

# BATTLECARD

## AG90 SERIES ELECTROMAGNETIC FLOW SENSOR



### Quick Facts/Features

- Saddle/insertion electromagnetic flow sensor
- For use in 4" to 12" pipes
- Easy to install
- Easily retrofitted to mechanical propeller meter installations
- Low maintenance, no moving parts, resistant to wear from debris
- Bidirectional flow readings Forward, Reverse, Net, Batch Forward, Batch Reverse
- Battery powered
- Highly suitable for dirty water applications
- Same mounted display as the AG3000
- Pulse output is set by user
- Software included to filter out noise and averages sudden variation
- Optional add-ons include: output cable, internal data logger

### Market: Irrigation

### Applications

- Irrigation
- Reuse/reclaimed water
- Surface water
- Well usage monitoring
- Agricultural automation
- Poultry processing
- Dairy Lagoons

### Competitors

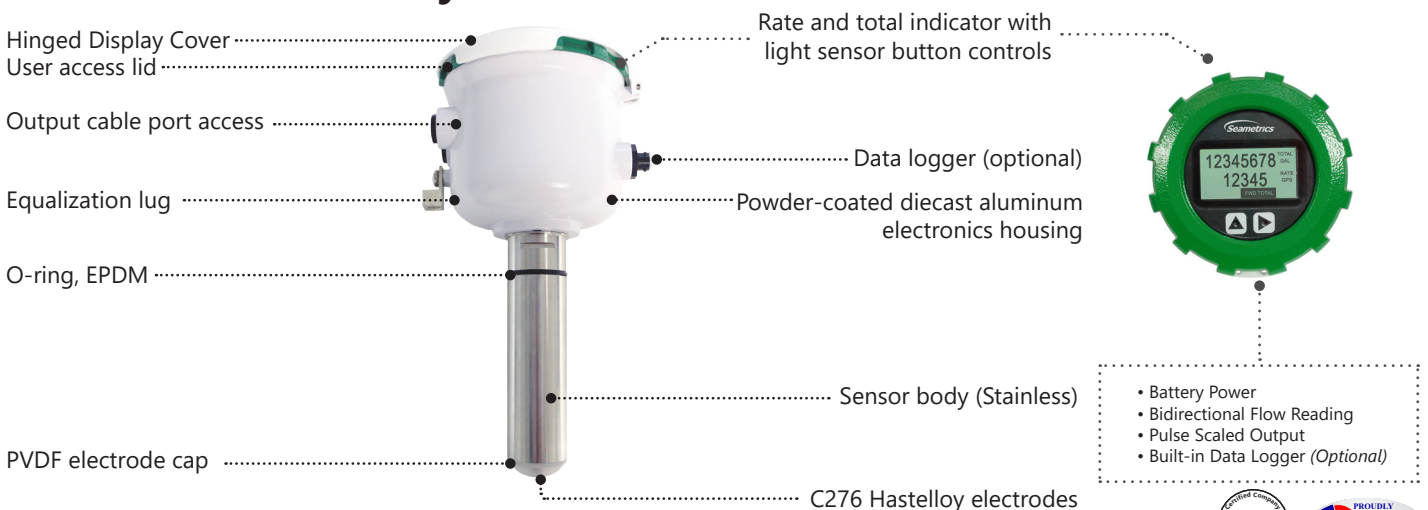
- McCrometer, Water Specialties and Sparling Propeller Meters!
- McMAG3000 insertion magmeter

**Programming** - Similar to the AG3000 with the addition of three items required for the meter to function

- **The pipe I.D.**
- **Type of hole** - **Large** for mechanical replacement or **Small** for new installation
- **Pipe configuration** - **5/2** (5 dia. up, 2 dia. down), **10/2** (10 dia. up, 2 dia. down), **Straight** (conditions with 10 diameters or more)
- If anything else is installed upstream of the meter, that might cause a disturbance, additional straight pipe may be required)

**Note:** Since this product is an insertion meter (vs. flanged) there are built in algorithms that will compensate for the above differences, allowing the meter to perform correctly for the conditions

### AG90 Meter Anatomy



## Key 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>Ambient Temperature</b>	0° to 160° F (-17° to 72° 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>	CE (EN 61326) 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.

AG90 electromagnetic wave diagram

## Flow Rate

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

