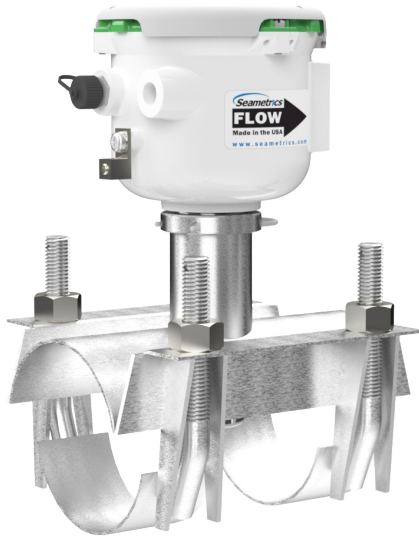


AG90-SERIES

ELECTROMAGNETIC INSERTION FLOW METER



APPLICATIONS

Irrigation
Agricultural automation
Reuse/Reclaim water
Surface water
Groundwater
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
- 5-year battery life
- Data logging (Optional)
- 4-20mA (Optional)
- Sensus Smart Output (Optional)
- Modbus Output (Optional)
- Telemetry ready for wireless meter reading. Solutions available now by our sister company **SIGNALFIRE** WIRELESS TELEMETRY

Contact Your Supplier

The **AG90-series** battery powered, insertion electromagnetic flow meter is designed for use in irrigation applications 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 total, reverse total, net total, batch forward total and batch reverse total.

The AG90 is commonly battery powered and an output cable is available for transmitting the output signals 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 of the meter in the pipe.

The AG90 can be connected to external DC power and while Modbus is an option on all versions, 4-20mA is available on external DC powered versions only.



Your first replacement battery is on us. Just register your meter & call when needed!

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 | Rate Volume Units | Rate Time 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 | Second |
| | | Liters | Minute |
| | | Barrels (42 gallons) | Hour |
| | | Cubic Feet | Day |
| | | Cubic Meters | |
| | | Million Gallons ¹ | Gallons |
| | | Mega Liters ¹ | Gallons x 10 |
| | | Imperial Gallons | Gallons x 100 |
| | | Million Imperial Gallons ¹ | 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 |
| | Bidirectional | Forward Total, Reverse Total, Net Total, Batch Forward Total, Batch Reverse Total ² | |
| Power | | One lithium 7.2V 'D' size battery pack, replaceable. DC Power available for 4-20mA output meters | |
| 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 | |
| Options | 4-20Ma Current Loop | Isolated, passive, 24Vdc, 650 Ω maximum current loop (External DC powered units only) | |
| | Serial Communications | Isolated, asynchronous serial RS485, Modbus® RTU protocol | |
| | Sensus Smart Output | Connects to Sensus SmartPoint | |
| 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 | |
| Environmental | | IP67 | |

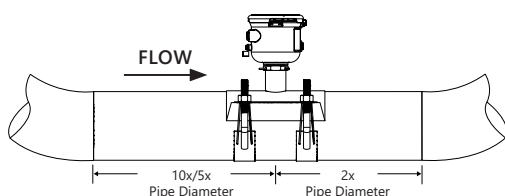
Modbus is a registered trademark of Schneider Electric.

* 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 total & batch reverse total can be reset.

Kynar is a registered trademark of Arkema, Inc.

