AG3000 SERIES
FLANGED MAGMETER

Seametrics

AG3000

AG3000p

AG3000-200/300

AG3000r
(Remote Display)

5-YEAR WARRANTY
LONGEST IN THE IRRIGATION INDUSTRY
5

RIGHT METER FOR
Irrigation
Chemigation
Agricultural automation
Well usage monitoring
Dairy lagoons
Aquaculture

Features

- Easy setup
- Minimal straight pipe
- Mounted or remote display
- Tamper-evident seal
- IP68 rated
- No moving parts
- Five year battery life
- Telemetry ready for wireless meter reading. Solutions available now by our sister company **SIGNALFIRE** — WIRELESS TELEMETRY —

Contact Your Supplier

The **AG3000** Series is a spool-type electromagnetic flowmeter for use in irrigation applications in 2" to 12" pipe. With no moving parts, these meters provide unobstructed flow and are resistant to wear from debris found in ground or surface water. Little maintenance is required because there are no bearings to wear out or propellers to stop turning. Minimal straight pipe requirements allow AG3000 meters to be used in piping configurations where there is little space between the meter and an elbow.

The standard AG3000 is battery powered with an available pulse output. Both rate and total indication are displayed. Bidirectional flow reading is standard with totals available in forward, reverse, net flow, batch forward flow, and batch reverse flow. Built-in data logging is available as an option for secure flow logging.
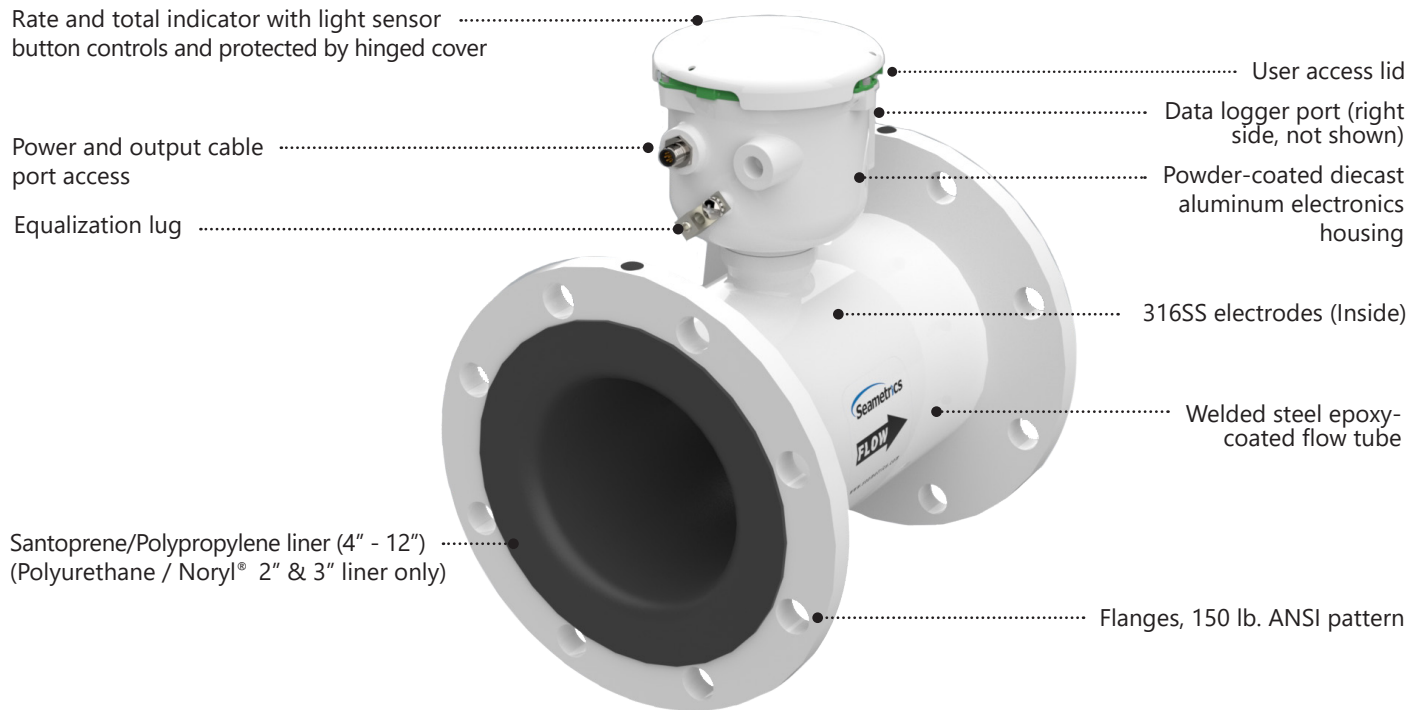
The AG3000 is also available in either AC or DC powered versions, with battery backup. Pulse output is standard on all models, while 4-20mA passive current loop is also standard on the AG3000p. 4-20mA loop is optional on the AG3000 and AG3000r externally powered meters and Modbus® protocol outputs are optional on all models although battery life will be reduced if ordered on battery powered units. A power/output cable allows outputs for use with a variety of Seametrics displays and other controls for remote reading and telemetry applications.

