This series is hot cathode type ionization vacuum gauge, capable of measuring pressure in the $9.9 \times 10^{-8}$ Pa ($7.4 \times 10^{-2}$ to $3.75 \times 10^{-10}$ Torr, $9.9 \times 10^{-2}$ to $5 \times 10^{-10}$ mbar) (Metal gauge, GI-M2), $6.7 \times 10^{-1}$ to $1.3 \times 10^{-6}$ Pa ($5 \times 10^{-3}$ to $9.75 \times 10^{-9}$ Torr, $6.7 \times 10^{-3}$ to $1.3 \times 10^{-8}$ mbar) (Glass gauge, GI-D7) range using triode tube or B-A type sensor heads.

### Features

- **Measures a Wide Pressure Range**
  Can measure a wide pressure range from $9.9 \times 10^{-8}$ Pa (GI-M2) ($7.4 \times 10^{-2}$ to $3.75 \times 10^{-10}$ Torr, $9.9 \times 10^{-2}$ to $5 \times 10^{-10}$ mbar)

- **2 Types Vacuum Tube, Metal and Glass**
  Sensor head selected depending on the application (bare type also available)

- **Strong Metal Vacuum Tube**
  Small-sized metallic sensor head prevents it from breaking (GI-M2)

- **Sensitivity Setup**
  Sensitivity setup can be changed for different gases. Allowing even more accurate pressure measurement.

- **Range Hold Function**
  Ideal for fixing the measurement range

- **Control Output Signal**
  2 set point output

- **Operable at Whole Function Front Panel**
  Switch 1/2 filament, sensitivity setting, range hold function, degas function

- **Serial Communication Specification**
  RS232C communication

### Digital Output
- BCD output

### Measured Value Output Signal
- Pressure is 0 to 10V Log output (pseudo-log output)

### Applications

- **GI-M2**
  Sputtering system
  Vacuum evaporation system (turbomolecular pump type)
  Pressure measurement for other general ultra-high vacuum pumping system

- **GI-D7**
  Vacuum heat treatment furnace
  Vacuum brazing furnace
  Vacuum evaporation system (diffusion pump type)
  Process control for furnaces and other industrial equipment

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**Ionization Vacuum Gauge [GI-M2/GI-D7]**

![Image of the gauge with features and applications listed]
## Ionization Vacuum Gauge [GI-M2/GI-D7]

### Specifications

<table>
<thead>
<tr>
<th>Product name</th>
<th>Metal Ionization Vacuum Gauge</th>
<th>Glass Ionization Vacuum Gauge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>model GI-M2</td>
<td>model GI-D7</td>
</tr>
<tr>
<td>Measurable pressure range</td>
<td>$5.00 \times 10^{-8}$ to $9.99 \times 10^{-2}$ Pa</td>
<td>$WIT: 1.30 \times 10^{-5}$ to $6.7 \times 10^{-2}$ Pa; $9.75 \times 10^{-10}$ to $7.49 \times 10^{-2}$ Torr, $1.30 \times 10^{-1}$ to $8.7 \times 10^{-1}$ mbar)</td>
</tr>
<tr>
<td>WIT: $1.30 \times 10^{-5}$ to $6.7 \times 10^{-2}$ Pa</td>
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<td></td>
</tr>
<tr>
<td>WIB: $1.30 \times 10^{-6}$ to $2.3 \times 10^{-2}$ Pa</td>
<td>$9.75 \times 10^{-9}$ to $1.73 \times 10^{-4}$ Torr, $1.30 \times 10^{-7}$ to $2.3 \times 10^{-4}$ mbar)</td>
<td></td>
</tr>
</tbody>
</table>

| Accuracy | $\pm 15\%$ |
| Pressure indication | Digital indication 2 digit mantissa, 1 digit exponent |
| Compatible sensor head | M-11, M-12, M-13, M-14, M-15, WIT-G1, WIB-G5, WIB-N3 |
| Sampling time | 100ms |
| DEGAS | Direct electrical heating of grid AC power 1.5VA |
| Functions | Range hold function, Gas sensitivity setting, Filament selection |
| Measurement value output | Linear output 0 to 10 VDC, Pseudo-logarithmic output 0-10VDC (1V linear signal in each digit) |
| Control input | REMOTE/LOCAL, Filament ON/OFF, Filament 1/2, DEGAS ON/OFF, Range hold |
| Control output | Analog output (0-10V), BCD output, Filament ON/OFF, Emission current setting, Degassing ON/OFF |
| Set point (contact point capacity) | 2 points (AC125V, $0.55\text{mA} / DC24\text{V}, 1.0\text{mA})$ |
| Serial communication spec | RS232C |
| Operating temperature range | 10 to 40 $^\circ\text{C}$ (50 to 104 $^\circ\text{F}$) |
| Operating humidity range | 15 to 85% (not condensing) |
| Power supply voltage | AC100 $\pm$10V 50/60Hz, 60VA |
| Fuse | BS. SEMKO 3.15A (2pcs) |
| External dimensions $W \times D \times H$ | 240mm x 380mm x 99mm |
| Weight | 5.6kg 5.7kg |
| Standard accessories | Power cord 3P Plug with ground |
| | Connector For external input/output |
| | Instruction manual 1 copy |
| Options | Sensor cable 2, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 60m 4, 10, 15, 20, 25, 30m |
| | Gauge head Metal Gauge: M-11, M-12, M-13, M-14, M-15 B-A type glass gauge: WIB-G5 B-A type nude gauge: WIB-N3 |

### Dimensions

#### Controller

- **GI-M2**
  - 240 (Main body)
  - 220 (Front)
  - 360 (Mounting panel)
- **GI-D7**
  - 300 (Main body)
  - 220 (Front)
  - 360 (Mounting panel)

#### Sensor head

- **GI-M2**
  - M30 x 1.25
  - M12
  - M14
  - M15
- **GI-D7**
  - 30
  - 220
  - 210

#### Units

- **GI-M2**
  - (73)
  - (17)
  - (157)
- **GI-D7**
  - (76.5)
  - (81.5)
  - (157)

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