

ML4-F1 CONVERTER

HIGH SPEED BATCHING FLOWMETER

Designed for demanding rapid filling, batching and dispensing applications



The high-speed ML4-F1 Converter is compatible with a wide variety of flow sensors. The stainless steel ML4-F1 is shown here mounted on the MS501 flow sensor with NPT connections (left) and the MS2410 with food-grade tri-clamp connections (right).

TYPICAL APPLICATIONS

- Syrups
- Milk
- Fruit Juices
- Beer
- Dressings
- Tomato Pastes
- Ketchup
- Yogurt
- Wines
- Jellies
- Preserves
- Ice Cream Mix
- Gravies
- Flavorings
- Vinegar
- Mayonnaise
- Soups
- Whey
- Meat Batters
- Chemicals
- Polymers
- Adhesives
- Fragrances

ML4-F1 FEATURES

- High sampling rate (400 samples/second) for short duration flows.
- Volumetric flow rate measurement independent of fluid viscosity, density and temperature.
- No moving parts for zero maintenance.
- Wide range of process connection types; threaded, flanged, tri-clamp or compression.
- Bi-directional flow measurement.
- No pressure drop through sensor.
- Minimal straight pipe run required.
- Every sensor is factory wet-calibrated.

Mounting	Sensor Mount
4-20mA Output	Y (optional)
ON-OFF Output	N
Digital Input	3
Digital Output	4
Pulse & Frequency Output	Y
Empty Pipe Detection	Y
Interface	PC USB
Batch Function	Y
Communications	RS485/Profibus (optional)
Diagnostic Functions	Y
Power Supply	10-33VDC

ENGINEERING SPECIFICATIONS

ML4-F1 Converter Specifications

- Body Material: 304 S.S.
- Environmental Rating: NEMA 6
- Cable Gland: 2 x PG9
- Ambient Temperature: -4 to 140 °F (-20 to 60°C)
- Pulse Frequency Output: 1250 Hz / 100mA
- Digital Input/Output: 5 open collector, programmable as input or output
- Current Output: 4-20mA - RL 500Ω passive

- Communication Interface: RS485/PROFIBUS DP (optional)
- Flow Direction: Bi-Directional
- Inputs and outputs galvanically isolated
- Diagnostic Functions
- Empty Pipe Detection
- PC USB Interface (software and cable optional)
- High Speed Batching
- Repeatability: better than 0.01%
- Power Supply: 18 - 30VDC

MS501 Flow Sensor Specifications

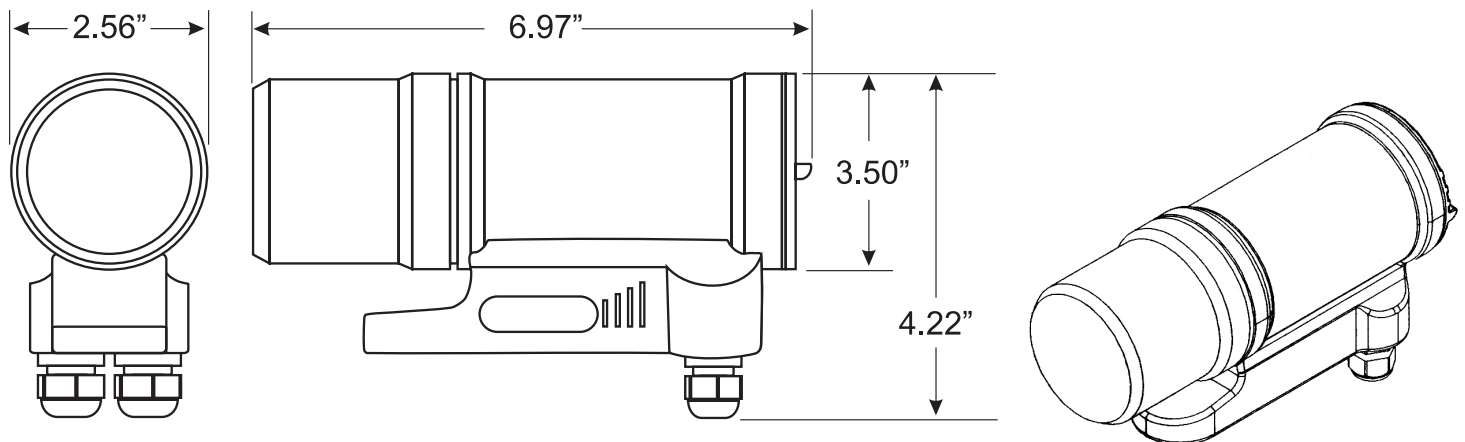
- Body Material: 304 S.S. (316 S. S. opt.)
- Size: 1/8" to 3/4" (3 - 20 mm)
- Flow Range: 0.034 to 49.8 GPM
- Pressure: 230 PSI (higher pressures upon request)
- Process Connection: Threaded NPT (other upon request)
- Process Connection Material: 316 S.S.
- Electrode Material: 316 S.S.*
- Flow Tube: 304 S.S. (316 S. S. opt.)
- Liner Material: PTFE
- Liquid Temperature: -4 to 212 °F
- Ambient Temperature (with ML-4F1): -4 to 140 °F
- Accuracy: ±0.2% of rate from 3 to 33 ft/sec.
- Repeatability: ±0.1%
- Number of Electrodes: 2
- Environmental Rating: NEMA 6
- Fluid Conductivity: 5 µS/cm (min)

MS2410 Flow Sensor Specifications

- Body Material: 304 S.S. (316 S. S. opt.)
- Size: 1/8" to 4" (3 - 100 mm)
- Flow Range: 0.34 to 1246 GPM
- Pressure: 230 PSI
- Process Connection: Tri-Clamp ISO 2852 (other upon request)
- Process Connection Material: 316 S.S.
- Electrode Material: 316 S.S.*
- Flow Tube: 304 S.S. (316 S. S. opt.)
- Liner Material: PTFE
- Liquid Temperature: -4 to 212 °F
- Ambient Temperature (with ML-4F1) : -4 to 140 °F
- Accuracy: ±0.2% of rate from 1 to 33 ft/sec.
- Repeatability: ±0.1%
- Number of Electrodes: 2
- Environmental Rating: NEMA 6
- Fluid Conductivity: 5 µS/cm (min)

* Hastelloy C, Platinum-Rhodium or Tantalum optional (other materials on request)

DIMENSIONS



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