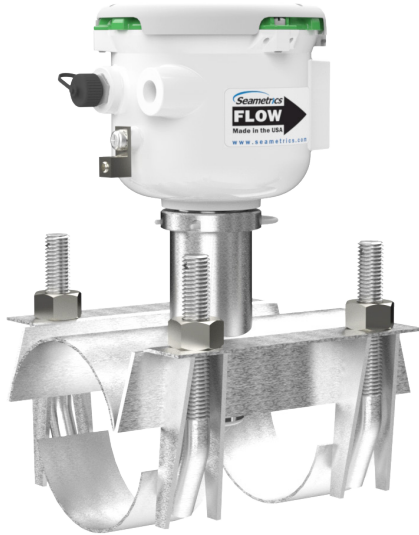# AG90-SERIES

ELECTROMAGNETIC INSERTION FLOW METER

Seametrics

APPLICATIONS

Irrigation
Agricultural automation
Reuse/Reclaim water
Surface water
Groundwater
Fertigation/Chemigation
Well usage monitoring
Propeller meter replacement

Features

- Direct replacement for propeller meter
- No moving parts to rebuild
- Less pipe obstruction
- Durable
- Easy to install
- No routine maintenance
- Pulse Output Standard
- 4 year battery life
- Telemetry ready for wireless meter reading. Solutions available now by our sister company **SIGNALFIRE** — WIRELESS TELEMETRY —

The **AG90-series** battery powered, insertion electromagnetic flow meter is designed for use with conductive fluids in 4"–12" pipe. The AG90's stainless steel body allows the meter to operate in a wide range of temperatures, pressure, and corrosive or dirty environments.

The AG90 is highly suitable for difficult applications. With no moving parts, over-run conditions will not degrade the life of the AG90. It is resistant to wear from debris found in surface or ground water and there are no bearings to wear out or propellers to damage.

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 AG90 is battery powered and an output cable is available for transmitting the pulse signal to remote devices. The AG90 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

5-YEAR WARRANTY
5
LONGEST IN THE IRRIGATION INDUSTRY

ISO 9001

PROUDLY MADE IN THE USA

Your first replacement battery is on us. Just call!

Specifications*

Pipe Size		4" to 12"		
Materials	**Sensor Body**	316 SS		
	Electrodes	Hastelloy		
	Housing	Powder-coated diecast aluminum		
	Electrode Cap	PVDF (Kynar®)		
	O-Ring	EPDM		
Temperature	**Operating**	10˚ to 140˚ F (-12˚ to 60˚ C)		
	Storage	-40˚ to 158˚ F (-40˚ to 70˚ C)		
	Fluid Temp.	32˚ to 200˚ F (0˚ to 93˚ C)		
Pressure		200 psi (14 bar)		
Flow Rate		0.5 - 4.5 m/sec (1.64 - 14.8 ft/sec) (Low flow cutoff .15 m/sec; .49 ft/sec)		
Calibration Accuracy	**0.5 - 4.5 m/s (1.64-14.76 ft/sec)**	+/- 2% of reading		
	0.3 - 0.5 m/sec (0.98 - 1.64 ft/sec)	+/- (2% of reading + 0.25% of full scale)		
Display	**Type**	128x64 dot-matrix LCD		
	Digits	5 Digit Rate		8 Digit Total
	Units *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.*	Rate Volume Units	Rate Time Units	Total Volume Units
		Gallons Liters Barrels (42 gallons) Cubic Feet Cubic Meters Million Gallons[1] Mega Liters[1] Imperial Gallons Million Imperial Gallons[1]	Second Minute Hour Day	Gallons Cubic Meters x 1000 Gallons x 10 Cubic Feet Gallons x 100 Cubic Feet x 1000 Gallons x 1000 Million Cubic Feet Million Gallons Imperial Gallons Liters Imperial Gallons x 1000 Kilo Liters Million Imperial Gallons Mega Liters Acre Inch Barrels (42 gallons) Acre Foot Cubic Meters Fluid Ounce
	Bidirectional	Forward Total, Reverse Total, Net Total, Batch Forward, Batch Reverse[2]		
Power		One lithium 7.2V 'D' size battery pack, replaceable.		
Scaled Pulse Output	**Signal**	Current sinking pulse, isolated, 36 Vdc at 10 mA max		
	Pulse Rates	User-scalable from 0.1 to 99,999.9 volume units/pulse. Pulse width varies with output frequency, 150 pulses/sec max		
Cable	**Optional Output Cable**	20ft (6m) standard length polyurethane jacketed cable—for power and outputs. (Lengths up to 200' (60 m) available.)		
Conductivity		>20 microSiemens/cm		
Empty Pipe Detection		Hardware/software, conductivity-based		
Regulatory		C E (EN 61326) Pending		
Environmental		IP67		

