The FPI-X Dual Sensor Electromagnetic Flow Meter is designed for the most difficult applications accurately measuring severe swirling flows. The FPI-X is based on the popular FPI Mag® adding an innovative dual sensor configuration which enables metering flow where no other flow meter can. The FPI-X installs without service interruption making it ideal for retrofits, maintenance projects and sites never metered before.

Operators will see immediate cost savings, allowing the measurement of total station discharge or multiple pump discharge instead of measuring at each pump or not measuring at all.

The hot tap installation significantly reduces installation time eliminating the need to de-water lines or cut pipe. The flow meter can be removed in pipes under pressure for easy inspection, cleaning, calibrating, or verification. Installation costs are reduced by eliminating the need for heavy equipment or extensive manpower.

The innovative flow meter comes pre-calibrated from McCrometer’s NIST traceable Calibration Lab and requires no recalibration in the field. With no moving parts, the FPI-X’s sensors contain nothing to wear or break for years of worry-free operation. The sensor body is made from heavy-duty 316 stainless steel for maximum structural integrity and coated with a NSF certified fusion-bonded epoxy coating for operational longevity.
FPI-X™ Dual Sensor Electromagnetic Flow Meter

MEASUREMENT
Volumetric flow in filled flow conduits 12” (300 mm) to 138” (3,500 mm) utilizing two insertable electromagnetic averaging sensors. Flow indication in English Standard or Metric units.

FLOW MEASUREMENT
Method: Electromagnetic
Accuracy for Forward and Bidirectional Sensors:
± 0.5% from 1 ft/s to 32 ft/s (0.3 m/s to 10 m/s)
± 1% from 0.3 ft/s to 1 ft/s (0.1 m/s to 0.3 m/s)
Linearity: 0.3% of Reading
Repeatability: 0.2% of Range
395L sensor: forward flow measurement and reverse flow indication.

POWER REQUIREMENTS
AC: 90-265 VAC / 44-66 Hz (20 W/25 VA) or
DC: 10-35 VDC (20 W)
AC or DC must be specified at time of ordering.

MATERIALS
Fusion bonded epoxy (NSF 61 approved) coated 316 SS Stainless steel isolation valve (included)
Insertion Hardware: 316 Stainless Steel
Compression Seal: Silicone Rubber
Sensor Electrodes: 316 Stainless Steel

STANDARD OUTPUTS:
Single 1 or Dual 2 4-20mA Outputs: Galvanically isolated and fully programmable for zero and full scale (0-21mA rangability)

Two 1 or Four 2 separate digital programmable outputs: open collector transistor usable for pulse, frequency, or alarm settings.
- Volumetric Pulse
- Flow Rate (Frequency)
- Hardware Alarm
- High/Low Flow Alarms

Optional Outputs:
- Modbus 2
- Profibus 1
- HART 1

OPTIONAL OUTPUTS:
1: Available with Single 4-20mA only. Forward flow only.
2: Available with Singe or Dual 4-20mA.

ENGINEERING UNITS
Cubic Meter; Cubic Centimeter; Milliliter; Liter; Cubic Decimeter; Decaliter; Hectoliter; Cubic Inches; US Gallons; Imperial Gallons; Cubic Feet; Kilo Cubic Feet; Standard Barrel; Oil Barrel; US Kilogallon; Ten Thousands of Gallons; Imperial Kilogallon; Acre Feet; Megagallon; Imperial Megagallon; Hundred Cubic Feet, Megaliters

ISOLATION
All inputs / outputs are galvanically isolated from power supply up to 500 V

CONDUCTIVITY
Minimum conductivity of 5µS/cm

CONVERTER ENCLOSURE
IP67 Die Cast Aluminum
5.75” H x 5.75” W x 6.69” D
(14.6 cm. H x 14.6 cm. W x 17 cm D)

ELECTRICAL CONNECTIONS
Sensor: Quick-Connect (IP68)
Converter: Compression gland seals for 0.125” to 0.375” diameter round cable.

RATINGS
IP68 Submersible Sensors
IP67 Die Cast Aluminum Converter

CERTIFICATIONS AND APPROVALS
Safety: Listed by CSA to 61010-1: Certified by CSA to UL 61010-1 and CSA C22.2 No.61010-1-04
ISO 9001:2008 certified quality management system
CE: Certified (Converter Only)

ENVIRONMENTAL
Pressure / Temperature Limits:
Sensor: Flow temperate range
14° to 170° F (-10° to 77° C) @ 250 PSI
Sensor is submersible (IP68)
Electronics: Operating and storage temperature:
-4˚ to 140˚ F (-20˚ to 60˚ C)

SYSTEM OPTIONS FORWARD AND BIDIRECTIONAL
- Hastelloy® Electrodes
- DC Power
- Sun Shield
- Extended Warranties
- Additional sensor cable up to 180° (Max 200°)
- Extension to hardware clearance
- Annual Verification / Calibration
- Sensor Insertion Tool
- Stainless Steel ID Tag

KEYPAD AND DISPLAY
Can be used to access and change set-up parameters using three membrane keys and an LCD display.

Standard Configuration - This full pipe averaging flow meter comes complete with a 2 Sensor X-Design with 5’ of cable to the Junction Box, Mounting Hardware, 1 AC Converter with forward flow 20mA output, 20 feet of Submersible Cable from the Junction Box to the converter with quick connects at sensors, Stainless Steel body, 316 Stainless Steel electrodes, NSF Approved Fusion Bonded Epoxy Coating, 2-Year Warranty, (2) 2-inch Stainless Steel Ball valve and 2-inch x Close Stainless Steel nipples.
## FPI-X™ Dual Sensor Electromagnetic Flow Meter

<table>
<thead>
<tr>
<th>Pipe Size (Nominal)</th>
<th>Pipe ID Range</th>
<th>Flow Ranges (GPM Standard)</th>
<th>Standard Program Defaults</th>
<th>Hardware Clearances</th>
<th>Required Installation Clearance</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Min Pipe ID</td>
<td>Max Pipe ID</td>
<td>Min (GPM)</td>
<td>Max (GPM)</td>
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<tr>
<td>78”-138”</td>
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<td>Available - Call Factory at 1-800-220-2279</td>
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</tbody>
</table>


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**At the time of ordering, please be prepared to provide the following information:**

1. Pipe ID and Pipe OD
2. Unit of Measure (US Gallons is Default)
3. Maximum pressure

Consult factory if any chemicals are in use.