



Marketa H. Killingbeck

Department of Purchasing and Contracting
NON-COMPETITIVE PROCUREMENT REQUEST FORM

Form 100-1000-1000-1000
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Requesting Department: Watershed Management
Department Contact Person: Garry Kinnemore Telephone: 678 614-4441
Email: gkinnemore@dekalbcountyga.gov

Requisition Number: _____ Suggested Supplier: The Avanti Company
Estimated Amount of Purchase: ~~\$ 115,752.00~~ \$116,607.00
Detailed Description of the Goods or Services to be purchased: McCrometer 84" Model 395L finished water flow meters

Emergency (For Emergency Requests, Please check this box and answer all questions below.)

1. Date and Time of Emergency Occurrence: _____

2. Please state the nature of the emergency posing a risk to public health, welfare, safety or resources:

3. State how the Estimated Amount was determined to be Fair and Reasonable (attach supporting documentation):

Sole Source (Please check box and answer all of the following completely.)

1. Provide an explanation why the product, service or supplier requested is the only method that can satisfy the requirements. Please explain why alternatives are unacceptable. Be specific with regard to specification, features, characteristics, requirements, capabilities and compatibility. (Attach additional documents, if necessary.):

The State of Georgia requires DeKalb County to accurately measure the volume of potable water discharge by Scott Candler. The current flow meters are inaccurate. The McCrometer FPI (Full Profile Insertion) Mag accurate to 0.5%

2. Will this purchase obligate us to a particular vendor for future purchases? (Either in terms of maintenance that only this vendor will be able to perform and/or if we purchase this item, will we need more "like" items in the future to match this one?) Explain in detail.

1. The McCrometer FPI (Full Profile Insertion) Mag flow-meter is patented. It is the only 0.5% accuracy, hot-tapped, full-profile insertion mag meter in the market. Hot-tapped installation requires no line shutdown resulting in significant construction cost savings

3. Explain the impact to the County or Public if this request is not approved.

Total cost for two 84" venturi meters would total \$400,000.00. The total cost for two insertion mag meters that can be installed in our preexisting taps is quoted at \$113,666.00. This represents significant savings for DeKalb County

I hereby request that this non-competitive procurement request be approved for the purchase of the above stated work, material, equipment, commodity, or service.

Department Director (Typed/Printed Name) Reginald Wells Signature: Reginald Wells Date: 4/9/20

Do Not Write Below -- for the Department of Purchasing and Contracting Use Only

Recommendation and Comments

Approved Not Approved

Signature: [Signature], Director, Department of Purchasing and Contracting Date: 5/30/2020

Procurement Agent [Signature] 5/12/20

Procurement Manager [Signature] 5/15/2020

Print Form



Public Notice of Proposed Award of Sole Source Procurement

Section A – Description of Proposed Sole Source Procurement

Description of Supplies/Services: Purchase of two (2) McCrometer 84" Model 395L finished water flow meters.

Demonstration of Contractor's Unique Qualifications: The Avanti Company is the exclusive representative that is responsible for all product sales and services for the McCrometer product line which includes the Full Insertion Mag Flow Meter for the State of Georgia.

Section B – To Be Completed by the Department of Purchasing and Contracting

Market Survey Results

Date Public Notice posted on website: May 1, 2020

Date Public Notice closed: May 8, 2020

Review of Offers

Were any offers received (Yes/No): No

Number of offers received: 0


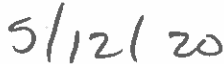
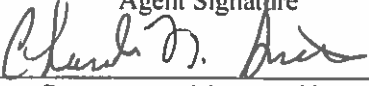

Responders: None

Purchasing Agent review and recommendation: The Avanti Company, founded by Paul and Justine Devlin, is located in Avon Park, Florida. They have been servicing the Florida measurement and control market since 1977. The Avanti Company is responsible for all McCrometer product sales, service that includes field repairs, start-ups and calibration. During the sole source process, the Law Department must review the vendor's terms and conditions. John Broadway with the Avanti Company informed Purchasing that their terms are Net 30 days and that they don't have conditions other than what is printed at the bottom of their invoices. The statement reads, "Please provide 2020 resale certificate, if applicable. If collection and/or litigation is necessary to collect the amount owed or enforce any other rights from this invoice, Avanti is entitled to any and all attorney's fees and costs incurred therein. We accept all major credit cards. All returns are subject to 25% restocking fee. See packing slip for details." Due to the lack of terms and conditions from the Avanti Company, they agreed to use DeKalb County's purchase order terms.

It is my recommendation to approve the sole source because the State of Georgia requires DeKalb County to accurately measure the volume of potable water discharged by Scott Candler Wastewater Plant. The McCrometer FPI (Full Profile Insertion) Mag flow-meter is the only full-profile insertion mag meter in the market that provides 0.5% accuracy and hot-tapped installation. Hot-tapped installation requires no line shutdown resulting in significant construction cost savings for the County. The Avanti Company has not done business with DeKalb County until now.



DeKalb County
GEORGIA

	
Agent Signature	Date
	
Procurement Manager Signature	Date



3255 West Stetson Avenue
Hemet, CA 92545-7799 USA
Tel 951 652-6811
Fax 951 652-3078

April 6, 2020

DeKalb County
1300 Commerce Drive
Decatur, GA. 30030

Atten.: Purchasing & Contracting,

Re; Sole Source Letter

Please be advised that the Avanti Company is the exclusive representative for McCrometer product line which includes the Full Profile Insertion Mag Flow Meter in the State of Georgia. This meter is patented (US Patent # 8,136,410) and is NFS-61 Certified for potable water.