The AG3000 Series is CE certified and IP68 for burial, or applications where the meter may be under water for prolonged periods of time. All meters are provided with a security seal to protect against unauthorized access. The seal can be broken by an authorized agent, to change units of measure, pulse rate or replace the battery pack. The cable is field installed where external power is available and/or an output is needed.
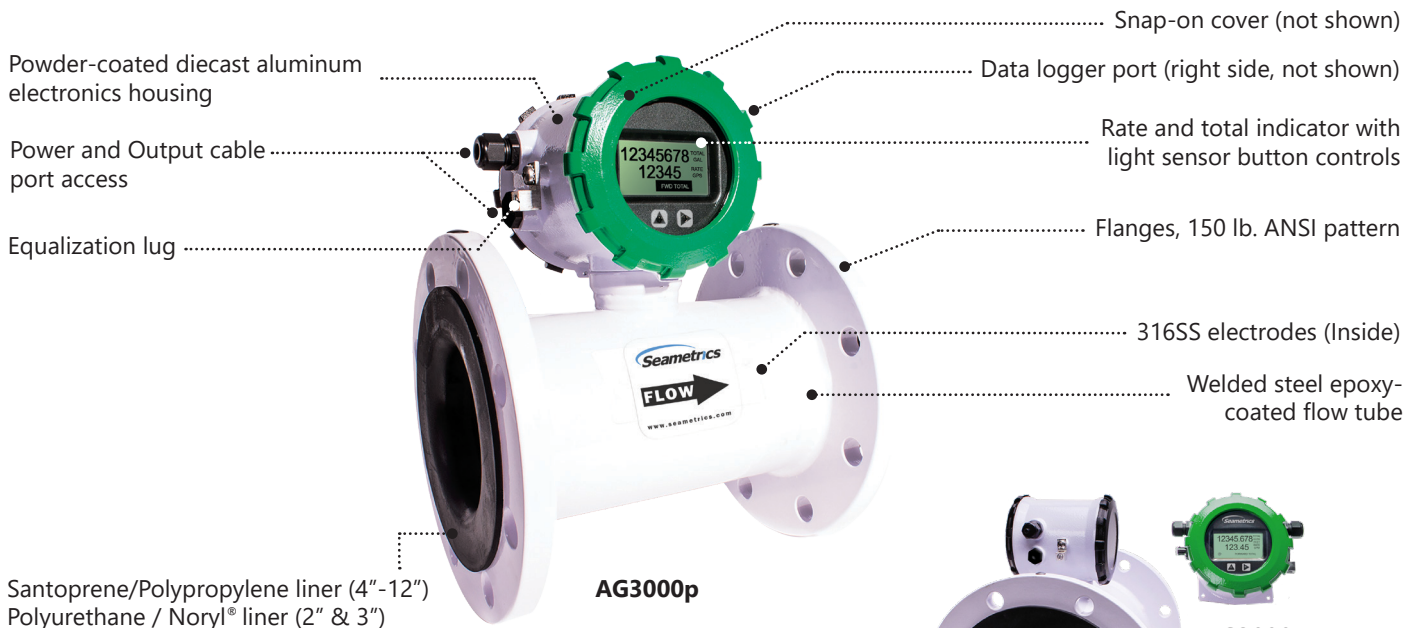
ISO 9001 Certified Company

PROUDLY MADE IN THE USA

Your first replacement battery is on us. Just call!