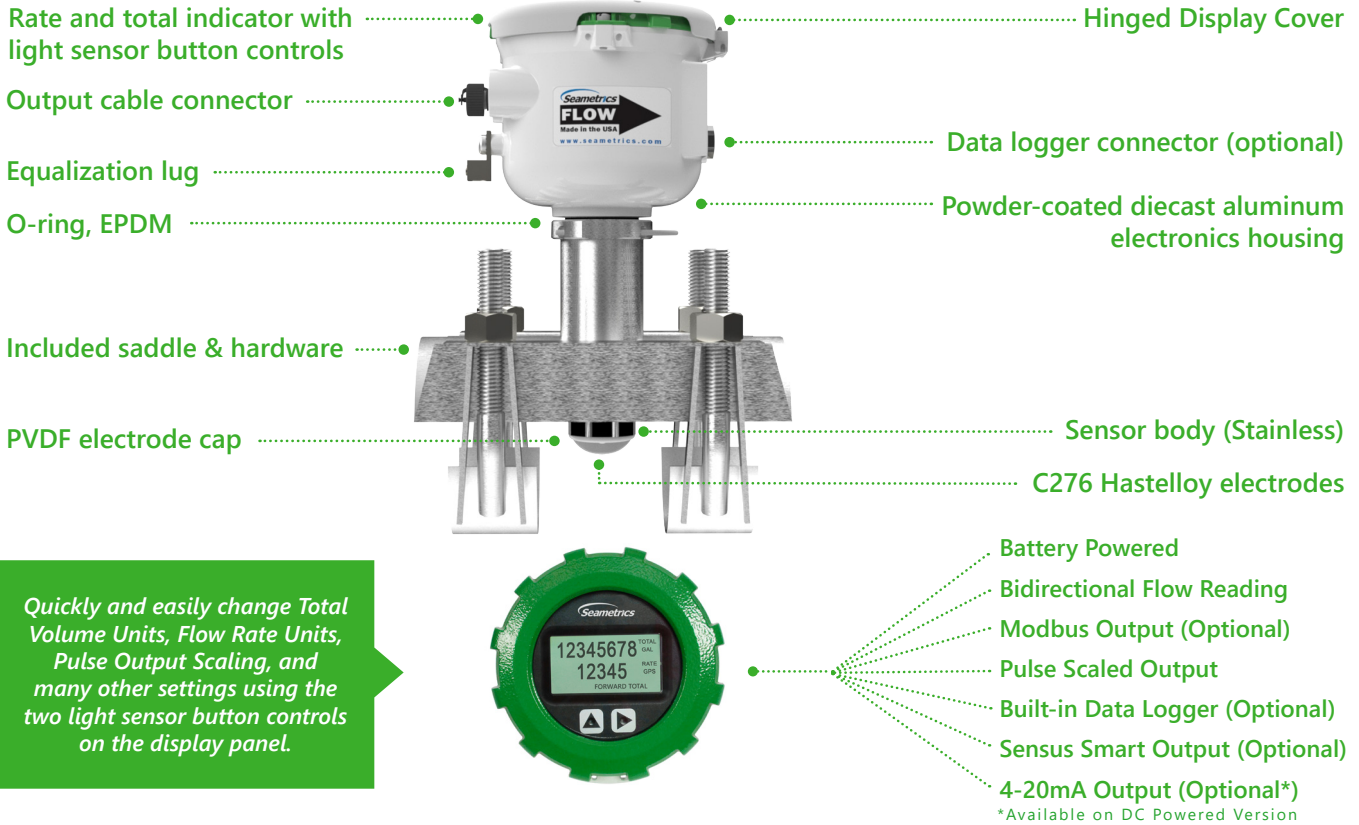


Upstream straight pipe is selected during initial setup. Upstream options are 5X or 10X the diameter and are based on the amount of straight pipe available in either new or propeller meter replacement installation. Downstream straight pipe requirement is 2X the diameter. See programming setup for details.

AG90-SERIES ELECTROMAGNETIC INSERTION FLOW SENSOR



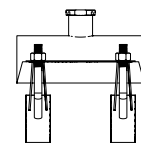
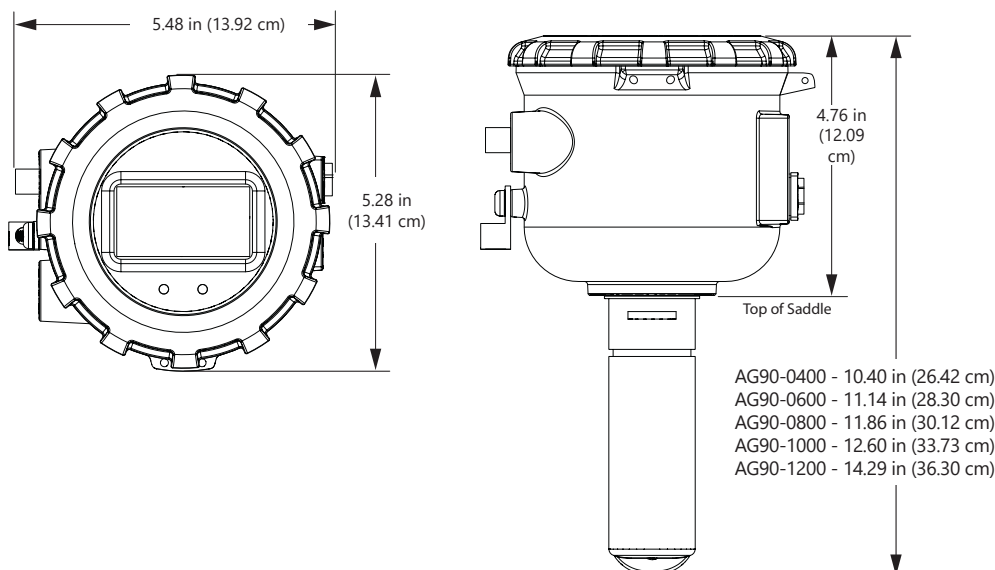
Features



Flow Range*

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

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

| | | | | |
|--|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| AG90 | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |
| <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>2 Power: BX = Battery D1 = DC 60Hz D2 = DC 50Hz (Background)</p> </div> <div style="width: 45%;"> <p>3 Outputs: X = No optional output S = Modbus L = 4-20mA</p> </div> </div> | | | | |

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 4-pin cable for pulse output) | -XX None | 0000 No Cable (Cable required for power/output) |
| -0600 6" | | -S (requires 8-pin cable) | -01 Data Logger | <u>4 Conductor</u> <u>8 Conductor</u> |
| -0800 8" | | | -02 Sensus Smart Output (Includes 6' Cable) | 0064 0068 6 meter (20 ft) |
| -1000 10" | | | | 0154 0158 15 meter (50 ft) |
| -1200 12" | -D1 | -L (requires 8-pin cable) | | 0304 0308 30 meter (100 ft) |
| | -D2 | | | 0454 0458 45 meter (150 ft) |
| | | | | 0604 0608 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 4-pin cable for pulse output) | -XX None | 0000 No Cable (Cable required for power/output) |
| -060R 6" | | -S (requires 8-pin cable) | -01 Data Logger | <u>4 Conductor</u> <u>8 Conductor</u> |
| -080R 8" | | | -02 Sensus Smart Output (Includes 6' Cable) | 0064 0068 6 meter (20 ft) |
| -100R 10" | | | | 0154 0158 15 meter (50 ft) |
| -120R 12" | -D1 | -L (requires 8-pin cable) | | 0304 0308 30 meter (100 ft) |
| | -D2 | | | 0454 0458 45 meter (150 ft) |
| | | | | 0604 0608 60 meter (200 ft) |

Modbus is a registered trademark of Schneider Electric.

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

Note2: Saddle included with meter

Note3: The AG90 -BX can be externally powered by connecting DC power with the power/output cable. Batteries then serve as backup power.

Note4: Battery life is shortened when using Modbus with battery powered units. Expected battery life is approximately 1 year, based on usage.

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



Easy New Installation

