

PGE300

Pirani Gauge Enhanced

The INFICON Pirani Gauge Enhanced 300 (PGE300) like its bigger brother PGE500 is equipped with the latest digital convection enhanced Pirani technology available on the market. Equipped with the same sensor components as the PGE500, the PGE300 yields the same higher accuracy readings in the measurement range between 100 to 1000 mbar. The PGE300 offers only the critical built-in features that the majority of customers in the vacuum industry are looking for, minimizing costs and maximizing efficiency. This rugged gauge and sensor design, in combination with the factory build in clear readable LED display, 3 selectable analog output signals and a set point relay makes the PGE300 a high value/low cost of ownership choice not only for OEM customers, but all customers. These features qualify this gauge for many applications where an economical vacuum measurement from low to high vacuum range is required. With its wider measuring range and higher accuracy, especially at lower pressures in combination with the economically priced built in features the PGE300 also is the first choice when replacing thermocouple gauges in your vacuum system.



ADVANTAGES

- Convection Enhanced Pirani Technology for wide measurement range and higher accuracy near atmosphere
- All-in-One active gauge with built-in display, 1 set point and 3 selectable analog output signals
- Bright digital LED display features a user friendly for calibration and operation
- Factory pre-set analog output signal or selectable via user interface and user programmable set point relay
- 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
- Compliance & standards: CE, RoHS
- Direct drop in replaces most Granville-Phillips® Mini-Convectron® modules (GP275) and ideal device for upgrading your installed thermocouple gauges

APPLICATIONS

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

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PGE300

ORDERING INFORMATION

3 P E 5 - 0 0 1 - A 7 0 0

Unit

mbar 0
Torr 1

Flange

DN 16 ISO-KF 1
DN 16 CF-R 3
DN 25 ISO-KF 6
DN 40 ISO-KF 7
DN 40 CF-R 8
4 VCR female D
8 VCR female E
1/8 in. NPT F

Output Signal Analog

0 0.61 ... 10.23 V
2 0.375 ... 5.659 V
5 1 ... 8 V

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



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SPECIFICATIONS

Type	PGE300 Tungsten gold-plated
Measurement range	$1.3 \times 10^{-4} \dots 1333 \text{ mbar}$ $1 \times 10^{-4} \dots 1000 \text{ Torr}$ $1.3 \times 10^{-2} \dots 133300 \text{ Pa}$
Accuracy (N ₂) ¹⁾	
$1.3 \times 10^{-4} \dots 1.3 \times 10^{-3} \text{ mbar}$ $1.3 \times 10^{-3} \dots 530 \text{ mbar}$ $530 \dots 1333 \text{ mbar}$	$0.1 \times 10^{-3} \text{ mbar resolution}$ $\pm 10\% \text{ of reading}$ ± 2.5
$1 \times 10^{-4} \dots 1 \times 10^{-3} \text{ Torr}$ $1 \times 10^{-3} \dots 400 \text{ Torr}$ $400 \dots 1000 \text{ Torr}$	$0.1 \text{ mTorr resolution}$ $\pm 10\% \text{ of reading}$ $\pm 2.5\% \text{ of reading}$
Repeatability (N ₂) ¹⁾	$\pm 2\% \text{ of reading}$
Admissible Temperature	
Operation	$0 \dots +40^\circ\text{C}$
Storage	$-40 \dots +70^\circ\text{C}$
Bakeout	$\leq 70^\circ\text{C}$
Supply voltage	$+12 \dots +28 \text{ V (dc)}^{2)}$
Output signal (analog)	
3PE5-0xx-A700	$0.61 \dots 10.23 \text{ V (dc) (log-linear)}$
3PE5-0xx-A702	$0.375 \dots 5.659 \text{ V (dc) (non-linear S-curve)}$
3PE5-0xx-A705	$1 \dots 8 \text{ V (dc) (log-linear)}$
Voltage vs. pressure	
3PE5-0xx-A700	1.286 V / Decade
3PE5-0xx / -A705	1 V / Decade
Setpoint relay	$1 \text{ (single-pole double-throw relay (SPDT))}$ $1 \text{ A at } 30 \text{ V (dc) resistive, or V (ac) non-inductive}$
Electrical connection	D-Sub, 9-pin, male
Mounting orientation	horizontal recommended ³⁾
Materials exposed to vacuum	gold-plated tungsten, 304 & 316 stainless steel, glass, nickel, Teflon®
Internal volume	$26 \text{ cm}^3 \text{ (1.589 in.}^3)$
Internal surface area	$59.7 \text{ cm}^3 \text{ (9.25 in.}^3)$
Weight	136 g (4.8 oz)

¹⁾ typically

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

³⁾ orientation has no effect on measurements below 1.3 mbar (1 Torr)

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DIMENSIONS

Dimension A	mm	(in)
DN 16 ISO-KF	33	(1.3)
DN 25 ISO-KF	33	(1.3)
DN 40 ISO-KF	33	(1.3)
DN 16 CF-R	27.4	(1.08)
DN 40 CF-R	37.3	(1.47)
4 VCR female	47.2	(1.86)
8 VCR female	44.5	(1.75)
1/8" NPT	25.4	(1)

mm (in.)