253.872.0284   seametrics.com

Features

Rate and total indicator with light sensor button controls and protected by hinged cover

Power and output cable port access

Equalization lug

Santoprene/Polypropylene liner (4" - 12") (Polyurethane / Noryl® 2" & 3" liner only)

User access lid

Data logger port (right side, not shown)

Powder-coated diecast aluminum electronics housing

316SS electrodes (Inside)

Welded steel epoxy-coated flow tube

Flanges, 150 lb. ANSI pattern

AG3000

Powder-coated diecast aluminum electronics housing

Power and Output cable port access

Equalization lug

Snap-on cover (not shown)

Data logger port (right side, not shown)

Rate and total indicator with light sensor button controls

Flanges, 150 lb. ANSI pattern

316SS electrodes (Inside)

Welded steel epoxy-coated flow tube

Santoprene/Polypropylene liner (4"-12") Polyurethane / Noryl® liner (2" & 3")

AG3000p

AG3000r
(Remote indicator)

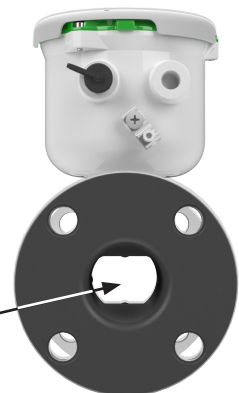## Features

Built-in Data Logger *(Optional)*

Bidirectional Flow Reading *(Standard)*

Pulse Scaled Output *(Standard)*

4-20mA Output *(Optional*)*

Modbus® Protocol Output *(Optional*)*

High Speed Digital Output *(Optional*)*

Battery Power *(AG3000 battery model only)*

External DC Power *(Optional*)*

Integrated AC Power Supply *(Optional*)*

Remote Display *(AG3000r)*

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.

* Some optional items only available on some configurations. See last page for further details.

2X Pipe Diameter

1X Pipe Diameter

Seametrics
FLOW

AG3000
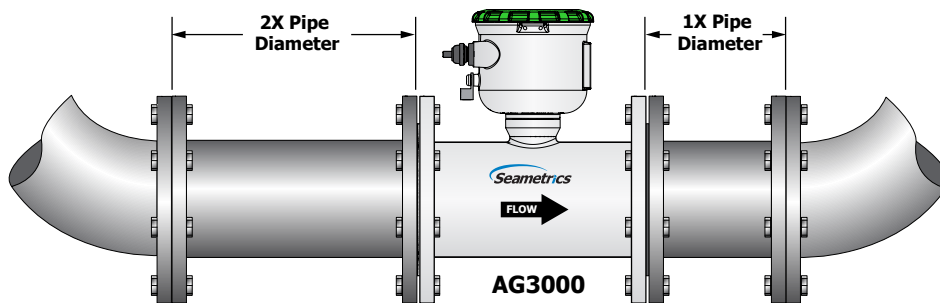
Minimal straight pipe requirements to ease installation in tight quarters.

No moving parts to break or foul!

