MAGMAX EGM1010C has achieved “Economical” and “Ecological” for electromagnetic flowmeters. EGM1010C covers almost all specifications which are required for present industries by very competitive price. Easy installation thanks to small, light and compact design.

**FEATURES**
- Low cost-High performance
- Punched plate reinforced PFA liner with Hastelloy C electrodes guarantee high durability and high anti corrosive capability
- Low power consumption of approx. 5 VA.
- Separate output terminals for current, pulse and status outputs.
- High speed response
- High accuracy of ±0.5% of reading
- Bi-directional flow measurement possible
- All CE marked.

**STANDARD SPECIFICATION**
- **Excitation**: Square wave
- **Nominal size**: 10, 15, 25, 40, 50, 80, 100 and 150mm
- **Measuring range**: Flow velocity Min. 0 to 0.3m/s Max. 0 to 12m/s
- **Protection class**: IP67 (equivalent to NEMA6)
- **Housing material**
  - Primary head: Size 10 to 40 mm; Cast iron *
  - Primary head: Size 50 to 150 mm; Carbon steel *
  - Converter: Aluminum alloy *
  - (Cover; Polyamide resin)
  * Anti-corrosive painting
- **Wetted part material**
  - Liner: PFA
  - Electrode: Hastelloy C
  - Earth ring: Stainless steel/SS316
  - Earth ring seal: Supplied for size 10 and 15mm only; Viton
- **Painting**: Polyurethane resin painting
- **Color**: Silver (Primary head)
  - Jade green (Converter; Cover excluded)
- **Cable entry**: 2 × G1/2 female thread
  - 2 × 1/2 NPT female thread
  - 2 × M20 with water tight glands
  (Option: Water tight glands for G1/2)
- **Supply voltage**: 100V AC (85 to 110V)
  - 115V AC (100 to 130V)
  - 200V AC (170 to 220V)
  - 230V AC (200 to 260V)
  - 24V DC (18 to 32V)
  * ( ) indicates voltage range.
- **Supply frequency**: 48 to 63Hz
- **Power consumption**: AC; approx. 5VA
  - DC; approx. 4.5W
- **Ambient temp.**: –25 to +40°C (For operation)
  - –50 to +70°C (For storage)
- **Process connection**: Wafer type
- **Matching flanges**: JIS10K/20K, ANSI class 150/300,
  - DIN PN16/40
  * Max. Op. Press is 1.6MPa irrespective of flange rating.
- **Grounding**: Grounding resistance must be less than 100Ω.
- **Fluid specification**
  - Conductivity: To be more than 5µS/cm
  - (20µS/cm for water flow measurement)
  - Temperature: –25 to 120°C
  - Pressure: 0Pa (abs) to 1.6MPa
- **Indicator**: LCD 2 lines with illumination
  - Line 1; 8 digit numerical figures
  - Line 2; Alphabet for unit indication
  - Flow rate or total flow volume indication selectable. Or alternative indication of these two items with approx. 10 sec, intervals.
  - Flow rate indication: By flow unit (m³/h, L/s, or others) or % of full scale (Bar graph available)
  - Total flow volume: Forward total, reverse total or difference total of forward and reverse. (m³, L, others)
  * Factory setting: Continuous indication of flow rate
**Output Signal**

- **Current output**: 4 to 20mA DC, 0 to 20mA DC
  - Load: Max. 500Ω
  - Time constant: 0.2 to 99.9 s adjustable (0.1s step)

- **Pulse output**
  - Open collector output
    - Rating: 5 to 30V DC, 150mA Max.
    - Pulse rate (Output pulse at full scale): 20 to 36,000,000 Pulse/h
    - Pulse width: One of the following selectable:
      1) Automatic: Pulse width shall be duty 50% in full scale frequency
      2) Duty factor 1:1 (Constant)
      3) Setup of arbitrary value

- **Status output**
  - Open collector output
    - Rating: 5 to 30V DC, 150mA Max.
    - Contents of output:
      1) No status output (Factory setting)
      2) Flow direction identification
      3) Error
      4) Flow alarm (1 point)

- **Low flow cut off**
  - Effective for current output and pulse output
  - 0 to 19% of full scale adjustable (1% step, factory set 1%)

**Accuracy**

- **Pulse output**
  - For velocity ≥1.0m/s: ±0.5% of reading
  - For velocity <1.0m/s: ±(0.3% of reading + 0.2% × \(\frac{1}{\text{Velocity (m/s)}}\))

- **Current output**
  - Additional error of ±0.05% of full scale to be added onto above pulse output accuracy

**Standard Functions**

- **Customer’s free measuring unit**
  - : Volume (or mass) unit in 5 characters and time unit in 3 characters can be created.

