**iMAG 4700 Series**  
**FLANGED MAGMETER**

**Features**
- Easy setup
- Minimal straight pipe
- Mounted or remote rate & total
- Tamper-evident seal
- Certified to NSF/ANSI standard 61
- IP68 rated
- No moving parts

The **iMAG-Series** is the most economical flanged electromagnetic flowmeter on the market. With electrodes designed to discourage fouling, it is available in 3” to 12” pipe in municipal or industrial water, waste and reclaimed water, pump stations, and packaged plant applications. Minimal straight pipe requirements allow iMAG-Series meters to be used in piping configurations where there is little space between the meter and an elbow.

iMAG-Series meters are CE certified, certified to NSF/ANSI standard 61 and are rated IP68 for applications where the meter may be operated under water to a depth of at least 10 feet (3 meters) continuously.

The display can be meter mounted or remote, and both rate and total indication are standard. Rate and total units and pulse scaling can be set via the front panel touch key pad by the user. 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.

A power/output cable allows outputs for use with a variety of Seametrics and other displays and controls for remote reading and telemetry applications. Pulse output is standard on all models and 4-20mA passive current loop is standard on the iMAG 4700p. In addition, 4-20mA loop, HART protocol, high speed digital, and Modbus® protocol outputs are optional on the externally powered units, depending on model.

**Contact Your Supplier**

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253.872.0284  seametrics.com
iMAG 4700 Series
FLANGED MAGMETER

Features

Rate and total indicator with light sensor button controls

Power and Output cable port access

Equalization lug

Santoprene/Polypropylene Liner (Noryl® Liner, 3” only)

Welded steel epoxy-coated flow tube (Ductile cast iron flow tube, 3” only)

Flanges, 150 lb. ANSI pattern

Hinged cover

User access lid

Data logger port (right side, not shown)

Powder-coated diecast aluminum electronics housing

316SS electrodes (Inside)

User access lid (on back)

Rate and total indicator with light sensor button controls

Flanges, 150 lb. ANSI pattern

316SS electrodes (Inside)

Welded steel epoxy-coated flow tube (Ductile cast iron flow tube, 3” only)

Santoprene/Polypropylene Liner (Noryl® Liner, 3” only)

Snap on faceplate cover and lanyard for imag4700p and iMAG4700r
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.

Minimal straight pipe requirements to ease installation in tight quarters.

No moving parts to break or foul!

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

**Pipe Sizes**  
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 IMAG 4700p and 4700r (±1.0% IMAG 4700), ±0.025% of full-scale flow from low flow cutoff to max. 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

**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:** Gallons, Liters, Barrels (42 gal), Cubic Feet, Cubic Meters, Million Gallons, Million Imperial Gallons, Mega Liters, Acre Feet

**Power**  
- **DC Power:** 9-36 Vdc @ 250 mA max, 30 mA average  
- **Battery Backup:** DC powered units: One lithium 7.2V ‘D’ size battery pack, replaceable. AC powered units: One 9V alkaline battery, replaceable.

**Scaled Pulse Output**  
- **Signal:** Current sinking pulse, isolated, 36 Vdc at 10 mA 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 (IMAG 4700 & 4700p only):** Isolated, open collector, 24 Vdc

**Cable**  
- **Power/Output Cable:** 20ft (6m) standard length polyurethane jacketed cable—for power and outputs (lengths up to 200' available).  
- **Remote Display Cable (IMAG 4700r):** 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), 4"-12" certified to NSF/ANSI standard 61 60°C (140°F); 3" certified to NSF/ANSI standard 61 Cold Water 23°C (73.4°F)

**Environmental**  
NEMA 6P, IP68 (10ft (3m) depth, continuously)

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* 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.
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>
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<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 - iMAG 4700

<table>
<thead>
<tr>
<th>iMAG 4700 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>
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<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
- Cable 1 lb.

Note: ‘L’ dimension is total from liner face to liner face
Dimensions - iMAG 4700r and iMAG 4700p

<table>
<thead>
<tr>
<th>iMAG 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>
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<tr>
<td>3” *</td>
<td>12.25</td>
<td>311</td>
<td>7.95</td>
<td>201.9</td>
<td>.68</td>
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<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

*Add 8lbs (3.5kg) for remote display. 3” Only.

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

AG3000p
AG3000r
## How to Order Worksheet

<table>
<thead>
<tr>
<th>Style: F1 = 150 lb ANSI Pattern</th>
<th>Power: D1 = DC 60Hz, D2 = DC 50Hz</th>
<th>Outputs: X = No optional output</th>
<th>Gaskets</th>
<th>DC Power/Output Cable - 6 conductor (Must select one)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IMAG 4700 Series</strong></td>
<td><strong>FLANGED MAGMETER</strong></td>
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<td><strong>iMAG 4700</strong></td>
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<td><strong>iMAG 4700r</strong></td>
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</tbody>
</table>

### Optional Output

- **G = Digital**
- **S = Modbus®**
- **H = HART/4-20mA**
- **L = 4-20mA**
- **B = Battery**

### Power

1. **AC**
2. **DC**
3. **Battery**

### Options

- **-1** Power: D1 = DC 60Hz, D2 = DC 50Hz
- **-2** Gaskets
- **-3** Style

### DC Power/Output Cable - 6 conductor

- **-000** No Cable (customer will supply)
- **-006S** 6 meter (20 ft)
- **-015S** 15 meter (50 ft)
- **-030S** 30 meter (100 ft)
- **-045S** 45 meter (150 ft)
- **-060S** 60 meter (200 ft)

### DC Power/Output Cable - 8 conductor

- **-000** No Cable (customer will supply)
- **-006S** 6 meter (20 ft)
- **-015S** 15 meter (50 ft)
- **-030S** 30 meter (100 ft)
- **-045S** 45 meter (150 ft)
- **-060S** 60 meter (200 ft)

### Remote Display Cable

- **-000** No Cable (customer will supply)
- **-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)

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

Note: All iMAG 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 on powered meters only.

3. If -X is selected, customer must provide full faced gaskets. Failure to install gaskets will void warranty. No charge for non NSF (-R) gaskets.