McCrometer acquired Marsh McBirney Company (Full pipe meters) products and now manufactures this product line in Hemet, California. The Avanti Company is our exclusive representative and is responsible for all product sales, service that includes field repairs, start-ups and calibration. This "Sole Source Letter" remains in effect until further notice.

Sincerely

A handwritten signature in black ink that reads "John W. Callison".

John W. Callison
RSM: Municipal Water, Waste Water and Industrial Markets, Southeast.
McCrometer, Inc.
Office: 817-244-2859
Cell: 817-729-6465
Email: johnw@mccrometer.com
Web site: www.mccrometer.com



Quotation

22 South Lake Avenue
 Avon Park, FL 33825-3902
www.avanticompany.com

Toll Free: 1-800-284-5231
 Fax: 863-453-0085
 E-Mail: info@avanticompany.com

To: Dekalb County Purchasing Department
 1300 Commerce Drive
 Decatur, Georgia 30030
sasmith2@dekalbcountyga.gov

We are pleased to quote the following:

Quote # JB-022720-0307
REVISÉD 06.25.20
Date 6/25/20
Terms Net 30 Days
Prices FOB Factory
Delivery 4-6 weeks
Phone # 404-965-9600
Cell # _____
Reference # Dekalb Finished Water

Item	Quantity	Description	Unit Price	Total
A	2	McCrometer 84" Model 395L Forward Flow, Full Profile Insertion Mag Meter complete with mounting hardware, AC-ProComm Series Converter with Dual 4-20mA outputs, 425ft of dual submersible cable with quick connect at sensor, Stainless Steel Body, 316 Steel Electrodes, NSF Approved Fusion Bonded Epoxy Coating, 2" Stainless Steel Valve, 2" x Close Stainless Steel Nipple, 2-Year Warranty. ***** Max Velocity/Flow, 9fps/225 MGD ***** *Standard lengths of 50ft, 75ft, 100ft, 125ft, 150ft, 175ft, 200ft & 500ft of cable at \$3.28 per foot. **Custom cable lengths will be \$5.20 per foot	\$50,059.00	\$100,118.00
B	1	One day on site installation, start-up, and verification by a Factory Certified Technician-Includes Travel and Expenses	\$3,142.00	\$3,142.00
C	1	Recommended Insertion Tool, p/n 75032, for 1/2" heavy sensor installation hardware. Used for greater than 72" sensor length. Wrench size 3/4".	\$1,120.00	\$1,120.00
D	2	Factory 3-year extended warranty, size over 72" (5 years total)	\$5,686.00	\$11,372.00
E	1	Freight Estimate-(exact freight to be billed)	\$855.00	\$855.00
Note: 2" Hot tap & saddle must be in place before Technician arrives to perform the install. Sensor Data Sheet must be completed before we place an order with the factory.				\$116,607.00
***above pricing does not include freight charges.				

Quoted By: *John Broadway* (John Broadway) / **Accepted By:** _____

Prices quoted above are current prices in effect and are subject to acceptance within 30 days from the above date, and are firm on an order resulting from this quote scheduled to ship within 60 days from date of order entry. All items quoted will be produced in strict accordance to any Government Regulation in effect including Fair Labor-Standards Act, OSHA, and Equal Employment Opportunity Executive orders. Delivery schedules are contingent upon strikes, accidents, fires, availability of materials and all other causes beyond our control.

From: [John Broadway](#)
To: [Thomas, Sophia D.](#)
Subject: RE: Quote JB012920-0107 The Avanti Company SOLE SOURCE
Date: Thursday, June 25, 2020 4:00:49 PM
Attachments: [image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)
[image008.png](#)
[image009.png](#)
[image010.png](#)
[image011.png](#)
[Dekalb 395-84 04.06.20 REVISED 06.25.20.pdf](#)

Ms. Thomas,

Yes the quote is still valid. See attached with freight estimate. Any indication when this might go to the commission?

Thank you,

John Broadway

The Avanti Company
Territory Manager
North Florida, Georgia, & Alabama
M 850-321-7877
O 800-284-5231
jbroadway@avanticompany.com
www.avanticompany.com

“Metering solutions and service since 1977”



From: Thomas, Sophia D. <sdthomas@dekalbcountyga.gov>
Sent: Wednesday, June 24, 2020 10:39 AM
To: John Broadway <jbroadway@avanticompany.com>

"INSTRUCTIONS AND CONDITIONS"