Specifications

Pipe Sizes		2", 3", 4", 6", 8", 10", 12"				
Flanges		150 lb. ANSI Pattern				
Pressure		150 psi (10.3 bar) line pressure				
Temperature	Operating	10˚ to 140˚ F (-12˚ to 60˚ C)				
	Storage	-40˚ to 158˚ F (-40˚ to 70˚ C)				
Accuracy		±0.75% of reading on AG3000p and AG3000r (±1.0% AG3000), ±0.025% of full-scale flow from low flow cutoff to maximum flow rate of 10 m/sec				
Low Flow Cutoff		0.5% of maximum flow rate				
Material	Body (2"-12")	Welded steel, epoxy-coated				
	Liner (2" & 3")	Polyurethane/Noryl®				
	Liner (4"-12")	Santoprene flange/Polypropylene liner body				
	Electronics Housing	Powder-coated diecast aluminum				
	Electrodes	316 stainless steel				
Display	Type	128x64 dot-matrix LCD				
	Digits	5 Digit Rate			8 Digit Total		
	Units	Rate Volume Units		Rate Time Units	Total Volume Units		
	Please Note: All AG3000 meters are factory set for gallons per minute (GPM) rate and acre feet total. If other units are required, they can be set in the field.	Gallons Liters Barrels(42 gal) Cubic Feet Cubic Meters	Million Gallons[2] Mega Liters[2] Imperial Gallons Million Imperial Gallons[2]	Second Minute Hour Day	Gallons Gallons x 10 Gallons x 100 Gallons x 1000 Million Gallons Liters Kilo Liters Mega Liters	Barrels (42 gal) Cubic Meters Cubic Meters x 1000 Cubic Feet Cubic Feet x 100 Cubic Feet x 1000 Second Foot Day Million Cubic Feet	Acre Feet Acre Inches Imperial Gallons Imperial Gallons x 1000 Million Imperial Gallons Fluid Ounces
	Bidirectional[1]	Forward Total, Reverse Total, Net Total, Batch Forward Total, Batch Reverse Total [3]				
Power	DC Power	9-36 Vdc @ 250 mA max, 30 mA average				
	Battery Backup (Not for use as primary power)	DC powered units: One lithium 7.2V 'D' size battery pack, replaceable. AC powered units: One 9V alkaline battery, replaceable.				
	AC Power	85-264Vac, 50/60Hz, 0.12A (AG3000p and AG3000r only)				
	Battery	One lithium 7.2V 'D' size battery pack, replaceable. (AG3000 only)				
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 is one-half of pulse period with minimum pulse width of 2.5 ms, 200 pulses/sec max. For battery option meters, pulse width varies with frequency, 150 pulses/sec max.				
Options	4-20mA Current Loop	Isolated, passive, 24Vdc, 650 Ω maximum current loop				
	High Speed Digital	Isolated, open collector, 24 Vdc (AG3000p only)				
	Serial Communications	Isolated, asynchronous serial RS485, Modbus® RTU protocol				
Cable	Power/Output Cable	20ft (6m) standard length polyurethane jacketed cable—for power and outputs (lengths up to 200' available).				
	Remote Display Cable	20ft (6m) standard length polyurethane jacketed cable—for connection between meter and remote display (lengths up to 200' available). (iMAG 4700r)				
Conductivity		>20 microSiemens/cm				
Empty Pipe Detection		Hardware/software, conductivity-based				
Regulatory		C€ (EN 61326)				
Environmental		NEMA 6P, IP68 (10ft (3m) depth, continuously)				