- **Automatic zero adjustment**
  - : Zero adjustment is automatically conducted at ‘ZERO ADJUST MODE’ (Subject to zero flow)

- **Self diagnosis**
  - : The following ERROR MESSAGE is indicated when applicable:
    - Internal error
    - A/D converter error
    - Wrong setting
    - Power fail detection
    - Output overranged
    - Total counter overflow

- **Memory save for power fail**
  - : Operation parameters and totalization figures are stored by EEPROM (Non-volatile memory) for more than 10 years.

- **Testing function**
  - : Current and pulse dummy output function provided, loop check can be conducted without calibrator.
  - *Current and pulse output correspond to 0, ±10, ±50, ±100, and ±110% of full scale.

**FLOW RANGE**

<table>
<thead>
<tr>
<th>Nominal size (mm)</th>
<th>Possible setting flow range (m³/h)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Min.</td>
</tr>
<tr>
<td>10</td>
<td>0 to 0.0849</td>
</tr>
<tr>
<td>15</td>
<td>0 to 0.191</td>
</tr>
<tr>
<td>25</td>
<td>0 to 0.531</td>
</tr>
<tr>
<td>40</td>
<td>0 to 1.36</td>
</tr>
<tr>
<td>50</td>
<td>0 to 2.13</td>
</tr>
<tr>
<td>80</td>
<td>0 to 5.43</td>
</tr>
<tr>
<td>100</td>
<td>0 to 8.49</td>
</tr>
<tr>
<td>150</td>
<td>0 to 19.1</td>
</tr>
</tbody>
</table>

*(Flow velocity span: 0.3 to 12m/s)*

**STANDARD ACCESSORIES**

- **Parameter sheet**: 1
- **Instruction manual**: 1

**OPTION**

- **Bolt and nut for installation**: 1 set  [Symbol : BN]
  - Material: Stainless steel SS304 for JIS10K flange

- **Teflon gasket for installation**: 1 set  [Symbol : FG]
  - VALQUA No. N7030, for JIS10K flange
  - *In case matching flange is not JIS10K, please consult TOKYO KEISO.

- **G1/2 water tight glands for cable entry**: 1 set  [Symbol : WG]

- **No converter data (parameter) setting**: 1 set  [Symbol : NS]
  - We will supply by standard data setting in case you have no request.
  - Please set the data flow range, pulse rate and flow direction etc. that required to operate.
**ELECTRICAL CONNECTION**

**Mark**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Polarity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>+</td>
<td>Current output (4 to 20mA DC)</td>
</tr>
<tr>
<td>b</td>
<td>-</td>
<td>Pulse output (Open collector)</td>
</tr>
<tr>
<td>c</td>
<td>+</td>
<td>Status output (Open collector)</td>
</tr>
<tr>
<td>d</td>
<td>AC (+)</td>
<td>Power supply ( ) indicates DC type</td>
</tr>
<tr>
<td>E</td>
<td>-</td>
<td>Grounding</td>
</tr>
</tbody>
</table>

- **Terminal type**: Plug-in type screw terminal
- **Connection capacity**: 0.5 to 2.5mm²

**DIMENSIONS**

**Nominal size: 10/15mm**

- **L**: 68 mm
- **H**: 242 mm
- **W**: 67 mm
- **Mass (kg)**: 3.3

**Nominal size: 25/40mm**

- **L**: 68 mm
- **H**: 242 mm
- **W**: 67 mm
- **Mass (kg)**: 3.3

**Nominal size: 50 to 150mm**

- **L**: 106 mm
- **H**: 245 mm
- **Mass (kg)**: 6.1

*1: Dimension L for nominal size 10 and 15 mm includes earth rings thickness.
The earth rings are fixed onto the primary head.