1. Acceptance of this order shall constitute acceptance of the terms and conditions upon the established effective start date. The Contract agreement together with the Supplier's written quotation and/or Sealed Bid/Request for Proposal and/or formal agreement form a binding agreement based upon the agreed terms between the parties.
2. Delivered orders are issued under terms of the numbered Contract agreement indicated on the face hereof; the supplier is required to deliver the commodities and/or services exactly and in strict accordance with the order. Substitutions of commodities and/or quantities ordered are strictly and firmly prohibited.
3. If for any reason, the supplier is unable to comply or supply in strict compliance with this order, the Department of Purchasing and Contracting is to be notified immediately of all factors involved.
4. No changes in conditions, prices, quantities or deliveries will be made without specific authorization; changes or modifications to the underlying transactions shall be in writing from the Department of Purchasing and Contracting. The Department of Purchasing & Contracting is the only authority for transactions under this order. The supplier shall not accept contrary instructions or conditions from any source other than the Department of Purchasing & Contracting. Should the supplier receive, from any other source, contrary instruction or conditions, the Department of Purchasing & Contracting should be notified immediately.
5. Supplier's invoice must describe the article and/or services exactly as shown on this order. The purchase order number must appear on the invoice, and/or delivery ticket, packing list and shipper's bill of lading related to this order, in addition to the name of the requesting department to whom delivery of goods and/or services are to be made.
6. Total price shown on this order shall include all delivery costs to the delivery point shown on the order.
7. Invoices are not paid until items and/or services on the invoice have been received, evaluated, tested and approved by the requesting department.
9. The County is exempt from Georgia Sales Tax and Federal Excise Tax. Exemption certificates will be issued upon request.
10. The County may cancel this Contract agreement at any time, in whole or in part, for the County's convenience, lack of funding or Supplier's failure to fulfill the contractual obligations in any respect.
11. The payment terms adopted by DeKalb County are Net 30 unless otherwise established by law or by contract. Suppliers may obtain more favorable payment terms by specifying cash discount terms on the invoice as stated in their submitted sealed bids/proposals.
12. When accepted in electronic form, this Contract agreement and all related electronic documents shall be governed by the provisions of Electronic Signatures in Global and National Commerce Act (E-Sign Act).
13. This Contract agreement and all related documents are considered public record by the County and shall be disclosed upon request pursuant to the Georgia Open Records Act, O.C.G.A. § 50-18-7- et seq.

From: [John Broadway](#)
To: [Thomas, Sophia D.](#)
Cc: [Killingbeck, Marketa H](#); [Stroman, Valencia D.](#)
Subject: RE: Quote JB012920-0107 The Avanti Company SOLE SOURCE
Date: Tuesday, April 28, 2020 2:50:48 PM
Attachments: [image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)
[image007.jpg](#)
[image008.png](#)
[image009.png](#)
[image010.png](#)
[image011.png](#)
[PO Terms.pdf](#)

Ms. Thomas,

The Avanti Company agrees to the terms and conditions of Dekalb County as per the attached you sent earlier.

Thank you,

John Broadway

The Avanti Company

Territory Manager

North Florida, Georgia, & Alabama

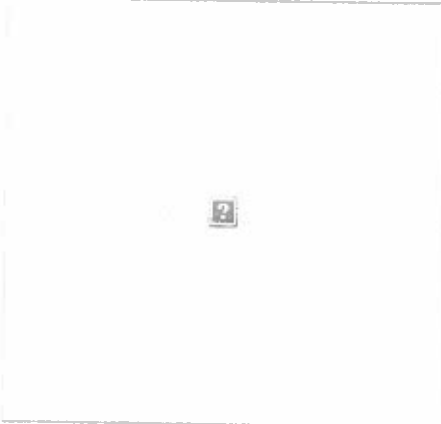
M 850-321-7877

O 800-284-5231

jbroadway@avanticompany.com

www.avanticompany.com

"Metering solutions and service since 1977"



From: Thomas, Sophia D. <sdthomas@dekalbcountyga.gov>

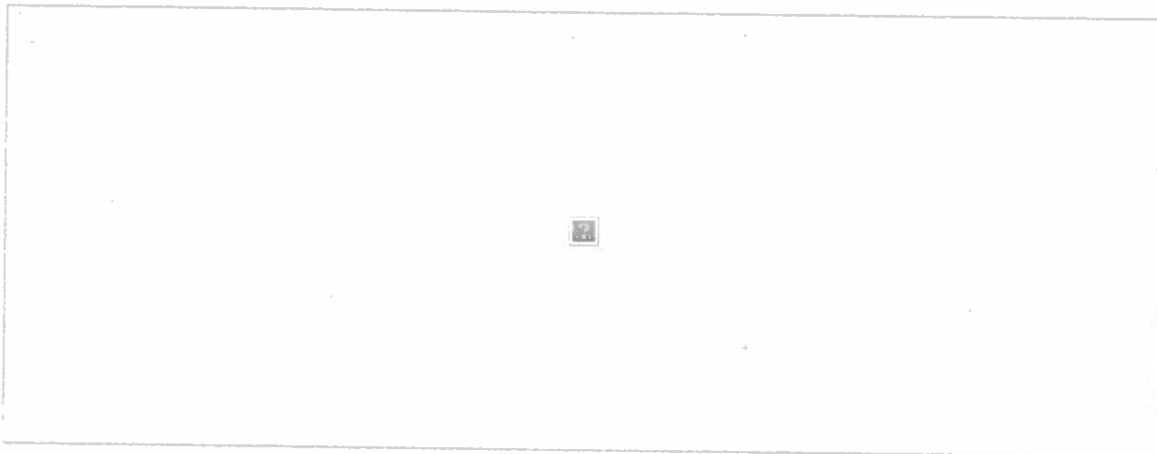
Sent: Tuesday, April 28, 2020 12:39 PM

To: John Broadway <jbroadway@avanticompany.com>

Cc: Killingbeck, Marketa H <mhkilllingbeck@dekalbcountyga.gov>; Stroman, Valencia D. <vstroman@dekalbcountyga.gov>

Subject: RE: Quote JB012920-0107 The Avanti Company SOLE SOURCE

To my knowledge, Ms. Killingbeck should be your point of contact. She's cc'd on the email thread.



From: John Broadway <jbroadway@avanticompany.com>

Sent: Tuesday, April 28, 2020 12:37 PM

To: Thomas, Sophia D. <sdthomas@dekalbcountyga.gov>

Cc: Killingbeck, Marketa H <mhkilllingbeck@dekalbcountyga.gov>; Stroman, Valencia D. <vstroman@dekalbcountyga.gov>

Subject: RE: Quote JB012920-0107 The Avanti Company SOLE SOURCE

Ms. Thomas,

Let me know who I should contact to get an answer. If I read Term #6 correctly, then it appears we need to include freight in the total. I have requested a freight estimate from the factory.