* Specifications subject to change. Please consult our website for the most current data (seametrics.com).
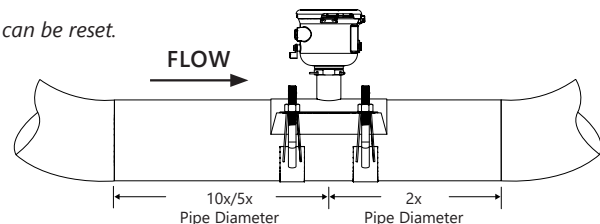
[1] Rate Time Unit is available in Day only.

[2] Forward & reverse flow totals are non-resettable. Batch forward & batch reverse can be reset.

Kynar is a registered trademark of Arkema, Inc.

Flow Range*

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

FLOW

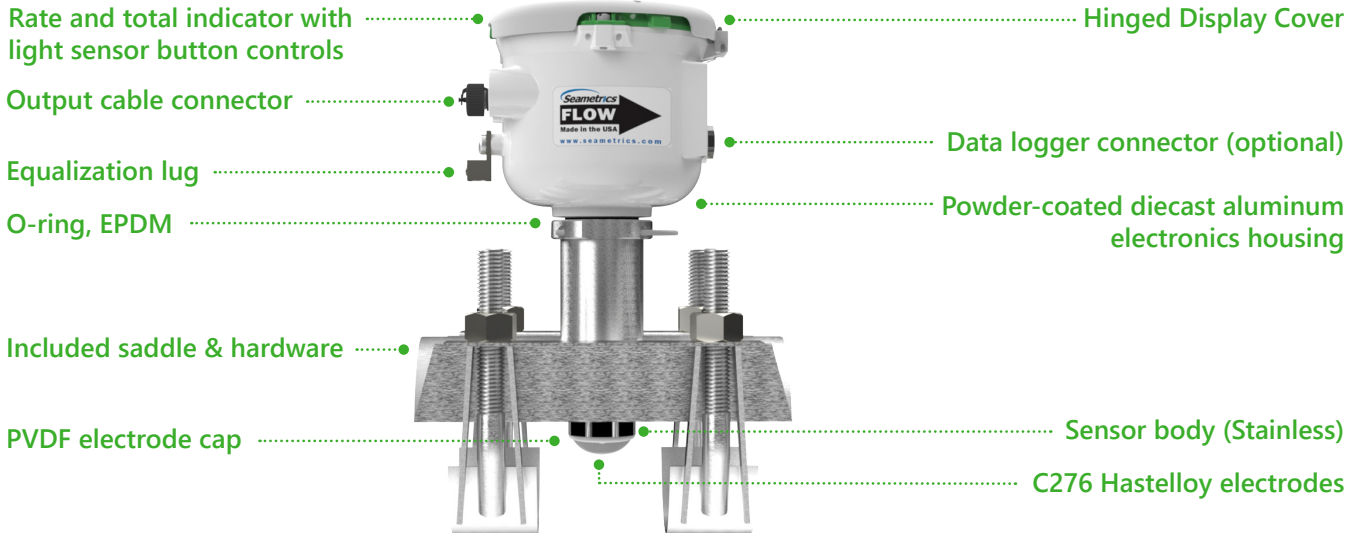10x/5x Pipe Diameter   2x Pipe Diameter

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.

