed DC
Process Conditions	
Response Time	1 Sec
Display	Backlight LCD - 6 Digit for Flow Rate, 8 Digit for Flow Totalizer
Process temperature	200°C max
Process pressure	16 kg/cm max
Process Connection	
Mounting Type	Inline Horizontal / Vertical
Process Connection	ANSI150 flanged, as per table B 16.5 (Other On Requirement)
Ambient conditions	
Temperature	20°C to 75°C
Humidity	5 to 95% non-condensing
Output Signal	
Output 1	4 to 20mA
Output 2	Pulse - Open Collector Type (Optional)
Alarm or Relay Output	1 Relay Output (Optional)
Communication Output	RS-485 MODBUS RTU (Optional)

Technical Specifications

Protection Class	
Electronic Protection	Weather Proof IP-68
Sensor/Flow Tube Protection	Weather Proof IP-68
Electronics Location	Integral / Remote
Electrical Connection	
Remote Cable Length	5mtr.
Connector	M12 Connector
Power supply	
Voltage supply range	18-30 V DC
Power consumption	< 5 VA
Material of Construction	
Lining	Neoprene / Ebonite Rubber / PFA / PTFE / PU / CERAMIC
Flange	MS / CS /SS-316 / SS-304
Coil Housing	SS-316L
Electrode Materials	SS-316L / Hastelloy C / Platinum / Tantalum / Titanium
Electronics Enclosure	SS-316

Line Size		Flange To Flange Distance	Flow Range (m ³ /Hr)			
Inch	NB		Velocity 0.3m/s	Velocity 2.5m/s	Velocity 6m/s	Velocity 10m/s
½"	15	200	0.19	1.59	3.81	6.36
¾"	20	200	0.34	2.83	6.785	11.31
1"	25	200	0.53	4.42	10.602	17.67
1¼"	32	200	0.87	7.24	17.371	28.95
1½"	40	200	1.36	11.31	27.143	45.24
2"	50	200	2.12	17.67	42.4115	70.69
2½"	65	200	3.58	29.86	71.675	119.46
3"	80	200	5.43	45.24	108.573	180.96
4"	100	250	8.48	70.69	169.646	282.74
5"	125	250	13.25	110.45	265.071	441.79
6"	150	300	19.09	159.04	381.703	636.17
8"	200	350	33.93	282.74	678.584	1130.97
10"	250	450	53.01	441.79	1060.28	1767.15
12"	300	500	76.34	636.17	1526.81	2544.69

Note : Flange to flange distance (FD) Tolerance : 1) 1/2"(15NB) to 6"(150NB) : +/-3mm 2) 8"(200NB) to 12"(300NB) : +/-5mm

- All dimensions are in 'mm'
- For dimensions of line size above 300NB, please consult factory.
- Typical mounting dimensions are for reference only.
- Wet Calibrated at IEC/ISO/EN17025 Accredited Calibration Rig.
- Flow meter should be selected with the help of Nomograph (recommended full scale velocity).

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Assembly Overview - Integral

