

# TURBINE FLOW METER

## DESCRIPTION

Flowstar series FETFM 2 wire /FETFM 4 wire 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 pulsation 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.

## SALIENT FEATURES

- 1) 2 wire system/ 4 wire system
- 2) Simple & cost effective construction
- 3) Provides wide flow ranges
- 4) Local display as 8 x 1 LCD./ 4 digit 0.3 " Red LED for flow rate & 8 digit, 0.3"Red LED For totalized Flow
- 5) Outstanding accuracy for clean & low viscosity applications
- 6) Operates over wide ranges of temperature & pressure
- 7) Easy maintenance
- 8) Flame-proof, IP-65, IIA, IIB CMRI Certified housing

## TECHNICAL SPECIFICATIONS

Media: Liquids (Clear)  
 Viscosity: 100 cp max  
 Pick off Type: Magnetic sensor  
 Line Size: 15 NB to 150 NB  
 Display: 8 x 1 LCD/ 4x1 LED, 8 x 1 LED  
 Type of Output: 4 to 20 mA DC, 2 wire/Pulse 30 mV (one at a time)  
 Calibration Range: As per requirement (Factory Calibrated)  
 Accuracy: +/- 1% F. S.  
 Linearity: +/- 1%  
 Repeatability: +/- 1%  
 Pressure Drop: Approx 0.28 kg/cm<sup>3</sup> at max. flow  
 Turn down ratio: 10:1 to 100:1  
 Process Temperature: 150 °C max  
 Process Pressure: 30 kg/cm<sup>3</sup> max  
 Material of construction : Body, Bearing, Support & Flange - SS 316 / Teflon  
 Rotor : SS 410 / SS 410 with Teflon coating  
 Shaft : tungsten carbide  
 Power Supply : Loop powered, 24 V DC, External  
 Power Consumption : < 40 mW  
 Response Time : < 100 mSec  
 Temperature Coefficient : +/- 0.01% per °C  
 Transmitter Enclosure : Flame-proof, IP-65, IIA, IIB CMRI Certified  
 Process Connections : Flanged / Threaded / Tri-clover  
 Mounting : In-line (Horizontal OR Vertical)  
 Operating Conditions : Temperature 0 to 55°C / Humidity 5 to 95% non condensing

## LINE SIZE SELECTOR CHART WITH RESPECT TO FLOW RANGE

Line Size (NB)	A (mm)	B (mm)	Liquid flow Range m <sup>3</sup> /hr
15	175	208	0.22 to 2.2
20	175	210	0.6 to 6
25	175	213	1 to 10
40	175	220	2.5 to 25
50	175	238	4.5 to 45
80	250	238	9 to 90
100	250	250	18 to 180
150	250	275	35 to 350



## DETAILS REQUIRED FOR QUOTATION

1. Name of the fluid
2. Operating temperature
3. Operating pressure
4. Operating viscosity/ density
5. Line size and connection detail
6. Measuring range
7. Power supply require
8. Enclosure flame proof
9. Mounting i.e horizontal or vertical
10. Material of construction for wetted parts