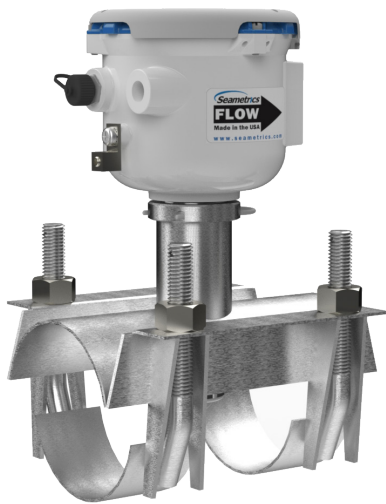


# EX90-SERIES

## ELECTROMAGNETIC INSERTION FLOW SENSOR



### APPLICATIONS

Municipal water  
Water/Wastewater  
treatment  
Reuse/Reclaim water  
Industrial processes  
Cooling towers  
Pump towers  
Dewatering

### Features

- No moving parts
- Economical
- Durable
- Easy to install
- Easy to maintain
- Pulse output standard
- 4 year battery life

The **EX90-series** battery powered, insertion electromagnetic flow meter is designed for use with conductive fluids in 4"–12" pipe. The EX90's stainless steel body allows the meter to operate in a wide range of temperatures, pressure, and corrosive or dirty environments.

The EX90 is highly suitable for difficult applications. With no moving parts, these meters can be used in "dirty water" applications where debris would foul a mechanical meter. If the EX90 meter is used with a programmable controller, the output signal can be fed direct, with no other conditioning required.

Rate and total units can be set via the front panel touch key pad by the user. Bidirectional flow is standard with totals available in forward, reverse, net, batch forward and batch reverse.

The EX90 is battery powered and an output cable is available for transmitting the pulse signal to remote devices. The EX90 includes a Seametrics saddle which has been designed to accommodate a wide range of pipe sizes and types while ensuring correct placement in the pipe. In addition, an optional internal data logger allows local storage of flow history.

**Contact Your Supplier**



## Specifications\*

<b>Pipe Size</b>		4" to 12"	
<b>Materials</b>	<b>Sensor Body</b>	316 SS	
	<b>Electrodes</b>	Hastelloy	
	<b>Housing</b>	Powder-coated diecast aluminum	
	<b>Electrode Cap</b>	PVDF (Kynar®)	
	<b>O-Ring</b>	EPDM	
<b>Temperature</b>	<b>Operating</b>	10° to 140° F (-12° to 60° C)	
	<b>Storage</b>	-40° to 158° F (-40° to 70° C)	
	<b>Fluid Temp.</b>	32° to 200° F (0° to 93° C)	
<b>Pressure</b>		200 psi (14 bar)	
<b>Flow Rate</b>		0.5 - 4.5 m/sec (1.64 - 14.8 ft/sec) (Low flow cutoff .15 m/sec; .49 ft/sec)	
<b>Calibration Accuracy</b>	<b>0.5 - 4.5 m/s (1.64-14.76 ft/sec)</b>	+/- 2% of reading	
	<b>0.3 - 0.5 m/sec (0.98 - 1.64 ft/sec)</b>	+/- (2% of reading + 0.25% of full scale)	
<b>Display</b>	<b>Type</b>	128x64 dot-matrix LCD	
	<b>Digits</b>	5 Digit Rate	8 Digit Total
	<b>Units</b>	Rate Volume Units	Rate Time Units      Total Volume Units
	<i>Please Note: All meters are factory set for gallons per minute (GPM) rate and acre foot total. If other units are required, they can be set in the field.</i>	Gallons Liters Barrels (42 gallons) Cubic Feet Cubic Meters Million Gallons <sup>1</sup> Mega Liters <sup>1</sup> Imperial Gallons Million Imperial Gallons <sup>1</sup>	Second Minute Hour Day Gallons Gallons x 10 Gallons x 100 Gallons x 1000 Million Gallons Liters Kilo Liters Mega Liters Barrels (42 gallons) Cubic Meters Cubic Meters x 1000 Cubic Feet Cubic Feet x 1000 Million Cubic Feet Imperial Gallons Imperial Gallons x 1000 Million Imperial Gallons Acre Inch Acre Foot Fluid Ounce
	<b>Bidirectional</b>	Forward Total, Reverse Total, Net Total, Batch Forward, Batch Reverse	
<b>Power</b>		One lithium 7.2V 'D' size battery pack, replaceable.	
<b>Scaled Pulse Output</b>	<b>Signal</b>	Current sinking pulse, isolated, 36 Vdc at 10 mA max	
	<b>Pulse Rates</b>	User-scalable from 0.1 to 99,999.9 volume units/pulse. Pulse width varies with output frequency, 150 pulses/sec max	
<b>Cable</b>	<b>Optional Output Cable</b>	20ft (6m) standard length polyurethane jacketed cable—for power and outputs. (Lengths up to 200' (60 m) available.)	
<b>Conductivity</b>		>20 microSiemens/cm	
<b>Empty Pipe Detection</b>		Hardware/software, conductivity-based	
<b>Regulatory</b>		Certified to NSF/ANSI standard 61 and NSF 372 (Stainless only with EPDM O-ring. Viton pending).	
<b>Environmental</b>		IP67	

