Features

- Easy setup
- Minimal straight pipe
- Mounted or remote rate & total
- Tamper-evident seal
- IP68 rated
- No moving parts
- Free battery at year five with warranty registration
- Telemetry ready for wireless meter reading. Solutions available now by our sister company

Contact Your Supplier

The AG3000 Series is a spool-type electromagnetic flowmeter for use in irrigation applications in 3” 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. Batch totals can be reset. 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 and 4-20mA passive current loop is standard on the AG3000p. In addition, 4-20mA loop, HART protocol, high speed digital, and Modbus® protocol outputs are optional on the externally powered units, depending on model. A power/output cable allows outputs for use with a variety of Seametrics and other displays and controls for remote reading and telemetry applications.

Rate and total units, pulse scaling, and various other settings are set via the front panel touch-key pad by the user. The remote display model (AG3000r) provides remote access for controlling the meter and viewing readings.

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, replace the battery pack, or field install a power/output cable. The cable is field installed where external power is available and/or an output is needed.
Features

AG3000 SERIES
FLANGED MAGMETER

Rate and total indicator with light sensor button controls
Data logger port (right side, not shown)
Powder-coated diecast aluminum electronics housing
Welded steel epoxy-coated flow tube
Equalization lug
Power and Output cable port access
316SS electrodes (Inside)
Snap-on cover (not shown)
Data logger port (right side, not shown)
Rate and total indicator with light sensor button controls
316SS electrodes (Inside)
Welded steel epoxy-coated flow tube
AG3000 SERIES
FLANGED MAGMETER

AG3000

Santoprene/Polypropylene Liner (Noryl® Liner, 3” only)
Powder-coated diecast aluminum electronics housing
Power and Output cable port access
Equalization lug
Santoprene/Polypropylene Liner
AG3000p

316SS electrodes (Inside)
Welded steel epoxy-coated flow tube
AG3000r
( Remote indicator)

Snap on cover and lanyard for AG3000p and AG3000r

253.872.0284 Page 2 seametrics.com
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.

- Built-in Data Logger (Optional)
- Bidirectional Flow Reading (Standard)
- Pulse Scaled Output (Standard)
- 4-20mA Output (Optional*)
- HART Protocol 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)

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

Minimal straight pipe requirements to ease installation in tight quarters.

No moving parts to break or foul!
### Specifications

**Pipe Sizes**

<table>
<thead>
<tr>
<th>Size</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3&quot;, 4&quot;, 6&quot;, 8&quot;, 10&quot;, 12&quot;</td>
<td></td>
</tr>
</tbody>
</table>

**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 (3" only)**: Ductile cast iron, powder coated
- **Body (4"-12")**: Welded steel, epoxy-coated
- **Liner (3" only)**: Noryl®
- **Liner (4"-12")**: Santoprene flange/Polypropylene liner body
- **Electronics Housing**: Powder-coated diecast aluminum
- **Electrodes**: 316 stainless steel
- **O-ring (3" only)**: EPDM

**Display**

- **Type**: 128x64 dot-matrix LCD
- **Digits**: 5 Digit Rate, 8 Digit Total

**Units**

**Rate Volume Units**:

- Gallons
- Liters
- Barrels (42 gal)
- Cubic Feet
- Cubic Meters

**Rate Time Units**:

- Second
- Minute
- Hour
- Day

**Total Volume Units**:

- Million Gallons
- Mega Liters
- Imperial Gallons
- Million Imperial Gallons
- Million Barrels (42 gal)
- Million Cubic Feet
- Million Cubic Meters
- Acre Feet
- Acre Inches
- Fluid Ounces

**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 (AG3000r and AG3000p only)**: 85-264Vac, 50/60Hz, 0.12A
- **Battery (AG3000 only)**: 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 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
- **HART/4-20mA**: HART protocol over 4-20mA line
- **High Speed Digital Output (AG3000 & AG3000p only)**: Isolated, open collector, 24 Vdc
- **Serial Communications**: Isolated, asynchronous serial RS485 (Reconfigurable for RS232 or 3.3V CMOS), Modbus® RTU protocol (factory selectable)

**Cable**

- **Power/Output Cable**: 20ft (6m) standard length polyurethane jacketed cable—for power and outputs (lengths up to 200' available).
- **Remote Display Cable (AG3000r)**: 20ft (6m) standard length polyurethane jacketed cable—for connection between meter and remote display (lengths up to 200' available).

**Conductivity**

>20 microSiemens/cm

**Empty Pipe Detection**

Hardware/software, conductivity-based

**Regulatory**

- **CE** (EN 61326)
- **NEMA 6P, IP68 (10ft (3m) depth, continuously)**

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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.
AG3000 Accuracy

Flow Rate (3” - 12”)

