

Pirani Thermal Vacuum Gauge



- ▶ Measures: 1×10^{-4} to 1,000 Torr
 1.3×10^{-4} to 1,333 mbar
 1.3×10^{-2} to 133,332 Pa
- ▶ Compact Size
- ▶ Low Cost
- ▶ Traditional Logarithmic Analog Output
- ▶ RS485 Serial Communication
- ▶ KF-16 or 1/8" MNPT Connections
- ▶ Works in Any Installation Orientation
- ▶ Easy to Install and Operate
- ▶ Simple Push Button Zero and ATM Adjustment
- ▶ Perfect for OEMs!

The HVG_{PR} vacuum gauge from Teledyne Hastings Instruments features a thermal-based Pirani sensor in a compact package. The Pirani sensor is a precision welded hot-wire thermal sensor that measures pressures from 1×10^{-4} to 1,000 Torr. This proven Pirani sensor design has been used in high-volume production of the HVG-2020B Piezo/Pirani vacuum gauge since 2019.

The HVG_{PR} was designed with convenient features for system integration. Available system connections include KF-16 Flange or 1/8" MNPT connection. Both system interfaces are small, low cost and perfect for OEM designs. The HVG_{PR} also offers two choices for analog output signal: 1V/decade logarithmic (2-9 VDC) or 1.286V/decade logarithmic (1.16-10.1620 VDC). These output curves allow you to measure seven decades of vacuum with distinguishable resolution. In addition, RS485 digital communication is always available. The RS485 communication allows you to query pressure, change analog output configuration, change gas selection and much more. All power, analog signal and digital connections are made with a single RJ45 connection. RJ45 connectors are simple to use and hardware is commercially available anywhere. While it is always recommended to install vacuum gauges with the port facing downward, the HVG_{PR} can be installed in any orientation in your system and maintain accurate measurements. Finally, the HVG_{PR} has a compact design that is optimized for small enclosure OEMs.

Applications

- OEMs
- Analytical Instrumentation
- Semiconductor
- Foreline Monitoring
- Thin Film Coating
- Vacuum Furnace/Heat Treat
- Freeze Drying
- HVAC & Refrigeration
- Oil Reprocessing





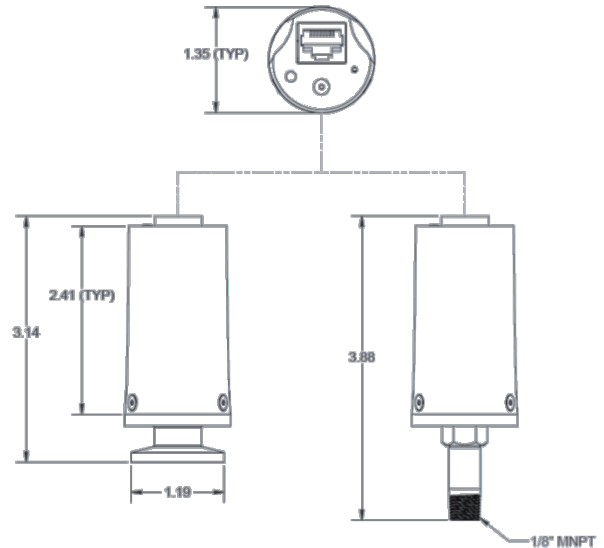
Accuracy ¹	0.001 Torr to 100 Torr: ± 15% of Rdg 100 Torr to 1,000 Torr: ± 50% of Rdg 0.0001 Torr to 0.001 Torr: ± (50% of Rdg + 0.0001 Torr)
Maximum Pressure	2,000 Torr / 25 psig (no change in performance)
Operating Temperature	-20° to 70°C
Warm Up Time ²	15 minutes (typical) 1 hour (for zero adjust)
Analog Outputs	1 V/decade (2 to 9 VDC) logarithmic (Default) 1.286 V/decade (1.16 to 10.1620 VDC) logarithmic
Wetted Materials	304SS, 316SS, Gold Plated Tungsten, Nickel, Glass
Connector	RJ-45 Female
Input Voltage	12 to 36 VDC
Power	0.41 watts max. (12 to 36 VDC); 0.36 W typ. @ 24 VDC
CE Mark	EN55011, EN61326
KC Mark	KSC9811, KSC9610
RoHS Compliant	Yes

¹ Nitrogen at ambient operating temperature without temperature/humidity effects after 2 hours warm up followed by zero adjustment
² To within rated accuracy

Ordering Codes

Part Number	Description
HVG-PR-KF-16	HVG _{PR} with KF-16 Fitting
HVG-PR-NPT	HVG _{PR} with 1/8" MNPT Connection
V-OPT-NIST	NIST Traceable Calibration Report
CB-HVGPR-LEADS-XXX	Cable: RJ45 to Bare Leads; Custom Length

Outline Drawings



Teledyne Hastings reserves the right to change or modify the design of its equipment without any obligation to provide notification of change or intent to change.

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