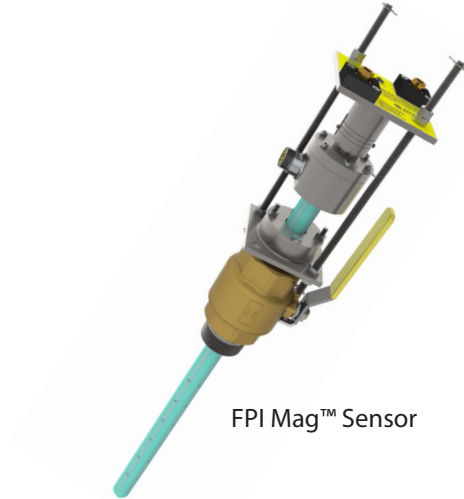


CONFIGURATION SHEET**Model 394L Bidirectional and 395L Forward Flow
with M-Series Converter**

M-Series Converter



FPI Mag™ Sensor

The FPI Mag™ (Full Profile Insertion) Electromagnetic Flow Meter is the only hot tap full profile insertion flow meter available on the market. The FPI Mag installs without service interruption making it ideal for retrofits, upgrades and maintenance projects and sites never metered before. The hot tap installation significantly reduces installation time eliminating the need to de-water lines or cut pipe.

The multi-electrode sensor delivers an accurate measurement of the full pipe profile rivaling the performance of a full-bore mag meter. The repeatable, stable measurement across the entire flow profile compensates for variable flow profiles, including swirl and turbulent conditions.

The FPI Mag is the industry's most economical flow metering solution offering unbeatable value in the cost of installation and ownership reducing installed costs by more than 45 percent in medium and large line sizes. The compact insertion design fits in confined spaces and offers complete accessibility. 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 and a single-piece design, the FPI Mag's sensor contains nothing to wear or break and is generally immune to clogging by sand, grit, or other debris. The electrodes are encased in a heavy-duty 316 stainless steel sensor body for maximum structural integrity and coated with a NSF certified 3M™ fusion-bonded epoxy coating for operational longevity.

Accurate Flow Measurement for:**Drinking Water:**

- Distribution
- Filter Balancing & Backwash
- Pump Stations
- UV Dosing
- Well Water
- Booster Stations
- Effluent

Wastewater:

- Effluent
- Recycle/Reclaim

Industrial:

- Chilled Water
- Cooling Water
- Fire Water
- Feed Water
- Raw Water
- Inlet to Surge Basin
- Effluent Wastewater

Benefits:

- **Hot Tap Installation** - No service interruption
- **Accurate** – Measures the full flow profile
- **Lower Cost** – Installed savings more than 45%
- **Robust** – No moving parts to wear or break
- **Versatile** – Great for plant maintenance, up grades and retrofits
- **Accessible** – Insertion design provides easy access
- **Virtually No Maintenance** – No field calibration required

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The full pipe averaging flow meter comes complete with Mounting Hardware, AC M-Series Converter with Dual 4-20mA output, 20 Feet of Submersible Cable with quick connect at sensor, Stainless Steel Body, 316 Stainless Steel Electrodes, NSF Approved Fusion Bonded Epoxy Coating, 2" Bronze Ball Valve (minimum of 1-7/8" port I.D.), 2" x Close Stainless Steel Nipple, 2-Year Warranty.

MEASUREMENT

Volumetric flow in filled flow conduits 4" (100 mm) to 138" (3,500 mm) utilizing insertable electromagnetic averaging sensor. 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 Range

Repeatability: 0.2% of Reading

395L sensor: forward flow measurement and reverse flow indication.

394L sensor: bidirectional flow measurement.

POWER REQUIREMENTS

AC: 90-265 VAC / 45-66 Hz (20 W/25 VA) or

DC: 10-35 VDC (21 W)

AC or DC must be specified at time of ordering.