<table>
<thead>
<tr>
<th>Pipe Size (Inches in diameter)</th>
<th>3”</th>
<th>4”</th>
<th>6”</th>
<th>8”</th>
<th>10”</th>
<th>12”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Flow Rate (Gallons/Minute)</td>
<td>723</td>
<td>1285</td>
<td>2891</td>
<td>5140</td>
<td>8031</td>
<td>11565</td>
</tr>
<tr>
<td>Cut-off (min) Flow Rate (Gallons/Minute)</td>
<td>3.62</td>
<td>6.43</td>
<td>14.46</td>
<td>25.70</td>
<td>40.15</td>
<td>57.82</td>
</tr>
<tr>
<td>Max Flow Rate (Liters/Second)</td>
<td>46</td>
<td>81</td>
<td>182</td>
<td>324</td>
<td>507</td>
<td>730</td>
</tr>
<tr>
<td>Cut-off (min) Flow Rate (Liters/Second)</td>
<td>0.23</td>
<td>0.41</td>
<td>0.91</td>
<td>1.62</td>
<td>2.54</td>
<td>3.65</td>
</tr>
<tr>
<td>Max Flow Velocity (Meters/Second)</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>
### Dimensions - AG3000

<table>
<thead>
<tr>
<th>AG3000 Meter Size</th>
<th>L (inch/mm)</th>
<th>H (inch/mm)</th>
<th>T (inch/mm)</th>
<th>ID (inch/mm)</th>
<th>Shipping Weight (lbs/Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3”</td>
<td>12.25/311</td>
<td>7.08/179.8</td>
<td>.68/17.25</td>
<td>2.6/66.04</td>
<td>38/17</td>
</tr>
<tr>
<td>4”</td>
<td>10.12/257</td>
<td>8.3/211</td>
<td>.62/15.7</td>
<td>3.12/79</td>
<td>33/15</td>
</tr>
<tr>
<td>6”</td>
<td>12.09/307</td>
<td>9.1/231</td>
<td>.69/17.5</td>
<td>5.05/128</td>
<td>49/22</td>
</tr>
<tr>
<td>8”</td>
<td>14.14/359</td>
<td>10.1/257</td>
<td>.69/17.5</td>
<td>6.44/164</td>
<td>70/32</td>
</tr>
<tr>
<td>10”</td>
<td>18.08/459</td>
<td>11.2/284</td>
<td>.69/17.5</td>
<td>8.61/219</td>
<td>130/59</td>
</tr>
<tr>
<td>12”</td>
<td>19.68/500</td>
<td>12.2/310</td>
<td>.81/20.6</td>
<td>10.55/268</td>
<td>170/77</td>
</tr>
</tbody>
</table>

**Flanges**

Standard ANSI 150 lb. drilling

Note: ‘L’ dimension is total from liner face to liner face

Cable 1 lb.
Dimensions - AG3000r and AG3000p

AG3000r (remote display)

AG3000p and AG3000r (remote meter)

<table>
<thead>
<tr>
<th>AG3000 Meter Size</th>
<th>L</th>
<th>H</th>
<th>T</th>
<th>ID</th>
<th>Shipping Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>inch</td>
<td>mm</td>
<td>inch</td>
<td>mm</td>
<td>inch</td>
</tr>
<tr>
<td>3” *</td>
<td>12.25</td>
<td>311</td>
<td>7.95</td>
<td>201.9</td>
<td>.68</td>
</tr>
<tr>
<td>4”</td>
<td>10.12</td>
<td>257</td>
<td>8.6</td>
<td>218</td>
<td>.62</td>
</tr>
<tr>
<td>6”</td>
<td>12.09</td>
<td>307</td>
<td>9.4</td>
<td>239</td>
<td>.69</td>
</tr>
<tr>
<td>8”</td>
<td>14.14</td>
<td>359</td>
<td>10.4</td>
<td>264</td>
<td>.69</td>
</tr>
<tr>
<td>10”</td>
<td>18.08</td>
<td>459</td>
<td>11.5</td>
<td>292</td>
<td>.69</td>
</tr>
<tr>
<td>12”</td>
<td>19.68</td>
<td>500</td>
<td>12.5</td>
<td>317</td>
<td>.81</td>
</tr>
</tbody>
</table>

Flanges

- Standard ANSI 150 lb. drilling
- Cable 1 lb.

* Add 8lbs (3.5kg) for remote display. 3” Only.
Note: ‘L’ dimension is total from liner face to liner face.
### How to Order Worksheet

#### AG3000 SERIES

<table>
<thead>
<tr>
<th>FLANGED MAGMETER</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AG3000</strong></td>
</tr>
<tr>
<td><strong>AG3000p</strong></td>
</tr>
<tr>
<td><strong>AG3000r</strong></td>
</tr>
</tbody>
</table>

#### Style:
- **F1** = 150 lb ANSI Pattern

#### Power:
- **D1** = DC 60Hz, **D2** = DC 50Hz
- **A1** = AC 60Hz, **A2** = AC 50Hz
- **BX** = Battery

#### Optional Output:
1. **X** = No optional output
2. **XX** = None
3. **-01** = Data Logger

#### Power/Output Cable - 6 conductor (Must select one):
- **-0000** = No Cable (customer will supply)
- **-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)

#### Remote Display Cable - 6 conductor (Must select one):
- **-0000** = No Cable (customer will supply)
- **-006** = -006D 6 meter (20 ft)
- **-015** = -015D 15 meter (50 ft)
- **-030** = -030D 30 meter (100 ft)
- **-045** = -045D 45 meter (150 ft)
- **-060** = -060D 60 meter (200 ft)

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1. AC meters come with a 1.8 meter (6 ft) AC power cable.
2. You can choose up to one additional output on powered meters only.

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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.