Thank you,

John Broadway

The Avanti Company

Territory Manager

North Florida, Georgia, & Alabama

M 850-321-7877

O 800-284-5231

jbroadway@avanticompany.com

www.avanticompany.com

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From: Thomas, Sophia D. <sdthomas@dekalbcountyga.gov>
Sent: Tuesday, April 28, 2020 12:20 PM
To: John Broadway <jbroadway@avanticompany.com>
Cc: Killingbeck, Marketa H <mhkilllingbeck@dekalbcountyga.gov>; Stroman, Valencia D. <vstroman@dekalbcountyga.gov>
Subject: RE: Quote JB012920-0107 The Avanti Company SOLE SOURCE

Thanks. Unfortunately, I cannot provide an answer about the freight cost. That is a question for the user department.



From: John Broadway <jbroadway@avanticompany.com>
Sent: Tuesday, April 28, 2020 12:17 PM
To: Thomas, Sophia D. <sdthomas@dekalbcountyga.gov>
Cc: Killingbeck, Marketa H <mhkilllingbeck@dekalbcountyga.gov>; Stroman, Valencia D. <vstroman@dekalbcountyga.gov>
Subject: Re: Quote JB012920-0107 The Avanti Company SOLE SOURCE

Ms. Thomas,

I believe so but let me send to my office for review and I will give you a formal response if they are acceptable. Also, can the freight be pre-pay and add? We were not asked to provide a freight estimate and the quote did not include freight. We can request a freight estimate if needed.

Thank you,

John Broadway
Territory Manager
The Avanti Company
850-321-7877

From: Thomas, Sophia D. <sdthomas@dekalbcountyga.gov>
Sent: Tuesday, April 28, 2020 12:10:05 PM
To: John Broadway <jbroadway@avanticompany.com>
Cc: Killingbeck, Marketa H <mhkilllingbeck@dekalbcountyga.gov>; Stroman, Valencia D. <vstroman@dekalbcountyga.gov>
Subject: RE: Quote JB012920-0107 The Avanti Company SOLE SOURCE

Hi John,

I wanted to know that since Avanti does not have standard terms and conditions, would you be willing to accept DeKalb County's purchase order terms for this sole source purchase?



From: John Broadway <jbroadway@avanticompany.com>
Sent: Monday, April 20, 2020 5:00 PM
To: Stroman, Valencia D. <vstroman@dekalbcountyga.gov>
Cc: Killingbeck, Marketa H <mhkilllingbeck@dekalbcountyga.gov>; Gilbert, Sonia A. <sagilbert1@dekalbcountyga.gov>; Thomas, Sophia D. <sdthomas@dekalbcountyga.gov>; Smith, Sandy A. <sasmith2@dekalbcountyga.gov>
Subject: RE: Quote JB012920-0107 The Avanti Company SOLE SOURCE

Good Afternoon,

I hope this note finds you and your family well. Is there any information you still need to proceed with a purchase order for the flowmeters? Do you have a possible date when the order might be placed? Let me know if there is anything else you need. Have a great week.

Thank you,

John Broadway

The Avanti Company

Territory Manager

North Florida, Georgia, & Alabama

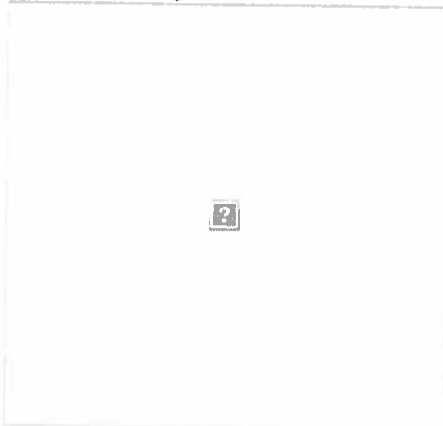
M 850-321-7877

O 800-284-5231

jbroadway@avanticompany.com

www.avanticompany.com

"Metering solutions and service since 1977"



From: Stroman, Valencia D. <vsstroman@dekalbcountyga.gov>

Sent: Wednesday, April 15, 2020 11:15 AM

To: John Broadway.<jbroadway@avanticompany.com>

Cc: Killingbeck, Marketa H <mhkillinglebeck@dekalbcountyga.gov>; Gilbert, Sonia A. <sagilbert1@dekalbcountyga.gov>

Subject: RE: Quote JB012920-0107 The Avanti Company SOLE SOURCE

Thanks so much. I will send to the Purchasing and Contracting Department.

Best Regards,

Valencia D. Stroman

Fiscal Assistant

DeKalb County Department of Watershed Management

1580 Roadhaven Drive
Stone Mountain, Georgia 30083
vstroman@dekalbcountyga.gov

770-621-3530

DeKalbCountyGA.gov



From: John Broadway <jbroadway@avanticompany.com>

Sent: Wednesday, April 15, 2020 11:13 AM

To: Stroman, Valencia D. <vstroman@dekalbcountyga.gov>

Cc: Killingbeck, Marketa H <mhkilllingbeck@dekalbcountyga.gov>; Gilbert, Sonia A. <sagilbert1@dekalbcountyga.gov>

Subject: RE: Quote JB012920-0107 The Avanti Company SOLE SOURCE

Ms. Stroman,

Our Terms are Net 30 days. We don't really have conditions other than what is printed on the bottom of our invoices. I've provided a snapshot below:

Please provide 2020 resale certificate, if applicable. If collection and/or litigation is necessary to collect the amount owed or enforce any other rights from this invoice Avanti is entitled to any and all attorney's fees and costs incurred therein.