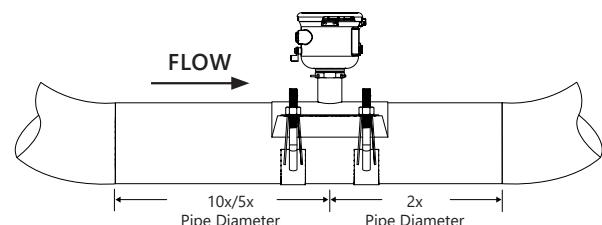
\* Specifications subject to change. Please consult our website for the most current data (seametrics.com).

<sup>1</sup> Rate Time Unit is available in Day only.

Kynar is a registered trademark of Arkema, Inc.

## Flow Range\*

Nominal Pipe Size	4"	6"	8"	10"	12"
<b>Low Flow Cutoff GPM</b>	19.3	43.11	77.1	120.5	173.5
<b>Low Flow Cutoff LPS</b>	1.22	2.72	4.86	7.6	10.95
<b>Min GPM</b>	64.3	144.6	257	401.6	578.3
<b>Min LPS</b>	4.1	9.1	16.2	25.3	36.5
<b>Max GPM</b>	578	1301	2313	3614	5204
<b>Max LPS</b>	36.5	82.1	145.9	228	328.3

