

DESCRIPTION

The M-Series 7500S Mag Meter, is a successful combination of the most advanced electromagnetic flow metering technology with the simplicity and ruggedness of proven batching systems for industrial applications requiring sanitary equipment.

Based on Faraday's Law of electromagnetic induction, the 7500S can accurately measure and control almost any batching requirement. The completely open cross-section flow tube design with no moving parts makes this meter the ideal device for batching of a wide range of industrial fluids.

Where other metering technologies fail due to the presence of solids in suspension in the process fluid, the 7500S is designed to perform for many years of trouble-free operation with an accuracy of $\pm 0.5\%$ or better.

The built-in Pulse Scaler features easy-to-use rotary switches for batch accuracy compensation, making the 7500S the most straightforward metering system available in the industry.

OPERATION

The 7500S Mag meter is a stainless steel flow tube with an internal isolating lining. Two electromagnetic coils are located outside the flow tube, diametrically opposed to each other and protected by a stainless steel housing. Two electrodes, inserted into the flow tube, are positioned "flush" with the internal diameter of the tube and perpendicular to the coils. The coils are energized by a pulsed DC voltage provided by the electronic converter, and a magnetic field is generated across the flow tube section. According to Faraday's law, when conductive liquid flows through this magnetic field of the meter, a voltage is generated in the liquid. This voltage is directly proportional to the liquid flow velocity, and therefore to the actual volumetric flow rate of the liquid. The electronic converter measures this voltage, processes the signal, and provides two digital pulse outputs, scalable to the desired volumetric value. These digital pulse outputs can be connected to a batch controller, a totalizer display unit for monitoring purposes, or to both devices simultaneously.

APPLICATION

Because of its inherent advantages over other more conventional technologies, this meter can be used in the majority of industrial sanitary flow applications. Whether the fluid is water or something very viscous, contains a moderate amount of solids or requires special handling, this meter will be able to accurately measure it. Today M-Series meters are successfully being used in many industries including food, beverage and pharmaceutical, handling fluids such as milk, beer, pastes, syrups, and many other hard to measure fluids.



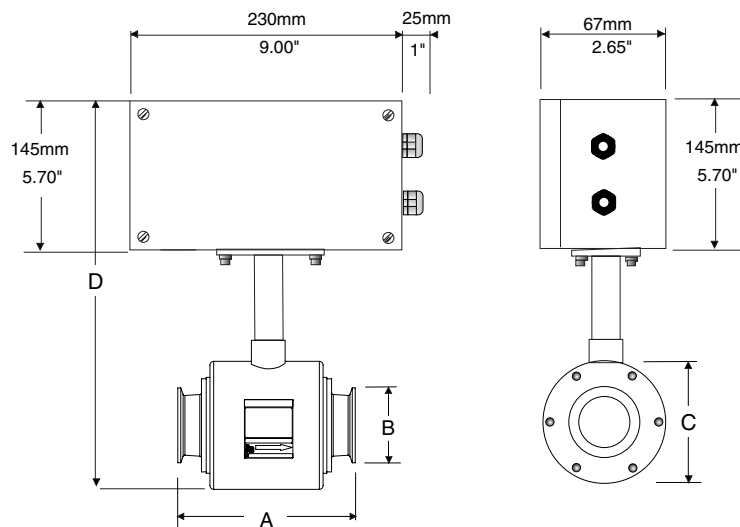
FEATURES

- Unaffected by most suspended solids in the liquid.
- Open cross-section design: no pressure loss, no moving parts.
- Pulsed DC magnetic field for maximum zero point stability.
- Rugged surface mount technology electronics for reliable, long life operation.
- NEMA 4X standard enclosure.
- Two standard pulse outputs: solid state relay and open collector output, compatible with most of existing Batch Controllers and/or Totalizer Displays.
- Standard $\pm 0.5\%$ of rate accuracy.
- $\pm 0.2\%$ repeatability.
- Built-in rotary switches for easy batch accuracy compensation.
- Long life corrosion resistant liner (PTFE)

SPECIFICATIONS

Sizes	1/2...4 in. (15...100 mm)
Electrode Material	Alloy C
Liner Material	PTFE
Max Fluid Temperature	212° F (100° C)
Pressure Limits	150 psi (10 Bar)
Housing Material	316 stainless steel
End Connections	Tri-clamp
Power Supply	110V AC ± 10%, 5V A (220V AC optional)
Coil Excitation	Pulsed DC 7.5 Hz
Minimum Liquid Conductivity	5 micromhos/cm
Maximum Output Frequency	10 kHz
System Accuracy	± 0.5% of rate
Repeatability	± 0.2%
Enclosure	Stainless steel, NEMA 4X
Mounting	Meter mounted only
Environmental	-4...122° F (-20...50° C)
Output 1	Solid state relay up to 230V, 500 mA
Output 2	Opto-isolated open collector, 50 mA at 24V DC
Flow Direction	Unidirectional
Pulse Width	50% duty cycle
Cable Connections	Two 1/2 in. NPT cord grip

DIMENSIONS



Size in. (mm)	A in. (mm)	B in. (mm)	C in. (mm)	D in. (mm)	Est. Weight lbs (kg)	Flow Range			
						gpm		lpm	
						min	max	min	max
1/2 (15)	5.6 (143)	1 (25.4)	2.8 (70)	11.8 (300)	7 (3.2)	1	20	3.8	76
1 (25)	5.6 (143)	2 (50.8)	2.8 (70)	11.8 (300)	8 (3.6)	3	80	11.4	303
2 (50)	5.9 (149)	2.5 (63.5)	4.1 (104)	13.4 (340)	10 (4.5)	10	320	37.9	1211
3 (80)	8.5 (216)	3.6 (91.4)	5.5 (140)	14.6 (370)	12 (5.4)	22	690	83.3	2612
4 (100)	8.5 (216)	4.7 (119.4)	6.3 (160)	15.4 (391)	15 (6.8)	40	1300	151.4	4921

Control. Manage. Optimize.

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