We accept all major credit cards. All returns are subject to 25% restocking fee. See packing slip for details. Thank You

John Broadway

The Avanti Company

Territory Manager

North Florida, Georgia, & Alabama

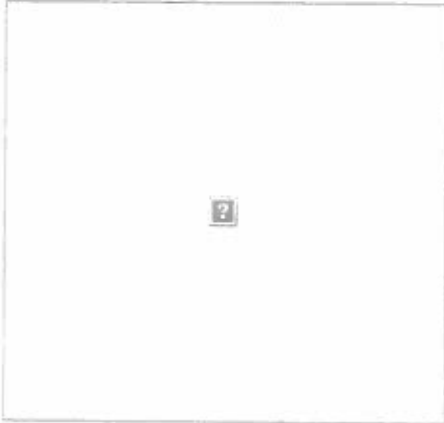
M 850-321-7877

O 800-284-5231

jbroadway@avanticompany.com

www.avanticompany.com

"Metering solutions and service since 1977"



From: Stroman, Valencia D. <vstroman@dekalbcountyga.gov>

Sent: Friday, April 10, 2020 1:38 PM

To: John Broadway <jbroadway@avanticompany.com>

Cc: Killingbeck, Marketa H <mhkilligbeck@dekalbcountyga.gov>; Gilbert, Sonia A. <sagilbert1@dekalbcountyga.gov>

Subject: Quote JB012920-0107 The Avanti Company SOLE SOURCE

Importance: High

Good Afternoon,

I hope all is well with you these days. Our Purchasing and Contracting Department is requesting your Terms and Conditions. Thanks.

Best Regards,

Valencia D. Stroman

Fiscal Assistant

DeKalb County Department of Watershed Management

1580 Roadhaven Drive
Stone Mountain, Georgia 30083
vstroman@dekalbcountyga.gov

770-621-3530

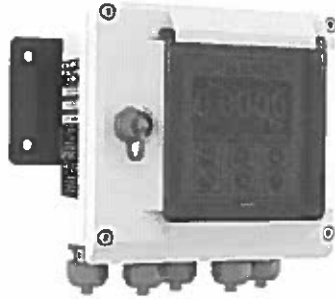
DeKalbCountyGA.gov



FPI Mag® Sensor



ProComm® Converter



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 and extensive manpower.

The innovative flow meter comes pre-calibrated from McCrometer's NIST traceable calibration labs 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.

MUNICIPAL WATER AND WASTEWATER

The FPI Mag Full Profile Insertion mag meter supports the following water and wastewater treatment applications:

Water

- Distribution
- Effluent
- Filter balancing and backwash
- Pumping stations
- UV dosing
- Wells and booster stations

Wastewater

- Effluent
- Recycle / reclaim

The FPI Mag is ideal for chilled water in campus style facilities, hospitals, airports, hotels, casinos, etc.

INDUSTRIAL FACILITIES

The FPI Mag is also suitable for a variety of industrial facilities: power plants (including cogeneration), paper mills, chemical & petrochemical plants, metals & mining, and food & beverage.

Applications Include

- 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, upgrades and retrofits
- **Accessible** - Insertion design provides easy access
- **Virtually No Maintenance** - No field calibration required



FPI MAG PART NUMBER MATRIX

39								
SINGLE DIRECTION / BIDIRECTIONAL								
394 - Bidirectional	4							
395 - Single Direction	5							
STOCK BODY OR CUSTOM LENGTH								
Stock Body Length (4-24")	S							
Custom Body Length	C							
NOMINAL LINE SIZE								
4 in	004							
6 in	006							
8 in	008							
10 in	010							
12 in	012							
14 in	014							
16 in	016							
18 in	018							
20 in	020							
22 in	022							
24 in	024							
30 in	030							
36 in	036							
42 in	042							
48 in	048							
54 in	054							
60 in	060							
66 in	066							
72 in	072							
Contact Factory for Larger Line Sized		Larger						
ELECTRODE MATERIAL OPTIONS								
5316 Stainless Steel (Standard)	S							
Hastelloy	H							
CABLE CONNECTOR OPTIONS								
Quick Connect (Standard)	Q							
Strain Relief	R							
REMOTE CABLE LENGTH OPTIONS								
25 feet (Standard) *	025							
50 feet	050							
75 feet	075							
100 feet	100							
125 feet	125							
150 feet	150							
175 feet	175							
200 feet *	200							
500 feet *	500							
Custom Length Cable [User Specified]	CST							

* Maximum cable lengths:
 Battery powered converter cable: 25 feet
 Model 394: 200 feet
 Model 395: 500 feet

