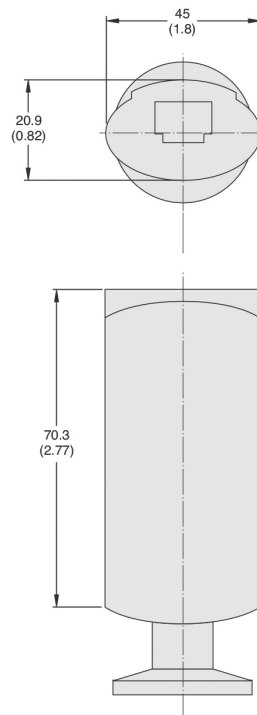


## PVG-500/PVG-500S/PVG-502S Series Pirani Gauges



Dimensions: millimeters (inches)

The Agilent PVG-500/500S (tungsten) / 502S (nickel) series of Pirani gauges provide the ultimate combination of state-of-art technology and ruggedness within a compact design. The PVG-500 series utilizes the most advanced digital Pirani technology combined with a stainless steel sensor cell design to meet the various needs of the market.

There is an easy pushbutton ATM and High Vacuum (HV) adjustment. The nickel filament option is an effective solution for corrosive applications.

| Features   | Benefits   |
|--|--|
| Compact, rugged aluminum housing that mounts in any orientation with a logarithmic signal output | Ease of integration                                      |
| Stainless steel sensor cell with metal-sealed feedthrough  | Rugged design for a wide range of applications           |
| Easy push button ATM and High Vacuum (HV) adjustment   | Ease of set-up   |
| Nickel filament option   | Solution for corrosive applications                      |
| Optional set points  | Utilize pressure readings to perform critical operations |

## Technical Specifications

|   |   |  |   |
|---|---|--|---|
| Measurement range (Air, O <sub>2</sub> , CO, N <sub>2</sub> ) | 5 x 10 <sup>-4</sup> to 1000 mbar (3.75 x 10 <sup>-4</sup> to 750 Torr)               |  |   |
| Accuracy (N <sub>2</sub> )                                    | % of reading  | Units  |   |
|   | ±15%  | 1 x 10 <sup>-3</sup> to 100 mbar (1 x 10 <sup>-3</sup> to 75 Torr)                                     |   |
|   | ±50%  | 5 x 10 <sup>-4</sup> to 1 x 10 <sup>3</sup> mbar (3.75 x 10 <sup>-4</sup> to 1 x 10 <sup>3</sup> Torr) |   |
|   | ±50%  | 100 to 1000 mbar (75 to 750 Torr)  |   |
| Repeatability (Air)   | 1 x 10 <sup>-3</sup> to 100 mbar (1 x 10 <sup>-3</sup> to 75 Torr) – % of reading 62% |  |   |
| Output signal (measurement signal)                            | Voltage range<br>0 to 10.3 V  | Measurement range<br>1.9 to 10.0 V   |   |
| Voltage vs. pressure  | 1.286 V/decade, logarithmic   |  |   |
| Error signal  | 0 to 0.5 V (filament rupture)   |  |   |
| Minimum loaded impedance                                      | 10 kΩ, short-circuit proof  |  |   |
| Response time   | 80 ms   |  |   |
| Adjustment  | One tactile switch for both ATM and HV adjustment                                     |  |   |
| Identification gauge  | 27 kΩ, referenced to supply common  |  |   |
|   | PVG-500   | PVG-500S, PVG-502S   |   |
| Setpoint  | None  | 2  |   |
| Setting range   | None  | 2 x 10 <sup>-3</sup> to 500 mbar (1.5 x 10 <sup>-3</sup> to 375 Torr)                                  |   |
| Hysteresis  | None  | 10% above lower threshold % of reading   |   |
| Relay contact   | None  | 30 VDC / 0.5 ADC floating  |   |
| Switching time  | None  | <20 ms   |   |
| Supply voltage  | At gauge<br>14 to 30 VDC  | Ripple<br>≤1 Vpp   | Power consumption<br>≤1 W               |
| Electrical connection   | RJ45/FCC 68, 8 pole female  |  |   |
| Sensor cable  | 8 poles plus shielding  |  |   |
| Cable length  | ≤100 meter (330 ft)   |  |   |
| Materials exposed to vacuum                                   | Glass, Ni, NiFe, tungsten (tungsten version)  |  |   |
| Admissible temperature  | Operation<br>5 to 60 °C   | Storage<br>-20 to +65 °C   | Bakeout at Flange <sup>1</sup><br>80 °C |
| Mounting orientation  | Any   |  |   |
| Weight  | 80 g  |  |   |

<sup>1</sup> In horizontal mounting position

## Ordering Information

| Description   | Part Number   |
|---|---------------|
| PVG-500 PPirani, tungsten filaments, DN 16 ISO-KF   | PVG500KF16    |
| PVG-500 Pirani tungsten filament with setpoints, DN 16 ISO-KF   | PVG500KF16S   |
| PVG-502 Pirani nickel filament with setpoints, DN 16 ISO-KF – for corrosive applications                            | PVG502KF16S   |
| <b>Accessories</b>  |               |
| Power supply, PVG-PCG, International Voltage  | AGPS45INT     |
| PVG-500 Replacement sensor (tungsten) – recommended for most applications   | PVG500KF16RS  |
| PVG-502 Replacement sensor (nickel) – recommended for corrosive applications  | PVG502KF16RS  |
| PVG-550 Pirani tungsten filament with setpoints, with LCD display (mbar), DN 16 ISO-KF                              | PVG550KF16SD1 |
| PVG-550 Pirani tungsten filament with setpoints, with LCD display (Torr), DN 16 ISO-KF - for corrosive applications | PVG550KF16SD2 |
| Power supply, PVG-PCG, International Voltage  | AGPS45INT     |
| Active gauge cable for Turbo AG Controllers, TPS Mini/Compact, 3 meters   | 9699960       |
| Active gauge cable for Turbo AG Controllers, TPS Mini/Compact, 5 meters   | 9699961       |