*2: Dimension L for nominal size 25 to 150 mm includes earth rings thickness.
The earth rings are not fixed onto the primary head.
They are to be installed between the primary head and connection flanges on installation. (Earth ring thickness = 3 mm x 2)
MAGMAX Compact Electromagnetic Flowmeter EGM1010C

MODEL AND SPECIFICATION CODE

Model: EGM1010C

<table>
<thead>
<tr>
<th>Primary head spec. code</th>
<th>V N 1 7 4</th>
<th>N</th>
<th>0 1 0</th>
<th>0 0 0 0 0</th>
<th>0 2 0 0 0 0</th>
<th>Description</th>
<th>Standard</th>
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</thead>
<tbody>
<tr>
<td>Primary head code</td>
<td>V N 1 7</td>
<td>(Fixed code)</td>
<td>4</td>
<td></td>
<td></td>
<td>Wafer type, PFA liner, Hastelloy C electrodes</td>
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<td>Nominal size</td>
<td>5</td>
<td>5 100mm</td>
<td>10mm</td>
<td>10 or 15A</td>
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<td>always 4</td>
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<tr>
<td></td>
<td>6</td>
<td>6 150mm</td>
<td>15mm</td>
<td>15A</td>
<td>1/2&quot;</td>
<td>○</td>
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<td>8</td>
<td>8 25mm</td>
<td>25mm</td>
<td>25A</td>
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<td>○</td>
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<tr>
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<td>B</td>
<td>B 40mm</td>
<td>40mm</td>
<td>40A</td>
<td>1-1/2&quot;</td>
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</tr>
<tr>
<td></td>
<td>C</td>
<td>C 50mm</td>
<td>50mm</td>
<td>50A</td>
<td>2&quot;</td>
<td>○</td>
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</tr>
<tr>
<td></td>
<td>E</td>
<td>E 80mm</td>
<td>80mm</td>
<td>80A</td>
<td>3&quot;</td>
<td>○</td>
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<tr>
<td></td>
<td>F</td>
<td>F 100mm</td>
<td>100mm</td>
<td>100A</td>
<td>4&quot;</td>
<td>○</td>
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</tr>
<tr>
<td></td>
<td>H</td>
<td>H 150mm</td>
<td>150mm</td>
<td>150A</td>
<td>6&quot;</td>
<td>○</td>
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<tr>
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<td>N Wafer type</td>
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<tr>
<td>Type</td>
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<tr>
<td>(Fixed code)</td>
<td>0</td>
<td>0 always 0</td>
<td>○</td>
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<td></td>
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<tr>
<td>Earth ring (Seal for earth ring)</td>
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<td>Stainless steel SS316 (Viton sealing) for size 10 and 15mm</td>
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<td></td>
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<tr>
<td></td>
<td>K</td>
<td>K Stainless steel SS316 for size 25 and 150mm</td>
<td>○</td>
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<tr>
<td></td>
<td>9</td>
<td>9 Others</td>
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<table>
<thead>
<tr>
<th>Converter spec. code</th>
<th>V 3 1 1 4</th>
<th>0 6</th>
<th>2 0 0 0</th>
<th>Description</th>
<th>Standard</th>
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</thead>
<tbody>
<tr>
<td>Converter code</td>
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<td>(Fixed code)</td>
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<td>Converter model: EGC010 (Square housing)</td>
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<td>Type</td>
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<td>4 LCD indication / Power supply and Pulse output</td>
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</tr>
<tr>
<td>Power supply</td>
<td>2</td>
<td>2 100V AC (85 to 110V)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>4 24V DC (18 to 32V)</td>
<td>○</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>6</td>
<td>6 115V AC (100 to 130V)</td>
<td>○</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>B 200V AC (170 to 220V)</td>
<td>○</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>C 230V AC (200 to 260V)</td>
<td>○</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cable entry</td>
<td>3</td>
<td>3 1/2 NPT female thread</td>
<td>○</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>4 1/2 NPT female thread</td>
<td>○</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>5 M20 with water tight glands</td>
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<td></td>
<td></td>
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<td>6</td>
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<td>Mounting position of LCD display</td>
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<td>○</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2 Version 2</td>
<td>○</td>
<td></td>
<td></td>
</tr>
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<td></td>
<td>3</td>
<td>3 Version 3</td>
<td>○</td>
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</tr>
<tr>
<td></td>
<td>4</td>
<td>4 Version 4</td>
<td>○</td>
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<tr>
<td>Special feature</td>
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<td>(Blank) None</td>
<td>○</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* In case that special feature are involved, put /Z at the end of spec. code and specify the details. It is recommended to consult TOKYO KEISO for such availability before ordering.

ORDERING INSTRUCTIONS

Specify the following when ordering:

1. Model and spec. code
   Example: Model : EGM1010C
   Primary head spec. code : VN1740N01100000000200000
   Converter spec. code : V31144240612000

2. Flow range (full scale), Pulse rate
3. Option
4. Fluid name

* Specification subject to change without notice