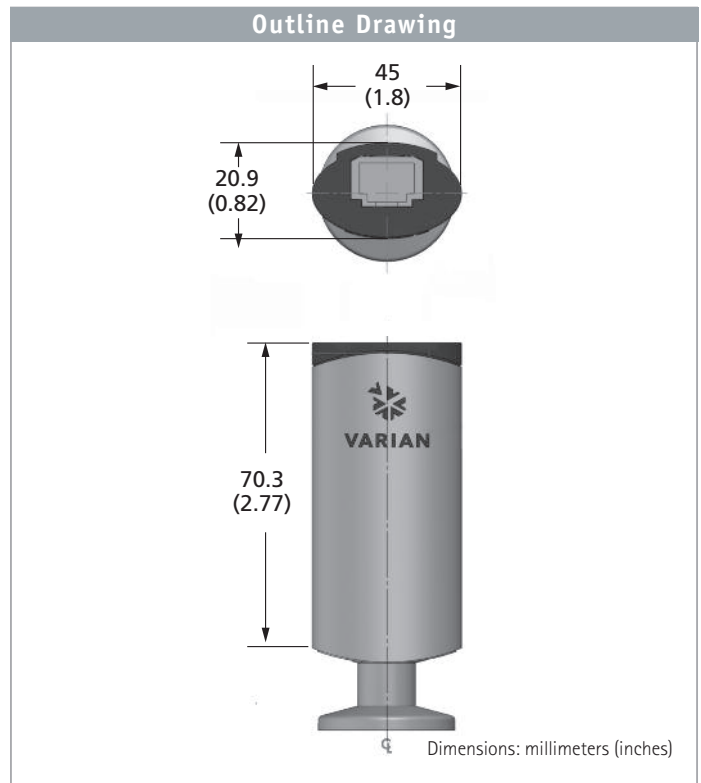


PVG-500/PVG-500S/PVG-502S



The Varian PVG-500 series of Pirani gauges provides 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 design to meet the various needs of the market today.

Applications

- Fore pressure vacuum pressure monitoring
- Controlling high vacuum ionization gauges
- Safety monitoring in vacuum systems
- General vacuum measurement and control in the medium and rough vacuum range

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



NOTICE: This document contains references to Varian. Please note that Varian, Inc. is now part of Agilent Technologies. For more information, go to www.agilent.com/chem.

PVG-500/PVG-500S/PVG-502S

Technical Specifications			
Measurement range (Air, O ₂ , CO, N ₂)	5 x 10 ⁻⁴ to 1000 mbar (3.75 x 10 ⁻⁴ to 750 Torr)		
Accuracy (N ₂)	% of reading	Units	
	± 15%	1 x 10 ⁻³ to 100 mbar (1 x 10 ⁻³ to 75 Torr)	
	± 50%	5 x 10 ⁻⁴ to 1 x 10 ⁻³ mbar (3.75 x 10 ⁻⁴ to 1 x 10 ⁻³ Torr)	
	± 50%	100 to 1000 mbar (75 to 750 Torr)	
Repeatability (Air)	1 x 10 ⁻³ to 100 mbar (1 x 10 ⁻³ to 75 Torr) – % of reading ± 2%		
Output signal (measurement signal)	Voltage range	Measurement range	
	0 to 10.3 V	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		
Setpoint	PVG-500	PVG-500S, PVG-502S	
	Setting range	2	
	Hysteresis	2 x 10 ⁻³ to 500 mbar (1.5 x 10 ⁻³ to 375 Torr)	
	Relay contact	10% above lower threshold % of reading	
	Switching time	30 VDC / 0.5 ADC floating	
Supply voltage	At gauge	Ripple	Power consumption
	14 to 30 VDC	≤ 1 V _{pp}	≤ 1 W
Electrical connection	FCC 68/RJ45 appliance connector, 8 poles, male		
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	Storage	Vacuum Connection ¹
	5 to 60 °C	-20 to +65 °C	80 °C
Mounting orientation	Any		
Weight	80g		

¹ In horizontal mounting position

Ordering Information	
Description	Part Number
PVG-500 Pirani, KF16	PVG500KF16
PVG-500 Pirani tungsten filament with setpoints, KF16	PVG500KF16S
PVG-502 Pirani nickel filament with setpoints, KF16 – <i>for corrosive applications</i>	PVG502KF16S
Accessories	
PVG-500 Replacement sensor (tungsten) – <i>recommended for most applications</i>	PVG500KF16RS
PVG-502 Replacement sensor (nickel) – <i>recommended for corrosive applications</i>	PVG502KF16RS