

ELECTROMAGNETIC FLOW METER



FLOWTECH
MEASURING INSTRUMENTS PVT. LTD.

AN ISO 9001 : 2008 COMPANY

Engineered for Reliability

DESCRIPTION

FLOWTECH Make Electromagnetic Flow Meter are intended for measuring flow of electrically conductive liquids in closed pipe lines where the magnetic flux permeates the entire cross sectional area of the liquids flow. Electromagnetic flow meters measure electromotive forces to determine liquids velocity using Faraday's law of electromagnetic induction and compute the flow rate using equation of conductive liquids having minimum conductivity of 5 micro Siemens / cm and are relatively immune to the effects of temperature, pressure, viscosity & density of the flowing liquid.

WORKING PRINCIPLE

This is working on the principal of faraday's law which states that when a conductor moves through a magnetic field of a given strength a voltage is produced in the conductor and proportion to the relative velocity between the conductor and the magnetic field.

The Equation Represent as under.

$$E = B \times V \times D \times C$$

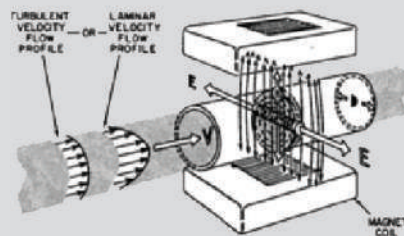
Where, E = Induction Voltage

B = Magnetic Field Strength

V = Average velocity

D = I.D. of Flow Tube

C = Meter Constant



The Flow rate Equation

$$Q = VA = V \times D$$

Where, Q = Flow Rate

V = Average Velocity

A = Area Occupied by the Fluid.

TECHNICAL DETAIL

Nominal Dia (mm)	: 15 to 400
Material of Construction	: MS, SS 304, SS 316 & SS 316L
Electrode Material	: SS 316/ SS 316L/ Hastelloy 'c', & Tantalum
Process Pressure	: Max. 25 kg/cm ²
Process Temperature	: Max. 150°C
Flow Tube Material	: SS 316
End Connection	: Flange/Wafer/TC Joint
Flange- Standard	: ANSI B 16.5 150 #RF / 300 # RF
Measuring Range	: 0.5 m/sec for Minimum & 5m/sec for Maximum
Accuracy	: ± 1% FSD Optional: ±0.5% FSD.
Repeatability	: 0.3%
Display	: 2 Line Alfa Numeric LCD
Display Version	: Integral /Remote
Display Unit	: Standard Unit in M3, Litre
Power Supply	: 230 VAC, 110 VAC & 24 VDC or Battery Operated
Output	: Std. 4 20 mA / RS 485 on request / Pulse output
Protection Class for Sensor / Transmitter	: IP 65
Cable Length for Remote	: 10 meters.
Installation	: Inline Flange Type

DATA LOGGER

A data logger, is an electronic instrument that records measurements at set intervals over a period of time. Depending on the particular data logger, measurements can include: water flow meter relative humidity, differential pressure, temperature, water level, and many more.

All the data from the instrument is taken to the desktop by RS485 communication ports. These data can be interpreted in many graphical formats by the higher layer user interactive software.

We can provide single, eight & sixteen channels data logger & software.

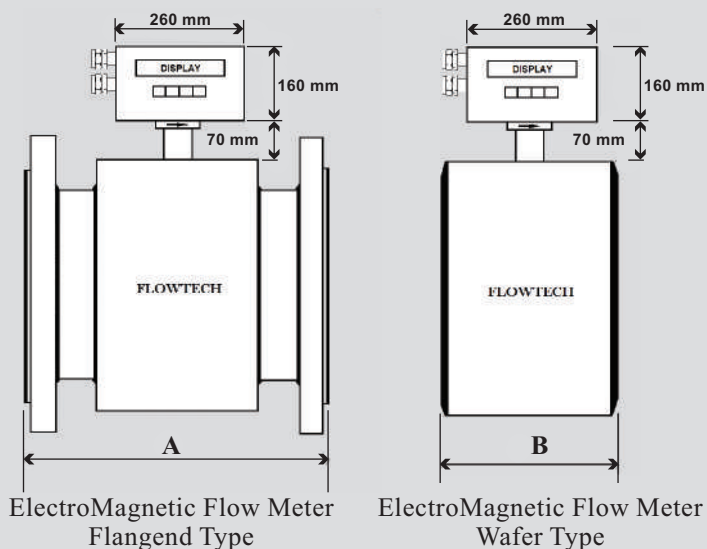


BATCH CONTROLLER

Flowtech can provide batch controller unit through which we can transfer exact volume of liquid. Our batch controller requires 230V AC & 5 Amp input & it give 2-relay output.



DIMENSION DETAIL



APPLICATION

- Acids
- Alkalis
- Chemical Solution
- Portable ,Raw & Chilled water
- Beverages
- Coal Slurry
- ETP/STP/Water Supply Scheme
- Sewage and many more

FEATURES

- Trouble free sensing of **Corrosive Liquids, liquids, Slurries & Paste**
- Integral as well as Remote
- Digital Output
- Display in User Selectable Units
- High Accuracy Flow Metering
- No Pressure Drop in Process

FLOW TABLE

LINE SIZE	Flanged Type	Wafer Type	LPM		M ³ /HR	
			Min Fluid Velocity	Max. Fluid Velocity	Min Fluid Velocity	Max. Fluid Velocity
			@0.5m/sec	@ 5m/sec	@0.5m/sec	@ 5m/sec
15 mm (1/2")	142 mm	N.A.	5	50	0.30	3.0
25 mm (1")	142 mm	N.A.	15	150	0.90	9.0
40 mm(1 1/2")	200 mm	N.A.	37	370	2.20	22.0
50 mm(2")	200 mm	115 mm	60	600	3.53	35.6
65 mm(2 1/2")	200 mm	125 mm	100	1000	6.00	60.0
80 mm (3")	250 mm	135 mm	150	1500	9.00	90.0
100 mm (4")	250 mm	145 mm	235	2350	14.10	141.0
125 mm (5")	250 mm	150 mm	368	3676	22.07	220.0
150 mm (6")	300 mm	150 mm	530	5300	31.80	318.0
200 mm (8")	350 mm	180 mm	942	9420	56.52	565.2
250 mm (10")	400 mm	200 mm	1471	14710	88.31	883.1
300 mm (12")	500 mm	220 mm	2119	21190	127.17	1271.7
350 mm (14")	500 mm	N.A.	2884	28840	173.09	1730.9
400 mm (16")	600 mm	N.A.	3766	37660	226.08	2260.8

Note : DOING ONLINE CALIBRATION OF FLOWMETER SIZE 40 NB TO 300 NB THROUGH HIGH ACCURACY ULTRASONIC FLOWMETER AT SITE ON REQUEST.

MODEL DECODIFICATION

FMIPL		EMFM																																																					
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