continued next page





Specification Sheet

FPI Mag Flow Meter with ProComm Converter

CONVERTER POWER OPTIONS	
AC Power	A
DC Power	D
Battery Power [25ft remote cable max]	B
Solar Power, Battery Backup [25ft remote cable max]	S
CONVERTER OUTPUT OPTIONS	
Dual 4-20mA Analog, Dual Digital (Standard)	1
Modbus + STD (Two 4-20, two Dig)	2
Hart + STD (Two 4-20, two Dig)	3
Datalogger/BIV + STD (Two 4-20, two Dig)	4
Datalogger/BIV + Modbus + STD (Two 4-20, two Dig)	5
Datalogger/BIV + Hart + STD (Two 4-20, two Dig)	6
AMI Smart Output + STD (Two 4-20, two Dig)	7
Datalogger/BIV + AMI Smart Output + STD (Two 4-20, two Dig)	8
AMI Smart Output + Dig Out + Datalogger (Battery power only)	9
Digital Out + Datalogger (Standard Battery Power only)	0
BALL VALVE OPTIONS	
2" NPT SS Ball Valve	N
2" BSP Brass Ball Valve	B
No Valve, NPT Hardware	X
No Valve, BSP Hardware	Y
SMART OUTPUT PROTOCOL OPTIONS *	
No AMI Outputs	-
Sensus Protocol (6ft cable, Nicor Connector hardwired only)	SEN
Itron 6 digit Protocol (6ft cable, Nicor Connector hardwired only)	ITR6
Itron 9 digit Protocol (6ft cable, Nicor Connector hardwired only)	ITR9
HAZARDOUS LOCATION	
Class I, Division 2, Groups A-D, T5	HL

* Smart Output protocol options require selection of converter output option 7, 8, or 9.



FLOW METER SPECIFICATIONS

The full pipe averaging flow meter comes complete with Mounting Hardware, AC Converter with Dual 4-20mA output, 25 Feet of Dual Submersible Cables with quick connects at sensor, Stainless Steel Body, 316 Stainless Steel Electrodes, NSF Approved Fusion Bonded Epoxy Coating, 2" Stainless Steel 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
Calibrated accuracy for forward and bidirectional sensors	<ul style="list-style-type: none"> • ±0.5% from 1 f/s to max velocity (on next page), up to ±1% for 0.3 to 1 f/s • ±1% for reverse flow
Linearity	0.3% of Range
Repeatability	0.2% of Reading
Direction measurement	<ul style="list-style-type: none"> • 395 sensor - Forward flow measurement and reverse flow indication • 394 sensor - bidirectional flow measurement

Materials

Coating	Fusion bonded epoxy (NSF 61 approved) coated 316 stainless steel
Insertion hardware	316 Stainless Steel
Compression seal	Silicone Rubber
Sensor electrodes	316 Stainless Steel

Temperature Range

Operation	-10 to 60°C (14 to 140°F) up to 250 PSI
Storage	-15 to 60°C (5 to 140° F)
	Note regarding storage: During freezing conditions and when meter is not in use, sensor must be removed from pipe and stored in dry conditions.
	NOTE: Damage to the sensor caused by allowing the sensor freeze in the pipe is not covered by the warranty.

Electrical Connections

<ul style="list-style-type: none"> • Quick Connect • Compression gland seals
--

IP Rating

Standard model	<ul style="list-style-type: none"> • Quick Connect (IP68) • Compression gland seals (IP68)
HL model	<ul style="list-style-type: none"> • Quick Connect (IP67) • Compression gland seals (IP67)

Sensor Submersibility Depth

With standard quick connect	1.8 m (6 ft.)
With optional strain relief cable	9 m (30 ft.)





Specification Sheet

FPI Mag Flow Meter with ProComm Converter

Certifications and Approvals

Standard Model

- ISO 9001:2015 certified quality management system
- NSF/ANSI/CAN 61 & NSF/ANSI 372
- Certified by MET to UL 61010-1

HL Model

- ISO 9001:2015 certified quality management system
- NSF/ANSI/CAN 61 & NSF/ANSI 372
- Certified by MET to UL 61010-1 and MET C22.2 No. 61010-1-04
 - Class I, Division 2, Groups A-D, T5
 - Class I, Zone 2, IIC T5



System Options

- Hastelloy® electrodes
- Additional sensor cable up to 475' (500' max for model 395 and 200' max for model 394)
- Extension to hardware clearance
- Annual verification / calibration
- Sensor insertion tool
- Stainless steel ID tag



Specification Sheet

FPI Mag Flow Meter with ProComm Converter

FLOW METER PIPE SIZES AND FLOW RANGES

Pipe Size (Nominal)	Pipe ID Range		Flow Ranges (GPM Standard)		Standard Program Defaults ¹	Minimum Clearance Required During Installation ²	Velocity Range ³ (f/s)		
	Min Pipe ID	Max Pipe ID	Min (GPM) ¹	Max (GPM) ¹	20mA				
S = Standard (Available in 395 models Pipe Sizes 4" - 24" as shown in table below) C = Custom (Available in all 394 and 395L models 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 GPM	51"	0.3 - 32		
6"	5.00	6.99	26	2800	1300 GPM	51"	0.3 - 32		
8"	7.00	8.99	47	5000	2350 GPM	55"	0.3 - 32		
10"	9.00	10.99	80	8000	4000 GPM	55"	0.3 - 32		
12"	11.00	12.99	110	11000	5500 GPM	59"	0.3 - 32		
14"	13.00	14.99	150	15000	7500 GPM	59"	0.3 - 32		
16"	15.00	16.75	190	20000	9500 GPM	59"	0.3 - 32		
18"	16.76	18.80	240	26000	12000 GPM	63"	0.3 - 32		
20"	18.81	20.99	300	28000	15000 GPM	63"	0.3 - 28		
22"	21.00	22.49	400	30000	20000 GPM	67"	0.3 - 25		
24"	22.50	25.99	410	33000	20500 GPM	67"	0.3 - 23		
30"	26.00	31.99	600	44000	30000 GPM	71.25"	0.3 - 20		
36"	32.00	37.99	1000	48000	50 KGPM	77.25"	0.3 - 15		
42"	38.00	43.99	1300	56000	65 KGPM	83.25"	0.3 - 13		
48"	44.00	49.99	1700	62000	85 KGPM	89.25"	0.3 - 11		
54"	50.00	55.99	2200	79000	110 KGPM	95.25"	0.3 - 11		
60"	56.00	61.99	2600	97000	130 KGPM	101.25"	0.3 - 11		
66"	62.00	67.99	3200	106000	160 KGPM	107.25"	0.3 - 10		
72"	68.00	73.99	3800	127000	190 KGPM	113.25"	0.3 - 10		
78"-138"	74.00	138.00	Available - Call Factory at 1-800-220-2279						

¹ Default totalizer units measured as KGAL.