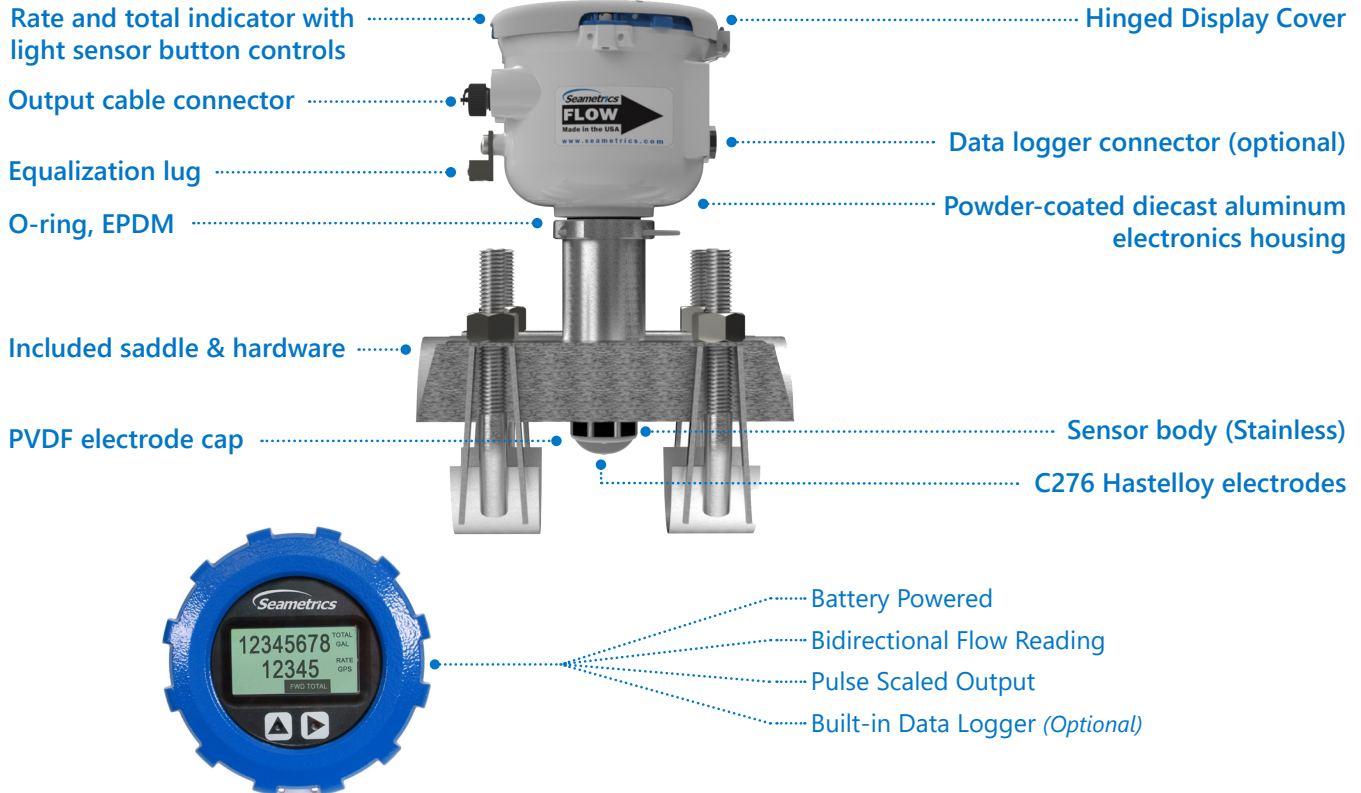


Upstream straight pipe is selected during initial setup. Upstream options are 5X or 10X the diameter and are based on the amount of straight pipe available in either new or propeller meter replacement installation. Downstream straight pipe requirement is 2X the diameter. See programming setup for details.

# EX90-SERIES ELECTROMAGNETIC INSERTION FLOW SENSOR

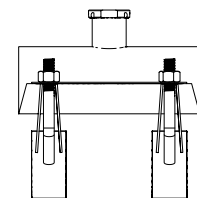
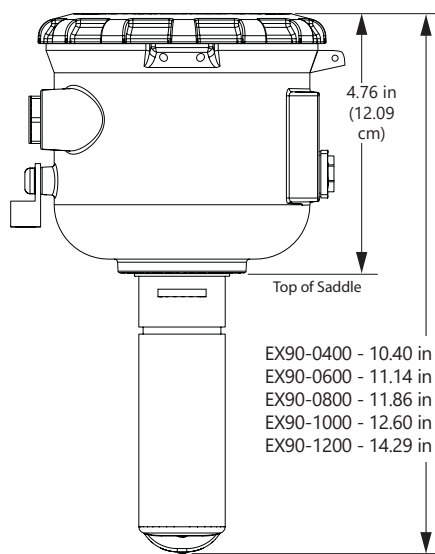
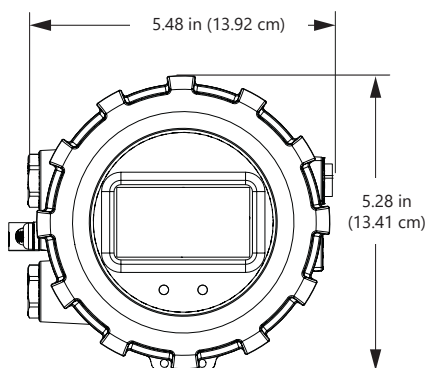


## Features



Quickly and easily change Total Volume Units, Flow Rate Units, Pulse Output Scaling, and many other settings using the two light sensor button controls on the display panel.

