The Series IEFS Insertion Electromagnetic Flow Sensor comes in brass or stainless steel allowing it to handle a wide range of pressures and temperatures, as well as a variety of available saddle fittings, Series SDF, to fit pipe sizes 3 to 24˝. The IEFS-1XX has an isolation valve which allows hot-tap installation. Additional options for this flow meter include adapter fittings and a reverse flow output. The Series IEFS is great for “dirty” water applications or any application where moving parts may be an issue.

**PRINCIPLE OF OPERATION**

The IEFS is a liquid flow meter that uses a magnetic field to measure flow. As conductive fluids flow through the magnetic field, a voltage is generated which is measured and translated into a pulse frequency output signal. This signal can then be used with the Series BAT to produce a 4 to 20 mA analog signal, or the Series RTI to display rate and total.

**APPLICATIONS**

- Conductive Liquids
- Municipal
- Industrial
- Irrigation

**ACCESSORIES**

- Series BAT, Blind Analog Transmitter, converts pulse output to 4 to 20 mA analog output. Unit is loop powered, fits on the enclosure of the meter, and is field spannable.
- Series RTI, Rate Total Indicator, converts pulse output to 4 to 20 mA analog output with local flow rate and totalization display. Unit is loop powered, can fit on the enclosure of the meter, and provides a high/low flow alarm.
- Series PWD, Pulse Divider, for use with pacing electronic metering pumps. Unit divides the input frequency to any number from 1 to 9999 with the use of rotary switches to suit a number of metering pump inputs.

**SPECIFICATIONS**

- **Service:** Compatible clean or dirty non-coating, conductive liquids.
- **Range:** 0.28 to 20 ft/s (0.08 to 6.09 m/s).
- **Wetted Materials:**
  - Body Shaft/Fitting: 316 SS or brass;
  - Electrodes: Hastelloy®;
  - Electrode Cap: PVDF;
  - Valve Assembly: (IEFS-1XX) Bronze (SS optional) with bronze ball valve;
  - O-ring: EPDM.
- **Accuracy:** ±1% FS.
- **Temperature Limits:**
  - Process: 32 to 200°F (0 to 93°C);
  - Ambient: 0 to 160°F (-17 to 72°C).
- **Process Connection:**
  - IEFS-0XX: 1-1/2” male NPT;
  - IEFS-1XX: 2” male NPT.
- **Pressure Limit:** 200 psi (13.8 bar).
- **Output:** Current sinking, square wave pulse, opto-isolated, 550 Hz @ 20 ft/s, 30 VDC @ 6 mA max.
- **Power Requirements:** 12 to 25 VDC @ 250 mA; Low Power: 12 to 25 VDC @ 40 mA.
- **Electrical Connection:** Terminal block.
- **Conductivity:** ≥ 20 microSiemens/cm.
- **Enclosure Material:** Housing: Die-cast powder-coated aluminum.
- **Enclosure Rating:** NEMA 4X (IP66).
- **Weight:**
  - IEFS-0SX: 6 lb (2721 g);
  - IEFS-0LB: 12 lb (5443 g);
  - IEFS-1XX: 15 lb (6804 g).

**Example Table**

<table>
<thead>
<tr>
<th>Example</th>
<th>IEFS</th>
<th>BAF</th>
<th>IEFS-DSB-BAT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Series IEFS / Size/Material</strong></td>
<td>0SB</td>
<td>0SS</td>
<td>0LB</td>
</tr>
<tr>
<td>3 to 10”</td>
<td>No Hot-Tap</td>
<td>Brass</td>
<td></td>
</tr>
<tr>
<td>3 to 10”</td>
<td>No Hot-Tap</td>
<td>SS*</td>
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</tr>
<tr>
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<td></td>
</tr>
</tbody>
</table>

**Options**

- BAF: 2” Brass Adapter Fittings (IEFS-0XX only)
- SAF: 2” SS Adapter Fittings (IEFS-0XX only)
- SVA: 316 SSS Valve Assembly (IEFS-1XX only)
- NVA: No Valve Assembly (deduct price) (IEFS-1XX only)
- RFO: Reverse Flow Output
- BPT: 1-1/2” Brass BPT Adapter (2 piece) (IEFS-0XX only)
- SPT: 1-1/2” SS BPT Adapter (2 piece) (IEFS-0XX only)
- IMM: Immersible (Urethane potted electrical components)
- LOP: Low Power (12 to 25 VDC @ 40 mA)
- EXT: 12” Extension (IEFS-XLX only)

*SS is stem and fitting. For SS valve order SVA option.

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