

# FOUR ITS PVT.LTD.

## Electromagnetic Flow Meter

Electromagnetic flow meters are mainly used in various industries, ETP, STP, WTP Plants, Borewell and for conductive liquids for measuring the water flow rate.

### Description

**MAG-111** are micro-controller based full bore type electromagnetic flow meters specially used for various industrial applications. These flow meters accurately measure the flow rate of conductive liquid & slurries in closed pipes. Due to simple & rigid design, the flow meter is an obstruction less & maintenance free instrument in place of conventional mechanical flow measuring device.

The use of ' Pulsed DC' technology offers highest ability & better measuring accuracy in the form of electrical signal 4 - 20mA DC linearly proportional to volumetric flow. The instrument is based on Faraday's law of electro-magnetic induction. A magnetic field is generated by the instrument in the flow tube. Fluid flowing through this magnetic field generates a voltage that is proportional to the flow velocity. Corresponding electrical output is provided with respect to measuring flow range.



OFFICE ADDRESS:- 914, Conscient ONE, Dwarka Expressway, Sector 109, Gurgaon 122017, Haryana



## Salient Features:

- Suitable for conductive liquids
- Maintenance free
- Full bore type
- Local Indication through LCD
- Simple & cost effective construction
- Empty pipe indication
- Material option depending upon process data

## Technical Specifications:

Media : Liquids

(Conductive) Conductivity:

>5  $\mu\text{s}/\text{cm}$  Viscosity : 200 cp  
max

Line Size : 15 NB to 1000

NB Excitation : Pulsed DC

Type of Output : 1) 4 to 20 mA DC, Isolated

2) RS485 MODBUS

3) Pulse

Display : Graphics type

Engineering Unit : User Programmable ( $\text{m}^3/\text{hr}$   
by default)

Calibration Range : As per requirement  
(Factory Calibrated)

Accuracy : +/- 0.5% of F. S. (for 20 to 100%  
flow) Linearity : +/- 0.5% of F. S.

Repeatability +/- 0.2% of F. S.

Temperature Coefficient : +/- 0.05% per  $^{\circ}\text{C}$

Process Temperature : 85 $^{\circ}\text{C}$  max for Rubber  
Lining &

150 $^{\circ}\text{C}$  for PTFE Lining Process Pressure : 10  
 $\text{kg}/\text{cm}^2$  max (higher on request)

## Material of Construction:

Material of construction : Lining - Rubber (5mm +/-1mm  
thick) / PTFE (3mm +/-1mm thick)

Flange - CS / MS / SS

Electrode - SS 316L / Hastalloy C / Platinum Coil Housing -  
MS / SS 304

Power Supply : 220V AC/24V DC

Isolation : 1.4 KV between Input, Output & Power Supply

Response Time : < 1 Sec

Transmitter Enclosure : Die cast Aluminium IP 66, flow tube IP

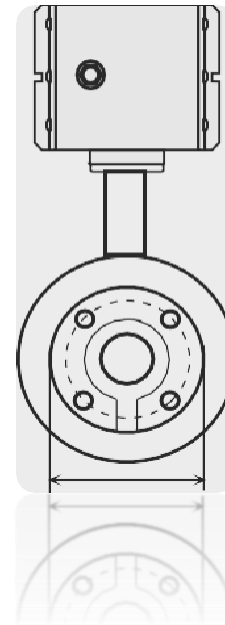
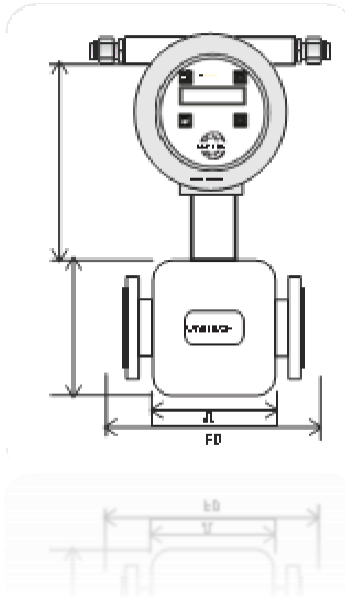
68 Process Connections : ASA 150 flanged, as per table B

16.5 Mounting : In-Line Horizontal (Vertical on request)

Operating Conditions : Temperature 0 to 55 $^{\circ}\text{C}$  / Humidity 5 to  
95%

non condensing Note :- For process conditions other than  
above please consult factory.

**DIMENTION  
DETAILS:**



**INSTALLATION  
DRAWING**



**OD: Flange Diameter  
W : Coil Housing Width  
H : Coil Housing Height  
FD: Flange to Flange Distance**

Meter Size	OD (mm)	W (mm)	H (mm)	FD (mm)	Flow Range (m <sup>3</sup> /hr)		
					Min	Normal	Max
15 NB	88.9	100	180	200	0.03	1.2723	6.4
20 NB	98.4	100	180	200	0.11	2.2619	11
25 NB	107.9	100	180	200	0.18	3.5341	18
32 NB	117.5	100	210	200	0.29	5.7906	29
40 NB	127.0	100	210	200	0.45	9.05	45
50 NB	152.4	100	210	200	0.71	14.14	71
65 NB	177.8	100	220	200	1.19	23.892	119
80 NB	190.5	100	240	200	1.81	36.19	181
100 NB	228.5	150	274	250	2.83	56.55	283
125 NB	254.0	175	300	250	4.42	88.35	442
150 NB	279.4	175	330	300	6.36	127.23	636
200 NB	342.9	175	390	350	11.3	226.18	1130
250 NB	406.4	244	440	450	17.66	353.41	1766
300 NB	482.6	250	520	500	25.43	508.91	2543
350 NB	533.4	250	520	550	34.62	692.68	3462
400 NB	596.9	250	520	600	45.22	904.72	4522
450 NB	635.0	623	632	698	57.23	1145.04	5723
500 NB	698.5	623	686	768	70.65	1413.63	7065
600 NB	812.8	818	772	918	101.74	2035.63	10174