Features

Rate and total indicator with light sensor button controls

Output cable connector

Equalization lug

O-ring, EPDM

Included saddle & hardware

PVDF electrode cap

Hinged Display Cover

Data logger connector (optional)

Powder-coated diecast aluminum electronics housing
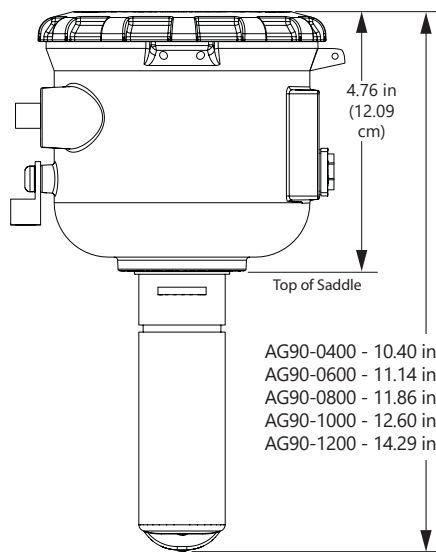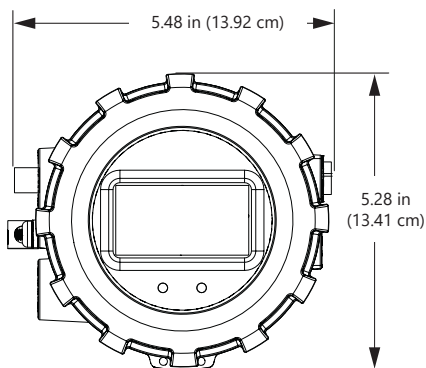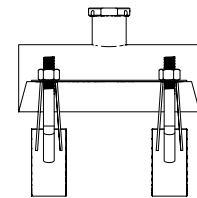
Sensor body (Stainless)

C276 Hastelloy electrodes

Battery Powered

Bidirectional Flow Reading

Pulse Scaled Output

Built-in Data Logger (Optional)

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

5.48 in (13.92 cm)

5.28 in (13.41 cm)

4.76 in (12.09 cm)

Top of Saddle

AG90-0400 - 10.40 in (26.42 cm)
AG90-0600 - 11.14 in (28.30 cm)
AG90-0800 - 11.86 in (30.12 cm)
AG90-1000 - 12.60 in (33.73 cm)
AG90-1200 - 14.29 in (36.30 cm)

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.

AG90-SERIES
ELECTROMAGNETIC INSERTION FLOW SENSOR

Seametrics

How to Order Worksheet

	①	②	③	④	⑤
AG90	☐☐☐☐	☐☐	☐	☐☐	☐☐☐☐

② **Power:** BX = Battery	③ **Outputs:** X = No optional output

Saddle Included

① Size	② Power	③ Optional Output *(Comes standard with one pulse output)*	④ Options	⑤ Power/Output Cable *(Must select one)*
-0400 4"	-BX	-X *(requires cable for pulse output)*	-XX None	-0000 No Cable *(Cable required for power/output)*
-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)

Order with Weldolet (Select weldolet type below)

① Size	② Power	③ Optional Output *(Comes standard with one pulse output)*	④ Options	⑤ Power/Output Cable *(Must select one)*
-040R 4"	-BX	-X *(requires single cable for pulse output)*	-XX None	-0000 No Cable *(Cable required for power/output)*
-060R 6"			-01 Data Logger	-0064 6 meter (20 ft)
-080R 8"				-0154 15 meter (50 ft)
-100R 10"				-0304 30 meter (100 ft)
-120R 12"				-0454 45 meter (150 ft)
				-0604 60 meter (200 ft)

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

Note2: Saddle included with meter

Note3: The AG90 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.

WELDOLET #	DESCRIPTION
104122-04-CS	Weldolet Kit, Carbon Steel 4"
104122-04-SS	Weldolet Kit, Stainless Steel 4"
104122-06-CS	Weldolet Kit, Carbon Steel 6"
104122-06-SS	Weldolet Kit, Stainless Steel 6"
104122-08-CS	Weldolet Kit, Carbon Steel 8"
104122-08-SS	Weldolet Kit, Stainless Steel 8"
104122-10-CS	Weldolet Kit, Carbon Steel 10"
104122-10-SS	Weldolet Kit, Stainless Steel 10"
104122-12-CS	Weldolet Kit, Carbon Steel 12"
104122-12-SS	Weldolet Kit, Stainless Steel 12"

Easy Propeller Meter Replacement Installation

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