² Hardware clearance after installation for all sizes is 28".

³ Flow temperature range -10° to 60° C (14° to 140° F) up to 250 PSI, max pressure is 250 psi.

! 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
4. FPI Specification Data Sheet for custom length sensors

Consult factory if any chemicals are in use.





Specification Sheet

FPI Mag Flow Meter with ProComm Converter

PROCOMM CONVERTER PART NUMBER MATRIX

PC -		-	-	-	-
CONVERTER MOUNTING OPTIONS					
Meter Mount	M				
Remote Mount	R				
CONVERTER POWER OPTIONS					
AC Power	A				
DC Power	D				
Battery Power [25ft remote cable max]	B				
Solar Power, Battery Backup [25ft remote cable max]	S				
CONVERTER OUTPUT OPTIONS					
Dual 4-20mA Analog, Dual Digital (Standard)	1				
Modbus + STD (Two 4-20, two Dig)	2				
Hart + STD (Two 4-20, two Dig)	3				
Datalogger/BIV + STD (Two 4-20, two Dig)	4				
Datalogger/BIV + Modbus + STD (Two 4-20, two Dig)	5				
Datalogger/BIV + Hart + STD (Two 4-20, two Dig)	6				
AMI Smart Output + STD (Two 4-20, two Dig)	7				
Datalogger/BIV + AMI Smart Output + STD (Two 4-20, two Dig)	8				
AMI Smart Output + Dig Out + Datalogger (Battery power only)	9				
Digital Out + Datalogger (Standard Battery Power only)	0				
SMART OUTPUT PROTOCOL OPTIONS *					
No AMI Outputs	-				
Sensus Protocol (6ft cable, Nicor Connector hardwired only)	SEN				
Itron 6 digit Protocol (6ft cable, Nicor Connector hardwired only)	ITR6				
Itron 9 digit Protocol (6ft cable, Nicor Connector hardwired only)	ITR9				
HAZARDOUS LOCATION					
Class I, Division 2, Groups A-D, T5	HL				

* Smart Output protocol options require selection of converter output option 7, 8, or 9.



Specification Sheet

FPI Mag Flow Meter with ProComm Converter

PROCOMM CONVERTER SPECIFICATIONS

Power Source

AC	100-240 VAC / 45-66 Hz (10 W)	Note: AC or DC must be specified at time of ordering.
DC	10-35 VDC (10 W)	

Standard Outputs

Dual 4-20mA Outputs: Galvanically isolated and fully programmable for zero and full scale (0-21mA rangeability)		
Two separate digital programmable outputs: open collector transistor usable for pulse, frequency, or alarm settings.		
<ul style="list-style-type: none"> • Volumetric Pulse • Flow Rate (Frequency) • Hardware Alarm • High/Low Flow Alarms • Empty Pipe • Directional Indication 	<ul style="list-style-type: none"> • Range Indication • Maximum switching voltage: 40 VDC • Maximum switching current: 100mA 	<ul style="list-style-type: none"> • Maximum switching frequency: 1250 Hz • Insulation from other secondary circuits: 500V

Optional Outputs

<ul style="list-style-type: none"> • Modbus • HART 	<ul style="list-style-type: none"> • Smart Output™ (Sensus, Itron 6, Itron 9) 	<ul style="list-style-type: none"> • Datalogger • Built-in verification
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Galvanic Isolation

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

<ul style="list-style-type: none"> • Cubic Meter • Cubic Centimeter • Milliliter • Liter • Cubic Decimeter • Decaliter • Hectoliter • Cubic Inches 	<ul style="list-style-type: none"> • US Gallons • Imperial Gallons • Cubic Feet • Kilo Cubic Feet • Standard Barrel • Oil Barrel • US Kilogallon • Ten Thousands of Gallons 	<ul style="list-style-type: none"> • Imperial Kilogallon • Acre Feet • Megagallon • Imperial Megagallon • Hundred Cubic Feet • Megaliters
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Conductivity

Minimum conductivity of 5µS/cm

Electrical Connections

Connection options <ul style="list-style-type: none"> • Compression gland seals for 0.24" to 0.47" diameter round cable • Conduit option: 1/2" NPT threaded connections
--

Sensor Cable Lengths




Standard	25' McCrometer supplied submersible cable with each remote mount unit.
Optional	Up to 500 feet, or 25 feet max for battery powered.
Quick Connect *	Available in standard cable lengths: 25', 50', 75', 100', 125', 150', 175', 200', and 500'. Custom cable lengths at additional cost.

IP Rating

IP67 Die cast aluminum converter (only when connected using compression gland seals)
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* Not available with SPI Mag

Certifications and Approvals

Standard Model	<ul style="list-style-type: none"> • ISO 9001:2015 certified quality management system • CE • Certified by MET to UL 61010-1 	  
HL Model	<ul style="list-style-type: none"> • ISO 9001:2015 certified quality management system • CE • Certified by MET to UL 61010-1 and MET C22.2 No. 61010-1-04 <ul style="list-style-type: none"> • Class I, Division 2, Groups A-D, T5 • Class I, Zone 2 IIC T5 	



IMPORTANT:
Electrical safety certifications above do not apply to model 282L Single Point Insertion (SPI Mag) Electromagnetic Flow Meter.

