

G-TRAN Series Pirani Gauge Box Unit [BPR2]

The "box" unit BPR2 is a pirani vacuum gauge which measures from 3000 to 0.4Pa (22.5 to 3×10^{-3} Torr, 30 to 4×10^{-3} mbar). This vacuum gauge design offers cost reduction and space-saving by focusing on minimizing functions by removing the display and some operational parts from an existing controller. Gauge head can be baked due to separate head and circuit design.



Features

- ▶ **Transducer Spec**
When the pressure display is not required, the following advantages can be realized:
Vacuum gauge cost is reduced because the display has been eliminated
Smaller size frees-up system control panel space
Wiring is reduced
- ▶ **Maintainability**
Easy to exchange gauge heads due to a special type of the gauge heads and circuits
- ▶ **Filament Material: platinum (Pt)**
Corrosion-resistant platinum is used as filament material
- ▶ **Able to Use Gauge Heads WP Series**
You can use current gauge heads (WP-01, 02, 03, 16, WPB-10).
- ▶ **Able to Bake Heads**
Able to bake the gauge heads due to a specialized type of gauge head and circuit (when you use WPB-10)
- ▶ **Control Output Signal**
Able to output two set points

- ▶ **Serial Communication Spec**
Include RS485 communication as standard equipment
- ▶ **Measured Value Output Signal**
Pressure is 0 to 10V output (pseudo-log output)
- ▶ **Supply Voltage**
Able to operate at 24VDC power input

Applications

- ▶ Process control in low vacuum range of vacuum equipment such as for semiconductor, optics and electronic parts manufacturing
- ▶ Process control in the low vacuum range for industrial equipment such as vacuum furnaces, etc.
- ▶ Process control in low pressure range for vacuum systems with multiple process chambers such as in-line sputtering and single wafer processing equipment

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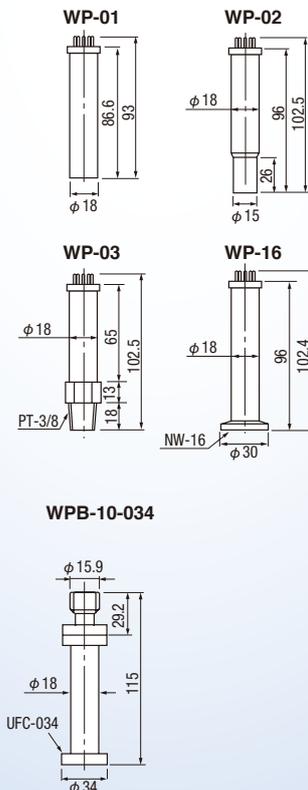
Specifications

Type	Box unit
Model	BPR2
Compatible sensor head	WP-01, WP-02, WP-03, WP-16, WPB-10
Measurement pressure range	4.0×10 ⁻¹ to 3.0×10 ⁻³ Pa (3×10 ⁻³ to 22.5 Torr, 4×10 ⁻³ to 30 mbar)
Accuracy	±15 % 51 to 760 Pa (0.4 to 5.7 Torr, 0.5 to 7.6 mbar) ±30 % 10 to 1000 Pa (7.5×10 ⁻² to 7.5 Torr, 0.1 to 10 mbar) ±50 % 0.4 to 3000 Pa (3×10 ⁻³ to 22.5 Torr, 4×10 ⁻³ to 30 mbar)
Sampling time	Moving average of five times for 50ms
Measurement value output	Nonlinear output: 0 to 5VDC Pseudo-linear output: 0 to 10VDC 1V linear in each digit
Update time	50 ms
Resolution	10 mV
SETPOINT1/2 Monitor output for adjustment	Mantissa part linear output of 0 to 10VDC
Control output signal	Open collector output, Negative logic ERROR signal Setpoint 1/2
LED display	Power, error, set point 1, set point 2, RS485
Serial communication spec	System RS485 Baud rate 9600/19200/38400 bps Communication mode Mode1: Read only, Mode2: Read/Control
Operating temperature range	10 to 40°C (50 to 104°F)
Operating humidity range	15 to 18% (not condensing)
Power supply voltage	DC24V±2V, 150mA (Max.)
Input/Output connector	D-sub-15P (M2.6 screw)
Weight	270g (Excluding sensor head)
Standard accessories	Connector 1pc Instruction manual 1pc 3-pin connector for power 1pc

IO and analog GND are isolated from the power GND. Communication connector is not included.

Sensor Head Dimensions

Unit: mm

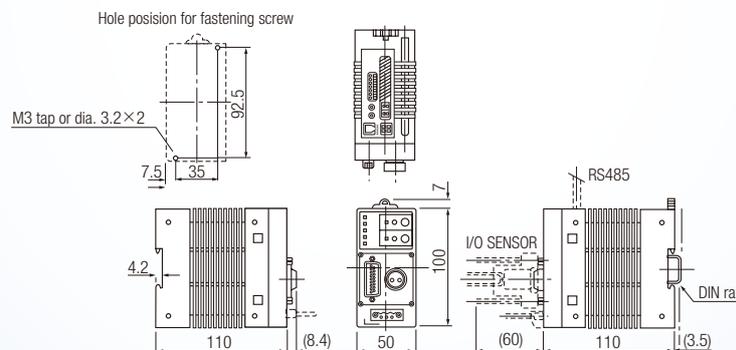


- ▶ The WPB series is a bakable type (heating and degassing is possible) that can be connected to ultra-high vacuum systems.
- ▶ The surrounding ambient temperature limit is 40°C or less.
- ▶ Communication connector is not included.

Dimensions

BPR2

Unit: mm



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