Micro Process Controls

(An ISO 9001–2008 Company)

MICRO, The Specialist for ..... Pressure + Temperature

ELECTROMAGNETIC FLOW TRANSMITTER EPATMAG223 With Local Display

SALIENT FEATURES

- Suitable for conductive liquid.
- Absolutely maintenance free.
- Full bore type.
- Local Indication through 2 Line LED.
- Simple & cost effective construction.
- Outstanding accuracy.
- Flow measurement in forward & reverse direction on demand.
- Empty pipe indication on demand.
- Material options depending upon process data.
- Universal power supply.
- Communication port on demand.

DESCRIPTION

MICRO series EPATMAG-223 are micro-controller based full bore type electromagnetic flow transmitter specially used for various industrial applications. These flow transmitters accurately measures the flow rate of conductive liquids & slurries in closed pipes. Due to simple & rigid design, the flow transmitter 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 - 20 mA DC linearly proportional to volumetric flow. The instrument is based on Faraday's law of electro-magentic induction. A magnetic field is generated by the instrument in the flow tube. The 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 voltage.

TECHNICAL SPECIFICATIONS

Media	:	Liquids (Conductive)
Conductivity	:	⩾5 µs/cm
Viscosity	:	200 cp max
Line Size	:	15 NB to 600 NB
Excitation	:	Pulsed DC coil
Type of Output	:	1) 4 to 20 mA DC, Isolated 2) Pulse
Display	:	LED - 4 digit for Flow Rate & 9 digit for Totalised Flow
Calibration Range	:	As per requirement (Factory Calibrated)
Accuracy	:	+/- 0.5% F. S. (For 20 to 100% flow)
Linearity	:	+/- 0.5%
Repeatability	:	+/- 1%
Process Temperature	:	85°C, 150°C max
Process Pressure	:	10 kg/cm^2 max
Material of construction	:	Lining - Rubber / PTFE (Teflon) Flange - CS / MS / SS Electrode - SS 316 / Hastalloy C Coil Housing - MS / SS 304

Power Supply	:	1) 24 V DC, External 2) 90 - 250 V AC, 50 Hz
Power Consumption	:	< 10 VA
Isolation	:	1.4 KV between Input, Output & Power Supply
Response Time	:	< 100 mSec
Temperature Coefficient	:	+/- 0.1% per °C
Process Connections	:	ASA 150 flanged, as per table B
Mounting	:	In-Line (Horizontal or Vertical)
Operating Conditions	:	Temperature 0 to 55°C / Humidity 5 to 95% non condensing
Transmitter Enclosure	:	Aluminum Enclosure IP68 / IP67
OPTIONAL		
Communication Port	:	RS 485 supporting MODBUS RTU Protocol
Transmitter Enclosure	:	Flame-proof, IP-65, IIA, IIB CMRI certified

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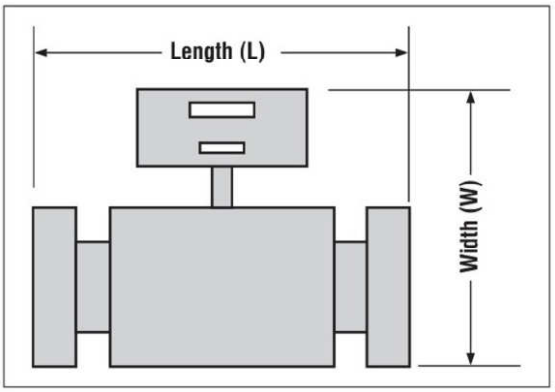
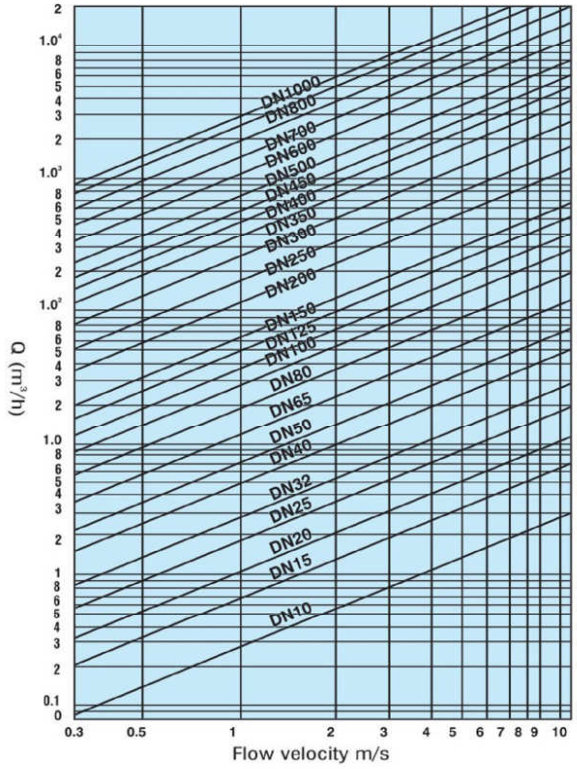
Dimensions Details with Flow Rate

Sr. No.	Line Size In mm.	Min. Flow Rate At 0.5 m/s in m³/h	Max. Flow Rate At 5 m/s in m³/h	Total Length (L) In mm.	Total Width (W) In mm.
1	15	0.318	3.18	186	308
2	25	0.883	8.83	186	313
3	40	2.26	22.6	186	313
4	50	3.53	35.3	186	330
5	65	5.97	59.7	186	355
6	80	9.04	90.4	186	368
7	100	14.13	141.3	230	408
8	125	22.07	220.7	230	462
9	150	31.8	318	230	458
10	200	56.52	565.2	280	522
11	250	88.312	883.12	330	586
12	300	127.17	1271.7	380	662



Flownomograph



Industries :

- Effluent Treatment Plant
- Sewage Treatment Plant
- Water Supply Scheme
- Steel & Aluminum Industries
- Food & Drug Industries
- Chemical & Fertilizers
- Dairy Industries
- Pump & Valve Calibration Lab
- Sugar Industries

Application :

- Raw Water, Portable Water, Sea Water, Waste Water, Cooling Water, Heat Exchanger
- Industrial & Domestic Effluent
- Syrup, Molasses, Fruit Juice, Pulp & Beverages
- Acidic & Alkaline Solutions
- Brine Solutions
- Paper Pulp, Black, Green & White Liquor

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