MATERIALS

Fusion bonded epoxy (NSF 61 approved) coated 316 stainless steel

Insertion Hardware: 316 Stainless Steel

Compression Seal: Silicone Rubber

Sensor Electrodes: 316 Stainless Steel

OUTPUTS:

Dual 4-20mA Outputs: Galvanically isolated and fully programmable for zero and full scale (0-21mA)

Four 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
- Empty Pipe
- Directional Indication
- Range Indication

Maximum switching voltage: 40 VDC

Maximum switching current: 100mA

Maximum switching frequency: 1250 Hz

Insulation from other secondary circuits: 500V

ENGINEERING UNITS

Cubic Meter; Kilo Cubic Foot; Cubic Centimeter; Milliliter; Liter; Cubic Decimeter; Decaliter; Hecaliter; Cubic Inches; American Gallons; Imperial Gallons; Cubic Feet; Standard Barrel; Oil Barrel; Cubic Yard; American Kilogallon; Imperial Kilogallon; Acre Feet; Megagallon; Imperial Megagallon

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 Sensor

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
- Stainless Steel Valve
- 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

CONFIGURATION SHEET
**Model 394L Bidirectional and 395L Forward Flow
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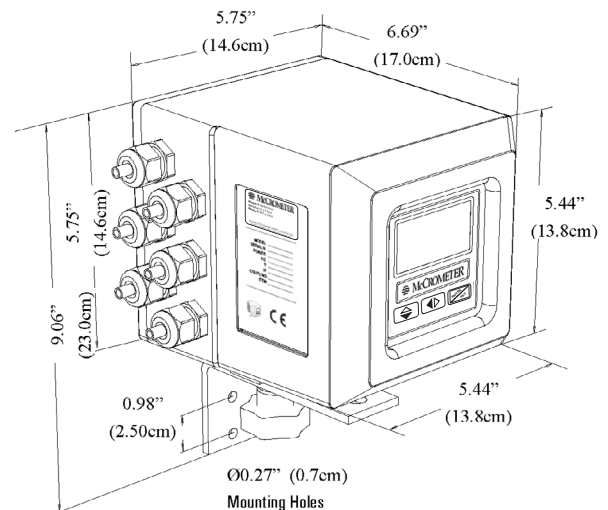
Pipe Size (Nominal)	Pipe ID Range		Flow Ranges (GPM Standard)		Standard Program Defaults		Hardware Clearance	Maximum Installation Clearance	
	Min Pipe ID	Max Pipe ID	Min (GPM)	Max (GPM)	20mA=GPM	Totalizer Units			
S = Standard (Available in Pipe Sizes 4" - 24" as shown in table below) / C = Custom (Available in Pipe Sizes 4" - 138") Standard Length Hardware and Installation Clearance Dimensions are based on a 4" Maximum Height Coupling and Pipe Schedule Standard									
4"	3.63	4.99	12	1280	600	KGAL	28"	51"	
6"	5.00	6.99	26	2800	1300	KGAL	28"	51"	
8"	7.00	8.99	47	5000	2350	KGAL	28"	55"	
10"	9.00	10.99	80	8000	4000	KGAL	28"	55"	
12"	11.00	12.99	110	11000	5500	KGAL	28"	59"	
14"	13.00	14.99	150	15000	7500	KGAL	28"	59"	
16"	15.00	16.75	190	20000	9500	KGAL	28"	59"	
18"	16.76	18.80	240	26000	12000	KGAL	28"	63"	
20"	18.81	20.99	300	32000	15000	KGAL	28"	63"	
22"	21.00	22.49	400	38000	20000	KGAL	28"	67"	
24"	22.50	25.99	410	46000	20500	KGAL	28"	67"	
30"	26.00	31.99	600	72000	30000	KGAL	28"	71.25"	
36"	32.00	37.99	1000	104000	50000	KGAL	28"	77.25"	
42"	38.00	43.99	1300	141000	65000	KGAL	28"	83.25"	
48"	44.00	49.99	1700	185000	85000	KGAL	28"	89.25"	
54"	50.00	55.99	2200	234000	110000	KGAL	28"	95.25"	
60"	56.00	61.99	2600	289000	130000	KGAL	28"	101.25"	
66"	62.00	67.99	3200	349000	160000	KGAL	28"	107.25"	
72"	68.00	73.99	3800	416000	190000	KGAL	28"	113.25"	
78"-138"	74.00	138.00	Available - Call Factory at 1-800-220-2279						

required information

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.


M-Series Converter Dimensions