

Technical Data Sheet

INSERTION TYPE ELECTROMAGNETIC FLOW METER:

MAGPROBE 6450:



Introduction:

Electromagnetic Flow measurement has been in use around the world for 50 years and more, as witnessed by the popularity of these meters that continues unabated in virtually all sectors of industry. Electromagnetic Flowmeters can be used to measure all electrically conductive liquids ($> 5 \mu\text{S}/\text{cm}$) with or without solids, e.g. water, wastewater, sludge, slurries, pastes, acids, alkalis, juices, fruit pulp, etc.

Insertion Type Electromagnetic Flowmeter is suitable for the most demanding applications. They are based on Faraday's law of Electromagnetic Induction. The meter features sensor tube and ball valve assembly.

Working Principle:

In an Electromagnetic Flowmeter, the 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 give standardised output signal or displayed in appropriate engineering unit.

The flux density of the electromagnetic field in each Flowmeter and the distance between the electrodes are constant. Therefore, the induced voltage is only a function of liquid velocity. The induced voltage is not affected by the physical properties of liquid like temperature, viscosity, pressure, density and conductivity, if conductivity of the measured liquid is above minimum threshold level. For reliable measurement, the pipe must be completely full of liquid.

FEATURES:

- Based on Faraday's law of electromagnetic induction
- Coil assembly in hermetically sealed welded construction
- Field interchangeable electronics
- Absolute zero stability and noise elimination due pulsed DC excitation
- Flow tube sizes 100 mm to 600 mm
- Integral or remote transmitter
- High linearity due to characteristic magnetic field
- High long-term stability and reliability

APPLICATIONS:

- Chemical, petrochemical and process industries
- Pharmaceutical industries
- Fertilizer industries
- Sugar, beverage industries

TECHNICAL SPECIFICATIONS:

Nominal Dia. (mm) : > 100
Working pressure(kg/cm): 20
Working Temperature : up to 120°C
Electrode Material : SS 316L standard
Sensor Lining : NA
Display Version : Integral/Remote
Measuring tube material : SS 316 Std.*
Sensor housing material : NA
End Connection : NA
Flange : NA
Measuring range : 0.2 to 12 mtr/sec,
Bidirectional
Accuracy % of measured value : ±2%
Repeatability : ±0.2% of span
Display : 2 Line LCD
Output : 4 to 20 mA dc

Protection class for transmitter: IP- 67
Cable length for remote: 10 mtr std*
Display Units: All standard engineering
Units in m³, liter, gallon, ft³ imperial gallon
Power Supply: 24 V DC/80-300 V AC/
Solar powered
Protection class for sensor: IP68
Installation: Insertion type with use of
isolating ball valve assembly on pipeline

Continuous efforts for product development may necessitate changes in specifications without Notice

JAYCEE TECHNOLOGIES PRIVATE LIMITED

REPRESENTED BY:

Mobile: 8554982251/ 9371068669 ; e-mail : jayceetech@gmail.com, sales@jayceetech.in