The SERIES MFS & MFS2 Electromagnetic Flow Transmitters is a compact, 316 SS body, in line flowmeter with pulse and optional analog 4 to 20 mA output. It is available in a variety of flow ranges from 0.25 to 52.8 GPM (1 to 200 LPM) and process connection sizes of 1/2” and 1” NPT.

**FEATURES/BENEFITS**

- **Long life cycle with no moving parts to wear or break**
- Can be applied in applications dealing with contaminated media with no mechanical component in the flow
- Obstruction free pipe cross-section yields low pressure drop
- Unaffected by change in temperature, density, viscosity or concentration

**APPLICATIONS**

- Contaminated liquid flow monitoring
- Flow of conductive liquids
- Water & wastewater treatment
- Industrial systems
- Irrigation applications

**SPECIFICATIONS**

- **Service:** Compatible, non-coating, conductive liquids.
- **Range:** See model chart.
- **Wetted Materials:** Electrodes: 316 SS; Process connections: MFS: 316 SS; MFS2: PVDF; Measuring pipe: MFS: PEEK-GF30; Gasket: EPDM.
- **Accuracy:** MFS: ±2% of reading; MFS2: ±1% or reading.
- **Repeatability:** 1%.
- **Temperature Limits:** MFS: Process: 32 to 194°F (0 to 90°C); Ambient: 41 to 140°F (-10 to 60°C); MFS2: Process: 140°F (5 to 60°C).
- **Pressure Limits:** MFS: 145 psi (10 bar) @ 68°F (20°C); 232 psi (16 bar); MFS2: 2X: 1.7 lb (0.77 kg); MFS-3X: 1.9 lb (0.87 kg); MFS2-1, -2, -3, -4, -5: 8 oz (226.8 g); MFS2-6: 1 lb (0.45 kg).
- **Response Time:** MFS: < 500 ms; MFS2: < 100 ms.
- **Loop Resistance:** MFS: 250 Ω.
- **Current Consumption:** MFS: Max 80 mA. MFS2: 45/64 [9.91] 17/64 [13.95] 23/64 [5.88] MFS-1X: 1.5 lb (0.68 kg); MFS-2X: 1.7 lb (0.77 kg); MFS-3X: 1.9 lb (0.87 kg); MFS2-1, -2, -3, -4, -5: 8 oz (226.8 g); MFS2-6: 1 lb (0.45 kg).
- **Power Requirements:** 24 VDC ±10%.
- **Power Consumption:** 0.6 W.
- **Output:** Frequency: Square-wave, NPN or PNP; Analog: 4 to 20 mA.
- **Loop Resistance:** 250 Ω.
- **Current Consumption:** Max 80 mA.
- **Minimum Conductivity of Medium:** MFS: 50 µS/cm.
- **Flow Indication:** LED green, flow proportional blinking.
- **Enclosure Rating:** NEMA 4 (IP65).
- **Process Connection:** See model chart.
- **Electrical Connection:** Plug connector M12x1.
- **Weight:** MFS-1X: 1.5 lb (0.68 kg); MFS-2X: 1.7 lb (0.77 kg); MFS-3X: 1.9 lb (0.87 kg); MFS2-1, -2, -3, -4, -5: 8 oz (226.8 g); MFS2-6: 1 lb (0.45 kg).

**MODEL CHART**

<table>
<thead>
<tr>
<th>Model</th>
<th>Range GPM (LPM)</th>
<th>Minimum Output Signal GPM (LPM)</th>
<th>Process Connection</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFS-11</td>
<td>0.25 to 5.3 (1 to 20)</td>
<td>0.13 (0.5)</td>
<td>1/2” NPT</td>
<td>Frequency</td>
</tr>
<tr>
<td>MFS-21</td>
<td>0.5 to 10.5 (2 to 40)</td>
<td>0.25 (1)</td>
<td>1/2” NPT</td>
<td>Frequency</td>
</tr>
<tr>
<td>MFS-31</td>
<td>2.5 to 52.8 (10 to 200)</td>
<td>1.3 (5)</td>
<td>1” NPT</td>
<td>Frequency</td>
</tr>
<tr>
<td>MFS-12</td>
<td>0.25 to 5.3 (1 to 20)</td>
<td>0.13 (0.5)</td>
<td>1/2” NPT</td>
<td>Frequency &amp; analog</td>
</tr>
</tbody>
</table>

**ACCESSORIES**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFS-C3</td>
<td>4 pin cable socket M12x1 connect, 9.8 ft (3 m)</td>
</tr>
<tr>
<td>MFS-C5</td>
<td>4 pin cable socket M12x1 connect, 16.4 ft (5 m)</td>
</tr>
<tr>
<td>MFS-C10</td>
<td>4 pin cable socket M12x1 connect, 32.8 ft (10 m)</td>
</tr>
</tbody>
</table>

**MAGNETIC INDUCTIVE FLOW SENSOR**

No Moving Parts, Frequency and 4 to 20 mA Output, Maintenance-Free