## Dimensions



Each saddle has a range of actual pipe size O.D. that it will work with. When you order your meter, you will specify the nominal pipe size and the saddle provided will work with the following actual pipe O.D.

Saddle Size	Range
4"	4.00" - 4.90"
6"	6.00" - 6.90"
8"	8.00" - 9.05"
10"	10.00" - 11.10"
12"	12.10" - 13.20"

Consult factory if your OD does not match.

## How to Order Worksheet

<b>EX90</b>	1	2	3	4	5
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center;"> </div> <div style="border: 1px solid black; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center;"> </div> <div style="border: 1px solid black; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center;"> </div> <div style="border: 1px solid black; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center;"> </div> </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 5px;"> <div style="border: 1px solid black; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center;"> </div> <div style="border: 1px solid black; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center;"> </div> <div style="border: 1px solid black; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center;"> </div> <div style="border: 1px solid black; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center;"> </div> <div style="border: 1px solid black; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center;"> </div> <div style="border: 1px solid black; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center;"> </div> </div>					
<div style="display: flex; justify-content: space-between;"> <div> <b>2 Power:</b> BX = Battery         </div> <div> <b>3 Outputs:</b> X = No optional output         </div> </div>					

1 Size	2 Power	3 Optional Output <small>(Comes standard with one pulse output)</small>	4 Options	5 Power/Output Cable <small>(Must select one)</small>
-0400 4"	-BX	-X <small>(requires single cable for pulse output)</small>	-XX None	-0000 No Cable <small>(Battery only with no output)</small>
-0600 6"			-01 Data Logger	-0064 6 meter (20 ft)
-0800 8"				-0154 15 meter (50 ft)
-1000 10"				-0304 30 meter (100 ft)
-1200 12"				-0454 45 meter (150 ft)
				-0604 60 meter (200 ft)

*Note: All meters are factory set for gallons per minute (GPM) rate and gallons total. If other units are required, they can be programmed in the field.*

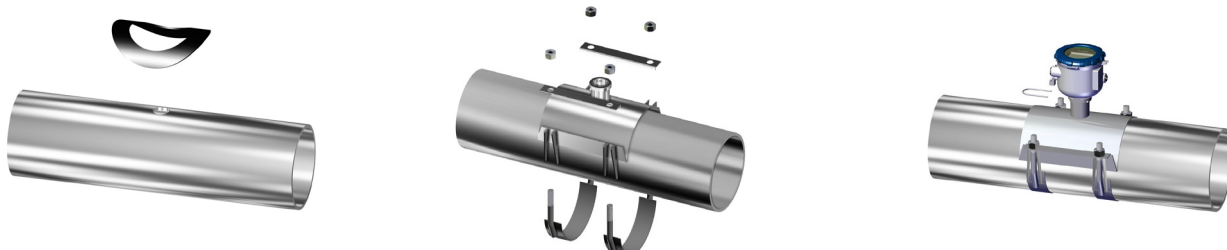
*Note2: Saddle included with meter.*

*Note3: The EX90 can be externally powered by connecting DC power with the power/output cable. Batteries then serve as backup power.*

*For chemical or fertilizer injection applications, the injection point must be placed downstream of the meter or far enough upstream for complete mixing to occur before the flow reaches the meter. (See fertigation technical bulletin on Seametrics website, seametrics.com.)*

**User is responsible for reviewing end use application with their supplier for product suitability.**

### Easy New Installation



### Easy Propeller Meter Replacement Installation