*Modbus is a registered trademark of Schneider Electric.*

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

[1] If forward and reverse flow data needs to be sent to another device, either the Digital or Modbus output is required.
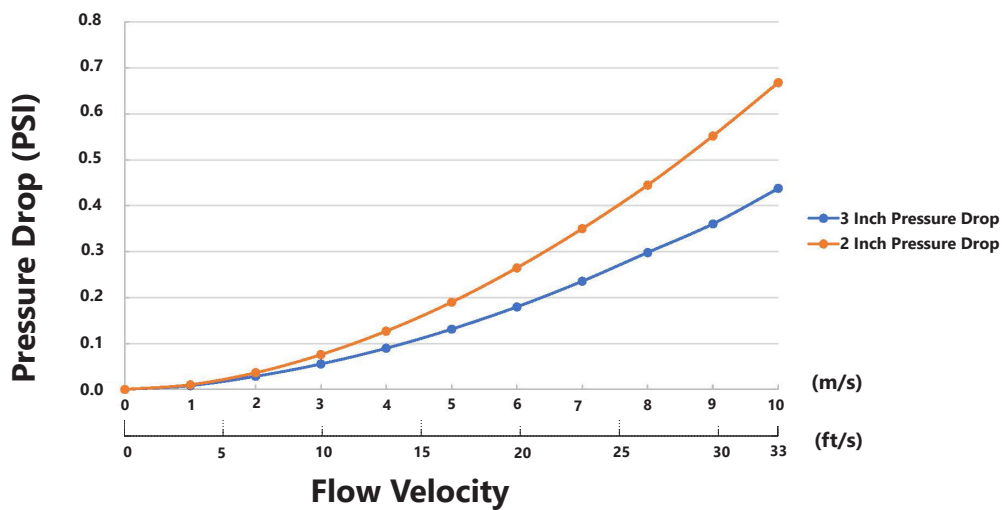
[2] Rate Time Unit is available in Day only.

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

AG3000 Accuracy
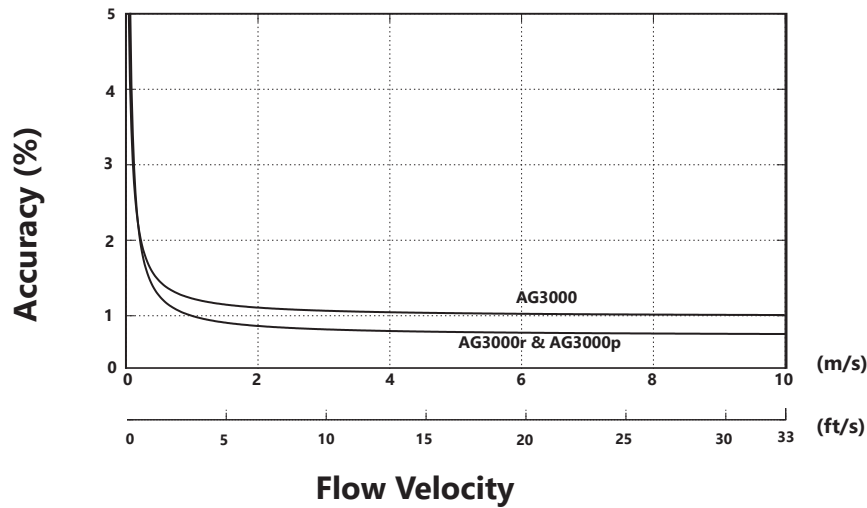
2" & 3" Pressure Drop Curve (No Pressure Drop 4"-12")

Flow Rate (2" - 12")

Pipe Size (Inches in diameter)	2"	3"	4"	6"	8"	10"	12"
Max Flow Rate (Gallons/Minute)	321	722	1285	2891	5140	8031	11565
Cut-off (min) Flow Rate (Gallons/Minute)	2	4.0	6.43	14.46	25.70	40.15	57.82
Max Flow Rate (Liters/Second)	20.25	46	81	182	324	507	730
Cut-off (min) Flow Rate (Liters/Second)	0.13	0.23	0.41	0.91	1.62	2.54	3.65
Max Flow Velocity (Meters/Second)	10	10	10	10	10	10	10

