

Electromagnetic Flowmeter



Introduction

Spink introduces new range of Plastic Body Electromagnetic Flowmeters for the first time in India.

These Flowmeters will help you reduce your cost and at the same time giving performance as that of metallic body Flowmeters. It is suitable for pipes with diameters of 10 mm to 150 mm. The meter features flanged construction. It has excellent accuracy and flow rangeability. The meter is suitable for use on wide range of corrosive and aggressive range of conductive liquids.

Salient Features

- Entire Plastic body Construction therefore rust free
- Light Weight
- Suitable for Virtually all types of Conductive Liquids
- Easy installation and absolutely low maintenance
- Remote Transmitter Type Assembly
- Coil Assembly in hermetically sealed Welded construction
- Suitable for pipe sizes of diameters 10 mm to 150 mm
- Field interchangeable electronics
- No pressure loss
- Excellent Accuracy and Repeatability
- **Performance at par with metallic body Flowmeters but at much lower Cost**

Applications

- Chemical, Petrochemical and Process Industries
- Fertilizer Industries
- Pharmaceutical Industry
- Food Industry
- Drug Industries
- Sugar Industries
- Beverage Industries
- Paper and Pulp Industries
- Aluminum Industries
- Steel Industries
- Mining Industries
- Dredging Industries
- Water and Waste - Water Management
- And many others

Operations

Electromagnetic Flowmeters are based on Faraday's law of Electromagnetic Induction.

In a Electromagnetic Flowmeter, magnetic field is generated by a set of coils. As the conductive liquid passes through the electromagnetic field, an electric voltage is induced in the liquid, which is directly proportional to its velocity. This induced voltage is perpendicular to both the liquid flow direction and the electromagnetic field direction. The voltage sensed by the electrodes is further processed by the transmitter to standardised output signal or displayed in appropriate Engineering Units on LED Display.

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Specifications

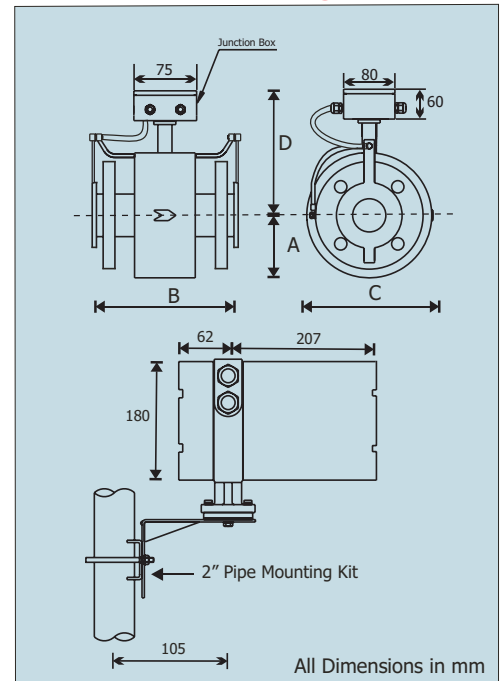
Suitable for Pipe Sizes	: DN 10 to DN 150
Media Conductivity (Min.)	: 10 μ S/cm
Media Pressure	: 5 kg/cm ²
Media Temperature	: 0 - 55 C
Ambient Temperature Range	: 0 - 50 C
Materials : Pipe	: HDPE
Electrode	: SS / Hastelloy C / Ta / Ti / Pt
End Connections / Flanges	: HDPE
Coil Housing	: HDPE
Transmitter	: Cast Aluminium (LM4) , Epoxy painted
Flange / End Connection Std.	: DIN / ANSI / BS
Power Supply	: 110 / 240V AC \pm 15%, 50Hz
Power Consumption	: 20 VA
Cable Gland Entry	: 1/2" NPT (F) : For Transmitter and PG9 for Junction Box
Analog Output (Isolated)	: 4-20 mA DC / 0-20 mA DC
Pulsed Output (Optional)	: Low Pulsed Rate Output 10 to 36000 pulses per hour a) Output to drive directly external electromagnetic counter of 12/24V DC @ 200 mA capacity OR b) Open Collector Output , High Pulse Rate Output, 0.5 KHz/1 KHz/10KHz/ (Open Collector Output)
Communication Port (Optional)	: RS - 232 / RS - 485 MODBUS RTU Protocol
Maximum Load Resistance	: 1000 Ω
Response Time	: 5 seconds
Flow Velocity Range	: 0.3 to 10 m/s
Ingress Protection	: IP - 65 (IP - 68 on request)
LED Display	: 4 Digit Indication for Flow Rate and 8 Digit Indication for Totaliser
Programming	: From Front Keyboard for Engineering Units
Accuracy	: \pm 1% of measured value
Reference Conditions	
Power Supply	: Nominal
Ambient Temperature	: 2 ° \pm 2 C
Load Resistance	: 500 Ω
Repeatability	: \pm 0.2% of span
Effect of Ambient Temperature	: Less than 0.2% per 10 ° C
Effect of Power Supply	: Less than 0.1% per 10% Voltage variation
Effect of Load Resistance	: Less than 0.1% of span

Meter Dimensions

DN (mm)	A	B	C	D
10, 15, 20	65	200	120	190
25, 32	80	200	150	205
40, 50	120	200	225	245
65, 80	130	200	245	255
100, 125	170	250	325	295
150	190	300	365	315

Notes : 1. Above dimensions are with ANSI 150
(For other flanges - Consult Factory)
2. Add 10 mm for two SS 316 Earthing rings and rubber gaskets to dimension 'B'

Dimensional Drawing :



Ordering Information

POWER SUPPLY

- 1) 240 +/- 15% V AC 50 Hz
- 2) 110 +/- 15% V AC 50 Hz

FLOW METER SIZE

- 1) DN 10
- 2) DN 15
- 3) DN20
- 4) DN 25
- 5) DN 32
- 6) DN 40
- 7) DN 50
- 8) DN 65
- 9) DN 80
- 10) DN 100
- 11) DN 125
- 12) DN 150

FLANGE STANDARDS

- 1) DIN PN 40
- 2) DIN PN 16
- 3) DIN PN 10
- 4) ANSI 300
- 5) ANSI 150
- 6) Any other

OUTPUT SIGNAL

- 1) 4-20 mA DC
- 2) 0-20 mA DC

ELECTRODE

- 1) SS 316
- 2) Hastelloy C
- 3) Tantalum
- 4) Titanium
- 5) Platinum
- 6) Any other

PULSED OUTPUT (Optional)

- 1) Low Pulse output
- 2) High Pulse output
- 3) Nil

COMMUNICATION PORT (Optional)

- 1) RS-232
- 2) RS-485

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