

PGE500

Pirani Gauge Enhanced

The INFICON Pirani Gauge Enhanced (PGE) is equipped with the latest digital convection enhanced Pirani technology available on the market. Due to the physical properties of convection this type of Pirani offers higher accuracy in the measurement range between 100 to 1000 mbar. The rugged gauge and sensor design in combination with many factory build in features, such as the bright, sharp and clear OLED display with integrated keypad, RS485/RS232 digital interface and 4 selectable analog output signals make the PGE500 a high value/ low cost of ownership choice. All these features qualify this gauge for many applications where an economical vacuum measurement from low to high vacuum range is required.



ADVANTAGES

- Convection Enhanced Pirani Technology for wide measurement range and higher accuracy near atmosphere
- All-in-One active gauge with built-in display, 2 set points, 4 analog output signals, and 2 digital interfaces
- Bright digital OLED display with keypad for simple setup, calibration and operation
- 4 optional analog output signals (3 user selectable, 1 default)
- Factory pre-set analog output signal or selectable via keypad
- Factory pre-set display units or selectable via keypad
- User programmable set point relays (factory pre-set on request for volume orders)
- Gold plated tungsten filament, Platinum filament for enhanced corrosion resistance available on request
- Mechanical strength, highly robust and less susceptible to mechanical shock and vibration
- Choice of flange options
- Compliance & standards: CE, RoHS
- Direct drop in replaces most Granville-Phillips® Mini-Convectron® modules (GP275)

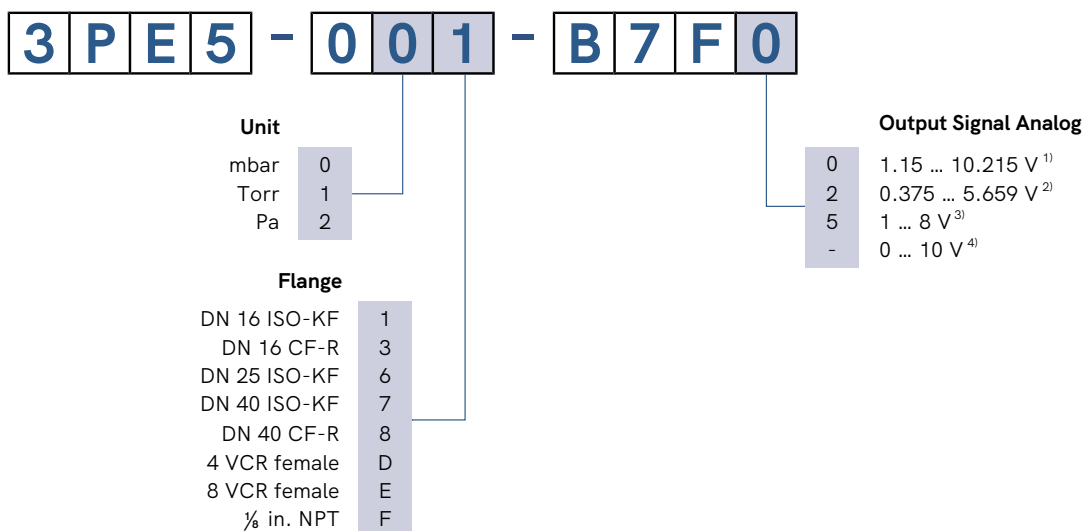
APPLICATIONS

- For vacuum pressure measurement
- General vacuum measurement and control from low to the high vacuum range

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PGE500

ORDERING INFORMATION



- 1) log-linear, $p = 10^{0.778(U-c)}$
- 2) non-linear S-curve, compatible to most Granville-Phillips® Mini-Convectron® modules (GP275)
- 3) log-linear, $p = 10^{(V-5)}$
- 4) linear, available on all devices by default on pin 9

Power supply for PGE300 & PGE500 ¹⁾		352-525
Input power:	V (ac)	100 ... 240
Output power:	V (dc)	+24 @ 2.5 A (60 W)
Cable length:	m (ft)	2 (6)



¹⁾ The IEC 60320 AC power entry receptacle allows use with any user supplied AC mains cord set available worldwide

PGE500

SPECIFICATIONS

Type	PGE500 Tungsten gold-plated
Measurement range	$1.3 \times 10^{-4} \dots 1333 \text{ mbar}$ $1 \times 10^{-4} \dots 1000 \text{ Torr}$ $1.3 \times 10^{-2} \dots 133000 \text{ Pa}$
Accuracy (N ₂) ¹⁾	
$1.3 \times 10^{-4} \dots 1.3 \times 10^{-3} \text{ mbar}$	0.1 × 10 ⁻³ mbar resolution
$1.3 \times 10^{-3} \dots 530 \text{ mbar}$	±10% of reading
530 ... 1333 mbar	±2.5% of reading
$1 \times 10^{-4} \dots 1 \times 10^{-3} \text{ Torr}$	0.1 mTorr resolution
$1 \times 10^{-3} \dots 400 \text{ Torr}$	±10% of reading
400 ... 1000 Torr	±2.5% of reading
Repeatability (N ₂) ¹⁾	±2% of reading
Admissible Temperature	
Operation	0 ... +40°C
Storage	-40 ... +70°C
Bakeout (electronics removed)	≤150°C
Supply voltage	+12 ... +28 V (dc) ²⁾
Output signal (analog)	
3PE5-0xx-B7F0	1.15 ... 10.215 V (dc) (log-linear)
3PE5-0xx-B7F2	0.375 ... 5.659 V (dc) (non-linear S-curve)
3PE5-0xx-B7F5	1 ... 8 V (dc) (log-linear)
3PE5-0xx-B7F ⁻³⁾	1 ... 10 V (dc) (linear)
Voltage vs. pressure	
3PE5-0xx-B7F0	1.286 V / Decade
3PE5-0xx-B7F5	1 V / Decade
Setpoint relay	2 (single-pole double-throw relays (SPDT)) 1 A at 30 V (dc) resistive, or V (ac) non-inductive
Electrical connection	D-Sub, 9-pin, male and D-Sub, 15-pin HD, male (with RS485)
Mounting orientation	horizontal recommended ⁴⁾
Materials exposed to vacuum	gold-plated tungsten, 304 & 316 stainless steel, glass, nickel, Teflon®
Internal volume	26 cm ³ (1.589 in. ³)
Internal surface area	59.7 cm ³ (9.25 in. ³)
Weight	340 g (12 oz)

¹⁾ typically

²⁾ 2 W protected against power reversal and transient over-voltages

³⁾ available on all devices by default on pin 9

⁴⁾ orientation has no effect on measurements below 1.3 mbar (1 Torr)

PGE500

DIMENSIONS

Dimension A	mm	(in)
DN 16 ISO-KF	29.5	(1.16)
DN 25 ISO-KF	29.5	(1.16)
DN 40 ISO-KF	29.5	(1.16)
DN 16 CF-R	34	(1.34)
DN 40 CF-R	34	(1.34)
4 VCR female	43.7	(1.72)
8 VCR female	40.9	(1.61)
1/8" NPT	21.8	(0.86)

mm (in.)

