

GENERAL

Badger Meter Inc. developed the Magnetoflow® 7500S Mag Meter, a successful combination of the most advanced electromagnetic flow metering technology with the simplicity and ruggedness of Badger Meter's proven batching systems for industrial applications requiring sanitary equipment.

Based on Faraday's Law of electromagnetic induction, the Magnetoflow® 7500S Mag Meter can accurately measure and control almost any batching requirement. Its completely open cross-section flow tube design with no moving parts, makes it the ideal metering 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, Magnetoflow® 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" (a proven Badger Meter Inc. exclusive design), features easy-to-use rotary switches for batch accuracy compensation, making the Magnetoflow® 7500S the most straight-forward 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.

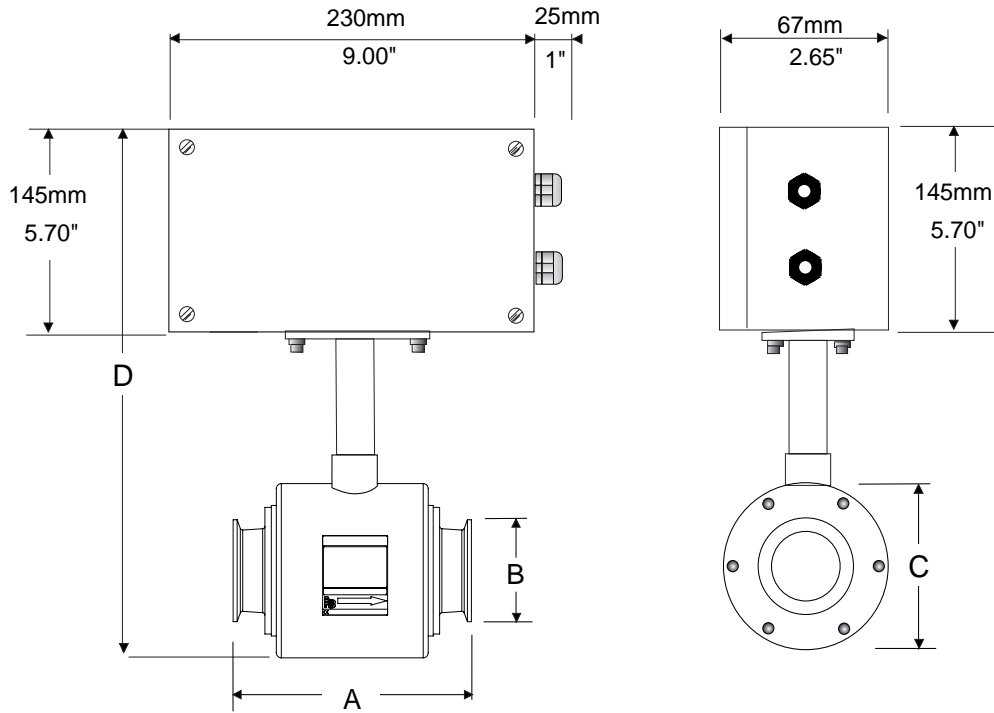
APPLICATION

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 Magnetoflow 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.

**Model 7500S Mag Meter****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.
- 3A Approved
- Long life corrosion resistant liner (PTFE)





Size	A		B		C		D		Est. Weight		Flow Range				
	inch	mm	inch	mm	inch	mm	inch	mm	Lbs	Kg	GPM		LPM		
											Min	Max	Min	Max	
1/2"	15	5.628	143	.992	25.2	2.8	70	11.8	300	7	3.18	1	20	3.8	76
1"	25	5.628	143	1.984	50.4	2.8	70	11.8	300	8	3.63	3	80	11.4	303
2"	50	5.875	149	2.516	63.9	4.1	104	13.4	340	10	4.54	10	320	37.9	1211
3"	80	8.5	216	3.579	90.9	5.5	140	14.6	370	12	5.44	22	690	83.3	2612
4"	100	8.5	216	4.682	118.9	6.3	160	15.4	370	15	6.80	40	1300	151.4	4921

SPECIFICATIONS

Sizes: 1/2" to 4" (15 to 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

Amplifier:

Power Supply: 110 VAC ±10%, 5 VA (220 VAC 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°F to 122°F (-20° to 50°C).

Output 1: Solid state relay up to 230V, 500 mA.

Output 2: Opto-isolated open collector, 50 mA @ 24VDC.

Flow Direction: Unidirectional.

Pulse Width: 50% duty cycle.

Cable Connections: (2) 1/2" NPT cord grip.



Please see our website at
www.badgermeter.com
 for specific contacts.



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