System Options

- Hastelloy® electrodes*
- DC power
- Additional sensor cable up to 475' (500' max for FPI Mag)
- Extension to hardware clearance
- Annual verification / calibration
- Sensor insertion tool*
- Stainless steel ID tag

Temperature Range

Operating and storage	-20° to 60° C (-4° to 140° F)
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Converter Dimensions

Remote mount*	<ul style="list-style-type: none"> • Height: 7.3" (18.5 cm) • Width: 8.5" (21.6 cm) • Depth: 4.3" (10.9 cm)
Meter mount	<ul style="list-style-type: none"> • Height: 6.9" (17.5 cm) • Width: 7.2" (18.25 cm) • Depth: 6.2" (15.7 cm)

Keypad and Display

Can be used to access and change set-up parameters using six membrane keys and an LCD display

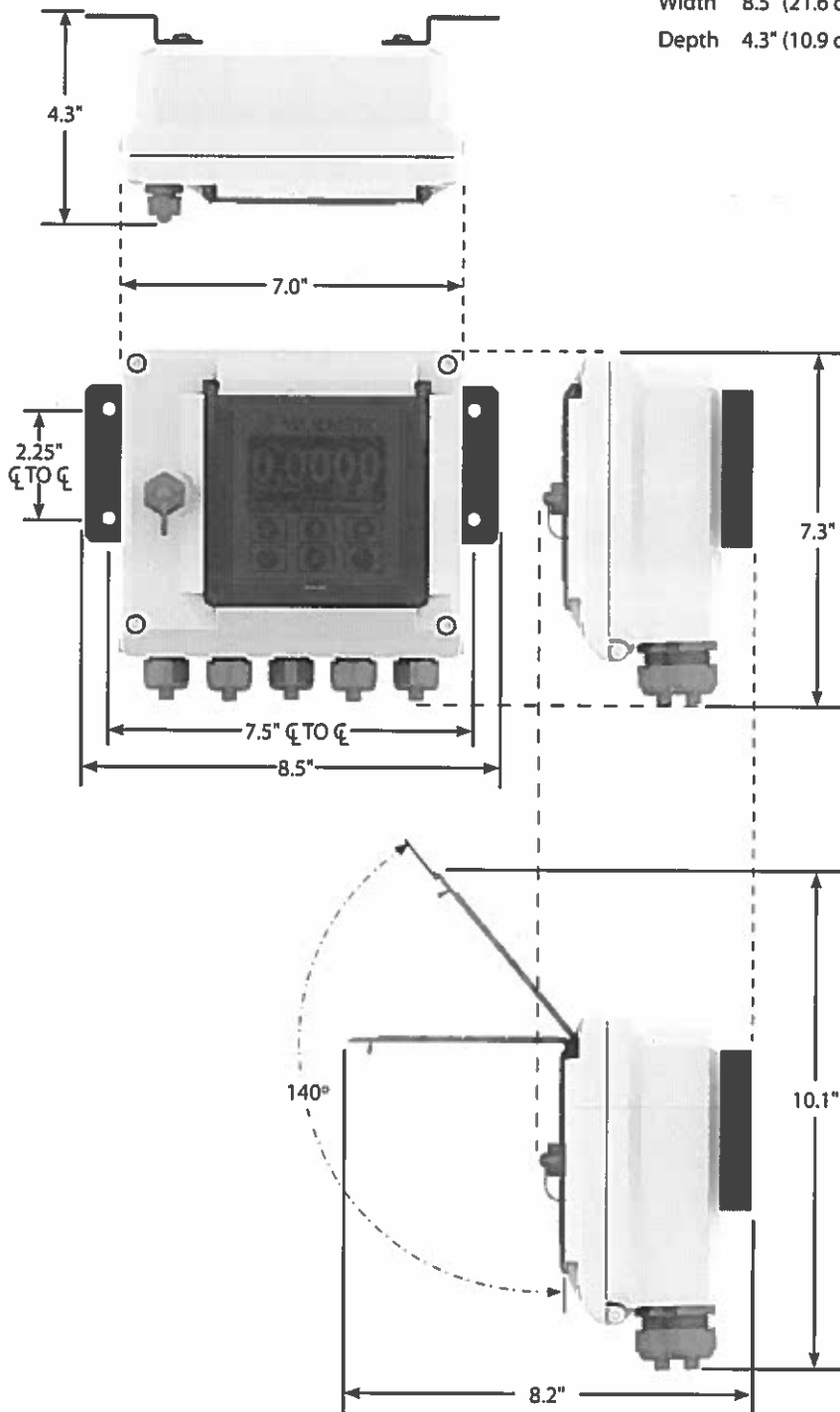
* Not available with SPI Mag

Note regarding cable length: McCrometer recommends minimizing cable length. Electromagnetic flow meters may have unfavorable signal strength to noise ratio in electrically noisy environments. Longer lengths of cable increase the likelihood of interference. In those cases where the meter's signal must be transmitted a long distance, or where the environment may be particularly noisy, we suggest using the converter's analog output(s). That allows locating the converter as close as possible to the metering location.

Specification Sheet FPI Mag Flow Meter with ProComm Converter

CONVERTER DIMENSIONS

Height 7.3" (18.5 cm)
Width 8.5" (21.6 cm)
Depth 4.3" (10.9 cm)



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