Dimensions - AG3000
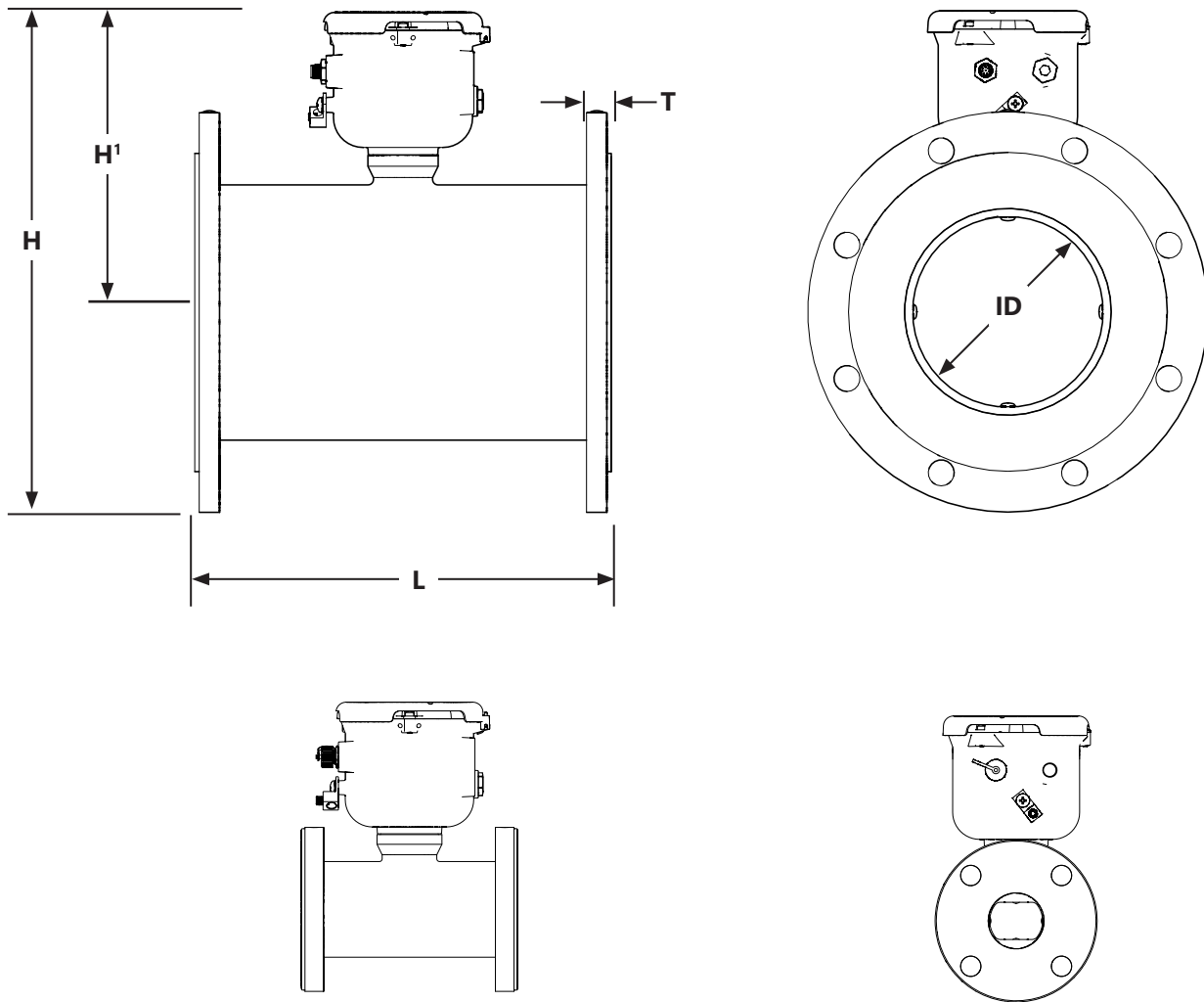
AG3000 Meter Size	L		H[1]		H		T		ID		Bolt Holes	Shipping Weight	
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	#	lbs	Kg
2"	7.9	200	7.58	193	10.58	268.73	.62	15.7	1.76*	45*	4	20	9
3"	7.9	200	8.08	206	11.83	300.48	.62	15.7	2.68*	68*	4	26	11.8
4"	10.12	257	8.33	211	12.83	325.88	.62	15.7	3.12	79	8	33	15
6"	12.09	307	9.14	231	14.64	371.86	.69	17.5	5.05	128	8	49	22
8"	14.14	359	10.14	257	16.89	429.01	.69	17.5	6.44	164	8	70	32
10"	18.08	459	11.2	284	19.2	487.68	.69	17.5	8.61	219	12	130	59
12"	19.68	500	12.2	310	21.7	551.18	.81	20.6	10.55	268	12	170	77
Flanges	Standard ANSI 150 lb. drilling											Cable 1 lb.	

