G-TRAN Series 4CH Display Unit [IM1R1/IM2R1]

4 channel display unit enables you to connect up to 4 sensor units, multiple measurements and display measured pressure.
8 set points output and I/O - communication control are equipped as standard features.
It is possible to measure wide range pressure by the interlock function of the atmospheric pirani gauge or pirani gauge and ionization gauge.

### Features

- **4 Channel Display**
  - Maximum four sensor units/box units can be connected (ionization gauge and cold cathode gauge are connectable only to CH1)

- **4 Channel Display is Possible**
  - 4 channel simultaneous measurement function

- **Used as Combination Gauge**
  - Possible to establish an interlock between the measurement of an ion gauge on CH1 and a pirani gauge on CH2

- **Control Output Signal**
  - Maximum 8 setpoint outputs from 4 gauges can be allocated (Channel allocation of each set point can be set from CH1 to 4.)

- **Power Supply Voltage**
  - Either DC24V or AC100V can be used as input power source

- **Serial Communication Type**
  - RS232C communication is standard

- **Vacuum Output Signal**
  - Pressure is 0 to 10V LOG output/4CH

- **Display Unit**
  - LED / LCD displays are large, bright and easily to read

- **DIN Standards**
  - Compatible with DIN standards (compact size of 96 x 96 mm)

### Applications

- **For vacuum equipment** (Photovoltaic field, FPD, Semiconductor and optics and electronic parts)

- **For vacuum equipment** that require many set points
# G-TRAN Series 4CH Display Unit [IM1R1/IM2R1]

## Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>IM1R1 / IM2R1</th>
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</table>
| **Compatible measuring unit** | CH1: Pirani, Hot cathode; Cold cathode, Multi ionization gauge Model: SW1, SP1, BPR2, BMR2, SC1, SH2  
CH2-4: Pirani gauge Model: SW1, SP1, BPR2 |
| **Number of measuring unit connected** | 1pc to 4pcs (BMR2, SC1, SH2 can connected only 1Ch) |
| **Measurable pressure range** | SW1: $5.0 \times 10^{-1}$ to $1.0 \times 10^{+6}$ Pa ($3.75 \times 10^{-1}$ to 760 Torr, $5 \times 10^{-4}$ to 1013 mbar)  
SH2, BMR2: $5.0 \times 10^{-1}$ to $9.9 \times 10^{-3}$ Pa ($3.75 \times 10^{-1}$ to 7.4 Torr, $5 \times 10^{-4}$ to 9.9 Torr)  
SC1: $5.0 \times 10^{-1}$ to $1.0 \times 10^{-3}$ Pa ($3.75 \times 10^{-3}$ to 7.5 Torr, $5 \times 10^{-6}$ to 1 Torr) |
| **Display** | Mantissa: 2 digit, exponent: 1 digit |
| **Accuracy** | ±10% [Pa] against the input pressure value from measuring unit |
| **Sampling time** | 50ms (Five times of moving average processing) (75ms: SW1) |
| **Value output** | Pseudo-logarithmic output 0 to 10VDC (1V linear signal in each digit) / SW1: logarithmic output |
| **Accuracy** | ±0.5 at the mantissa part of pressure indication |
| **Set point** | 8 point (CH free) |
| **Serial communication spec** | RS232C |
| **Baud rate** | 9600bps, 19200bps, 38400bps |
| **Control input signal** | FIL (HV): ON/OFF, FIL1/2, Degas ON/OFF |
| **Control output signal** | Open collector output, negative logic  
PROTECT / ERROR / SET POINT1-8 / EMISSION VALID |
| **LED display** | POWER, CAL, PROG, LOCK, SET-1 to 8, FIL, HV, DEGAS, PROTECT, Emission Valid |
| **Power** | IM1R1: DC24V ±2V, 200mA / IM2R1: AC100V ±10V, 200mA |
| **Weight** | IM1R1: 1360 g / IM2R1: 1760 g |
| **Operating temperature range** | 10°C to 40°C (50°C to 104°F) |
| **Operating humidity range** | 15% to 85% (not condensing) |
| **Accessories** | Output connector (Unfenol 50pin): 1pc  
Fixture for panel mounting: 1pc  
Instruction manual: 1pc  
Power cable (3m): 1pc |
| **Option** | Input connector: D-sub-15pin (M2.6 screw) |

## 4CH Display Application

**Dimensions**

<table>
<thead>
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<th>Unit: mm</th>
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<tbody>
<tr>
<td>IM1R1 / IM2R1</td>
</tr>
<tr>
<td>12</td>
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<tr>
<td>206</td>
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<tr>
<td>252</td>
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