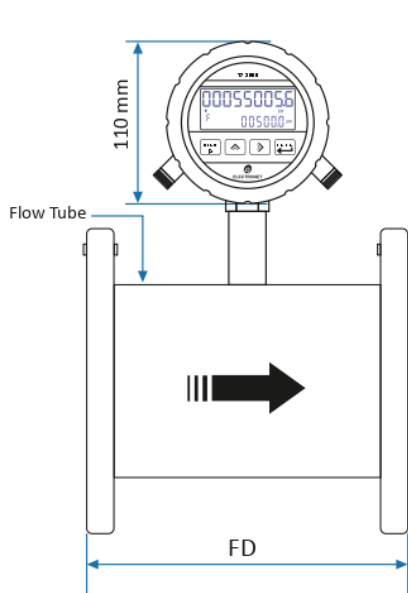


Fig. 1 Front View

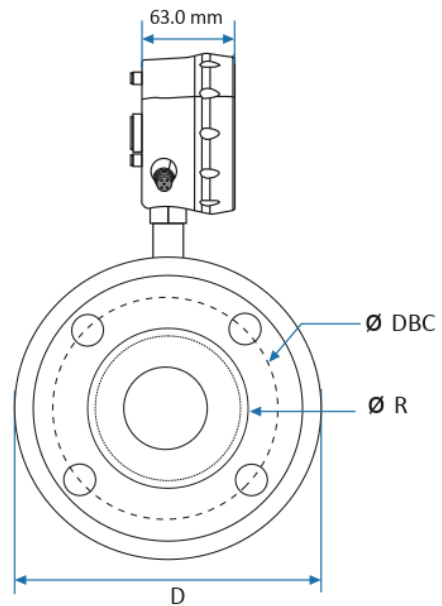


Fig. 2 Side View

Assembly Overview - Remote

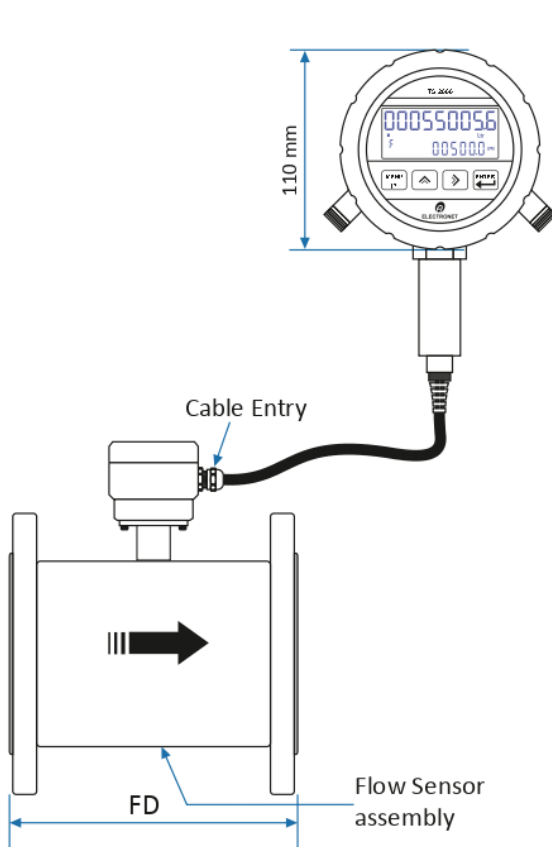


Fig. 3 Front View

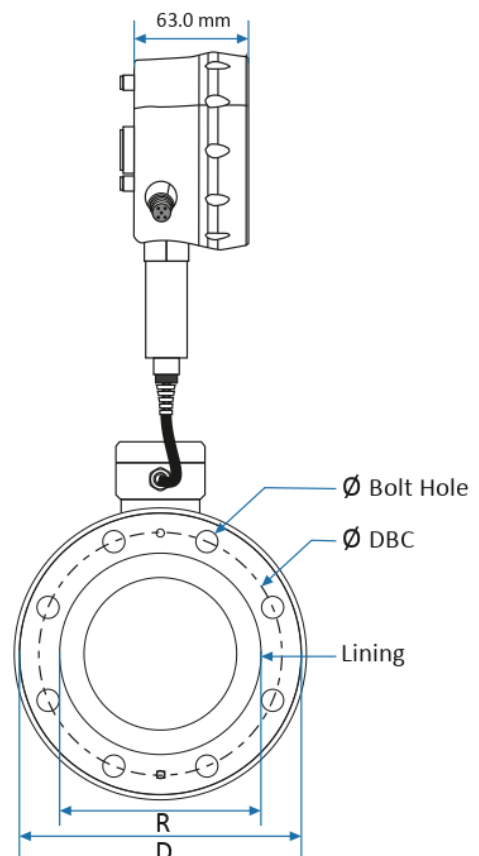


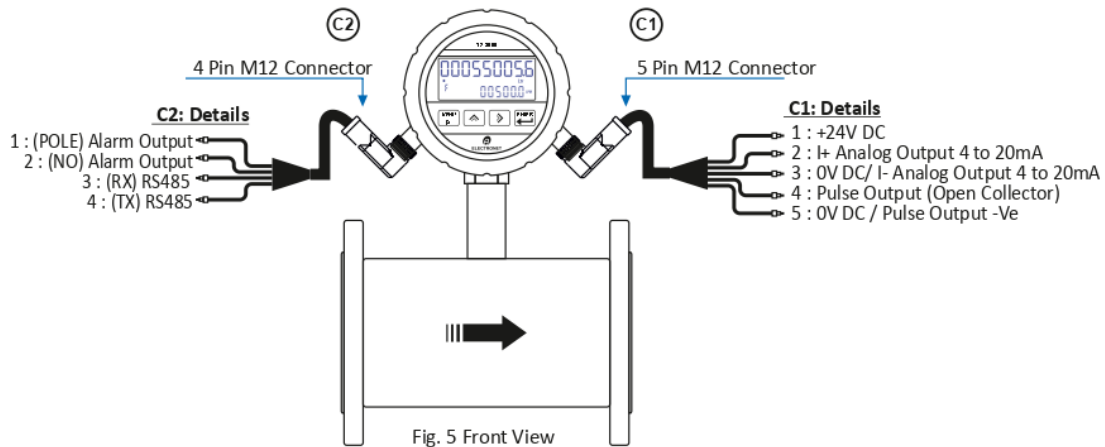
Fig. 4 Side View

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Connection Details



Ordering Information of Transmitter

Sample Order Code: TS 2000 EFM-TX-A1-B1-C1

Parameter	Code	Description
TX	Transmitter Electronics	TX
A	Alarm / Relay Output	A1
B	Communication Output	B1
C	Pulse Output	C1
		CX
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.		
■ This product is meant for laboratory/Process application only & not for custody transfer application.		

Ordering Information of Flow Tube

Sample Order Code: TS 2000 EFM-FT15-N1-O1-P1

Parameter	Code	Value	Code	Value
FT	Flow Tube	FT 15	15NB	FT 80
		FT 20	20NB	FT 100
		FT 25	25NB	FT 125
		FT 32	32NB	FT 150
		FT 40	40NB	FT 200
		FT 50	50NB	FT 250
		FT 65	65NB	FT 300
N	Electronics Location	N1	Integral (local)	
		N2	Remote (Max 5 mtr)	
O	Flow Tube MOC	O1	MS	
		O2	SS304	
		O3	SS316	
P	Lining Material	P1	Neoprene Rubber	
		P2	PFA	
		P3	PTFE	

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