Note: 'L' dimension is total from liner face to liner face

*Average ID

Seametrics

Dimensions - AG3000r and AG3000p

AG3000r (remote display)

6.840" *(173.7 mm)*
4.000" *(101.6 mm)*
3.500" *(88.9 mm)*

5.200"
(132.1 mm)

4.375"
(111.1 mm)

Ø 5.285"
(134.2 mm)

Ø 0.200"
(5.08 mm)

4.150" *(105.4 mm)*
4.20" *(106.68 mm)* with Cover
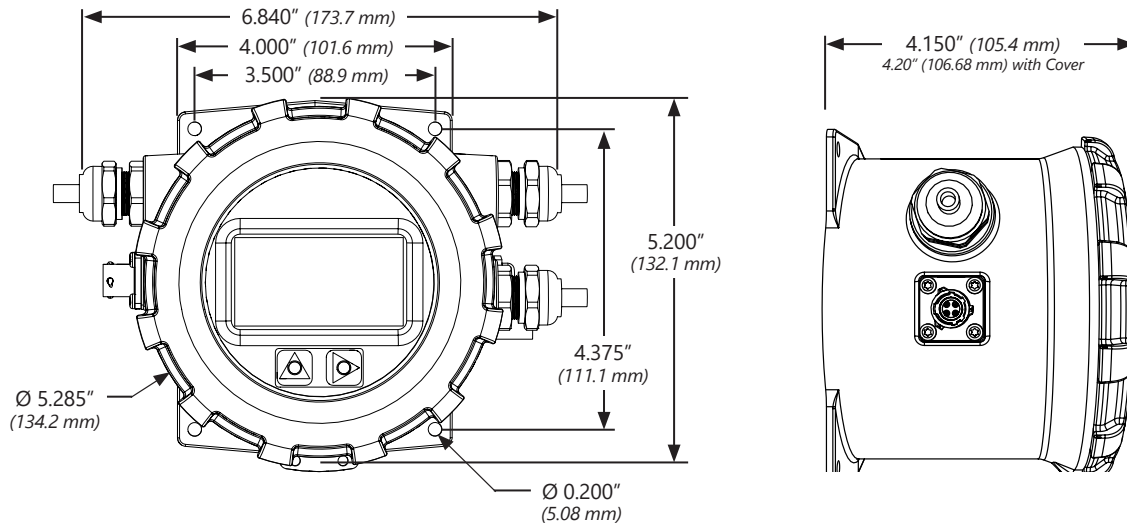
**AG3000p and
AG3000r (remote meter)**

H¹

H

T

L

ID

AG3000 Meter Size	L		H¹		H		T		ID		Bolt Holes	Shipping Weight			
												AG3000p		AG3000r	
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	#	lbs	Kg	lbs	Kg
2"	7.9	200	7.8	198	10.8	274	.62	15.7	1.76*	45*	4	21	9.5	22	10
3"	7.9	200	8.35	212	12.1	307	.62	15.7	2.68*	68*	4	27	12.3	28	12.7
4"	10.12	257	8.6	218	13.1	332	.62	15.7	3.12	79	8	34	15.5	43	19.5
6"	12.09	307	9.4	239	14.9	378	.69	17.5	5.05	128	8	50	22.5	59	27
8"	14.14	359	10.4	264	17.15	435	.69	17.5	6.44	164	8	71	32	78	35
10"	18.08	459	11.5	292	19.5	495	.69	17.5	8.61	219	12	130	59	135	61
12"	19.68	500	12.5	317	22	559	.81	20.6	10.55	268	12	170	77	175	79
Flanges	Standard ANSI 150 lb. drilling											Cable 1 lb.			

Note: 'L' dimension is total from liner face to liner face *Average ID

AG3000 SERIES
FLANGED MAGMETER

Seametrics

How to Order Worksheet

AG3000
AG3000p
AG3000r

(1) (2) (3) (4) (5) (6) (7)

(2) **Style:** F1 = 150 lb ANSI Pattern	(3) **Power:** D1 = DC 60Hz, D2 = DC 50Hz A1 = AC 60Hz, A2 = AC 50Hz BX = Battery	(4) **Outputs:** X = No optional output S = Modbus® L = 4-20mA G = Digital

AG3000 (Integrated Display)

(1) Size	(2) Style	(3) Power	(4) Optional Output[2] *(The AG3000 comes standard with one pulse output)*	(5) Options	(6) DC Power/Output Cable *(Must select one)*
-0200* 2" -0300 3" -0400 4" -0600 6" -0800 8" -1000 10" -1200 12"	-F1	-D1 -D2	-X *(requires 4 conductor cable)* -L *(requires 8 conductor cable)* -S *(requires 8 conductor cable)*	-XX None -01 Data Logger	-0000 No Cable *(Cable required for power/output)* 4 Conductor 8 Conductor -0064 -0068 6 meter (20 ft) -0154 -0158 15 meter (50 ft) -0304 -0308 30 meter (100 ft) -0454 -0458 45 meter (150 ft) -0604 -0608 60 meter (200 ft)
		-BX	-X *(requires 4 conductor cable for pulse output)* -S *(requires 8 conductor cable for output)[3]*		

AG3000p (Integrated Display)

(1) Size	(2) Style	(3) Power[1]	(4) Optional Output[2] *(The AG3000p comes standard with 4-20mA and one pulse output)*	(5) Options	(6) DC Power/Output Cable - 8 conductor *(Must select one)*
-0200* 2" -0300 3" -0400 4" -0600 6" -0800 8" -1000 10" -1200 12"	-F1	-D1 -D2	-X *(requires single cable for DC power & output)* -S *(requires dual cable for DC power & output)* -G *(requires dual cable for DC power & output)*	-XX None -01 Data Logger	-0000 No Cable *(customer will supply)* Single Dual -006S -006D 6 meter (20 ft) -015S -015D 15 meter (50 ft) -030S -030D 30 meter (100 ft) -045S -045D 45 meter (150 ft) -060S -060D 60 meter (200 ft)
		-A1 -A2	-X *(requires single cable for output)* -S *(requires single cable for output)* -G *(requires single cable for output)*		

AG3000r (Remote Display)

(1) Size	(2) Style	(3) Power[1]	(4) Optional Output[2] *(The AG3000r comes standard with one pulse output)*	(5) Options	(6) DC Power/Output Cable - 6 conductor *(Must select one)*	(7) Remote Display Cable - 6 conductor *(Must select one)*
-0200* 2" -0300 3" -0400 4" -0600 6" -0800 8" -1000 10" -1200 12"	-F1	-D1 -D2	-X *(requires single cable for DC power and output)* -L *(requires single cable for DC power and output)* -S *(requires dual cable for DC power and output)*	-XX None -01 Data Logger	-0000 No Cable *(customer will supply)* Single Dual -006S -006D 6 meter (20 ft) -015S -015D 15 meter (50 ft) -030S -030D 30 meter (100 ft) -045S -045D 45 meter (150 ft) -060S -060D 60 meter (200 ft)	-006 6 meter (20 ft) -015 15 meter (50 ft) -030 30 meter (100 ft) -045 45 meter (150 ft) -060 60 meter (200 ft)
		-A1 -A2	-X *(requires single cable for output)* -L *(requires single cable for output)* -S *(requires single cable for output)*			

Modbus is a registered trademark of Schneider Electric. Viton is a registered trademark of DuPont Corporation.

Note: All AG3000 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.

[1] AC meters come with a 1.8 meter (6 ft) AC power cable.
[2] You can choose up to one additional output.
[3] Battery life is shortened when using Modbus with battery powered units. Expected battery life is approximately 1 year, based on usage.

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

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LT-14686r1.3-20220202
02/02/2022