



### Accessories

- Panel mount flange (rear pressure port only)
- AC power adapter with DC output
- Shock damping rubber boot

### Operational Description

#### Battery Powered Digital Gauge Offers High Accuracy at Low Cost

Utilizing a solid state design, the PG-2000 incorporates a semi-conductor strain gage pressure transducer as the sensing element, conditioned by state of the art surface mount electronics. The unit requires very low power consumption, resulting in a battery life of two years in typical use. The large 3.5 digit display and  $\pm 0.25\%$  full scale accuracy allows it to replace much larger mechanical gauges.

### Applications

No special tools or adaptors are required for installation of the PG-2000. This makes the unit an easy, cost-effective replacement for less accurate, standard mechanical gauges. The unit's long life, ease of operation, high accuracy, and low cost make it perfect for all applications where standard 2 1/2 in. or larger mechanical gauges have been used.

# PG-2000

## Digital Pressure Gauge

- Large 3.5 digit display with 0.5 in. digits
  - Available ranges from vacuum up to 2,000 psi
  - 20 minute auto-off optional at no extra cost
  - Rugged, chemical-resistant case
  - Display capability to 1999
  - Battery operated with convenient on/off switch
  - $\pm 0.25\%$  accuracy of full scale (on selected ranges)
- ### Options
- Metric units of measure available at no extra cost
  - Metric process connection fittings available
  - Rear pressure port
  - Zero adjust knob
  - External power
  - 0-2 VDC output (battery powered)
  - 4-20 mA output (loop powered)
  - 0.25%  $\pm 2$  digital count accuracy with NIST certification
  - Absolute
  - Clean for oxygen service
  - For OEM applications or other configurations, consult factory

## ■ Specifications

<b>Performance</b>
<b>Standard Pressure Ranges</b>
<b>Compound Gauge:</b> From vac up to 200 psi
<b>Gauge or Absolute:</b> From 0 to 2000 psi
<b>Overpressure:</b> 2x full scale
<b>Burst Pressure:</b> 10x full scale or 20,000 psi (whichever is less)
<b>Accuracy (linearity, hysteresis, &amp; repeatability):</b> ±0.25% of full scale (B.F.S.L.) for ±2 digital counts; traceable certification also available
<b>Stability</b>
<b>One Year Zero Drift: 15-5:</b> < ±0.5% F.S., <b>316:</b> < ±1% F.S.
<b>Six Month Linearity:</b> < 0.25% F.S.
<b>Thermal Zero Shift:</b> ±0.02% F.S./°F
<b>Thermal Sensitivity Shift:</b> ±0.02% F.S./°F
<b>Life:</b> 10 million cycles minimum
<b>Environmental</b>
<b>Compensated Temp:</b> 30 to 130°F (-1 to 54°C)
<b>Storage Temp:</b> -40 to 160°F (-40 to 71°C)
<b>Operating Temp:</b> 0 to 160°F (-18 to 71°C)
<b>Electrical</b>
<b>Batteries:</b> Standard 9 V (1), user replaceable (2-year life typical with auto off option)
<b>External Power:</b> 10-32 VDC
<b>Display Type:</b> 3.5 digit LCD, 0.5 in. digits
<b>Transducer Resolution:</b> Infinite
<b>Display Resolution:</b> 1 part in 1999
<b>Low Battery Detection:</b> Displays "LOBAT"
<b>Adjustments:</b> Front accessible "Z": Zero Adjust; "S": Span Adjust
<b>Auto Off:</b> 20 minutes
<b>Physical</b>
<b>Weight:</b> 0.36 lb.
<b>Construction Materials</b>
<b>Case:</b> Injection molded case material EMI-X® PDX-W-88341
<b>Wetted Materials:</b> SS 15-5; 316L SS available at no extra charge (High resolution ranges under 100 psi, in 316L SS incorporate a Hastelloy® C276 diaphragm); One piece Hastelloy® fitting also available (minimum quantities required)
<b>6 Pin Connector:</b> Electrical receptacle, R04-R6M or equivalent with optional output selections (included with optional output selections)
<b>6 Pin Mating Connector:</b> R04-J6F or equivalent (included with optional output selections)
<b>External Power Connector:</b> 1/8 in. – 3 conductor (included with optional external power selection)
<b>External Power Mating Connector:</b> 1/8 in. – 3 conductor (included with optional external power selection)
<b>Cavity Volume:</b> 0.07 <sup>3</sup> in.

Specifications are subject to change without notice.

## ■ Electrical Specifications

<b>4-20 mA Output</b>
<b>Excitation:</b> 6-35 VDC max
<b>Input Current:</b> 3-30 mA max
<b>Output:</b> 4-20 mA ±0.16 mA at set points
<b>Output/Input:</b> 2 wire loop powered
<b>Resolution:</b> Infinite
<b>Protection:</b> Reversed polarity
<b>0-2 VDC Output</b>
<b>Excitation:</b> Battery powered
<b>Output:</b> Zero set point is ±0.150 V with a 2 VDC span ±0.05 VDC
<b>Output/Input:</b> 2 wire
<b>Resolution:</b> Infinite
<b>Protection:</b> Battery powered

## ■ Common Pressure Ranges

Range Option	Range	Unit of Measure	Resolution
30**	-30 to 0	inHg	0.1
20	0 to 20	psi	0.01*
30	0 to 30	psi	0.1
60	0 to 60	psi	0.1
100	0 to 100	psi	0.1
200	0 to 200	psi	0.1
1000	0 to 1000	psi	1
2000	0 to 2000	psi	1

Other ranges available.

\*Requires G2 option when ordering.

\*\*Requires VAC when ordering.



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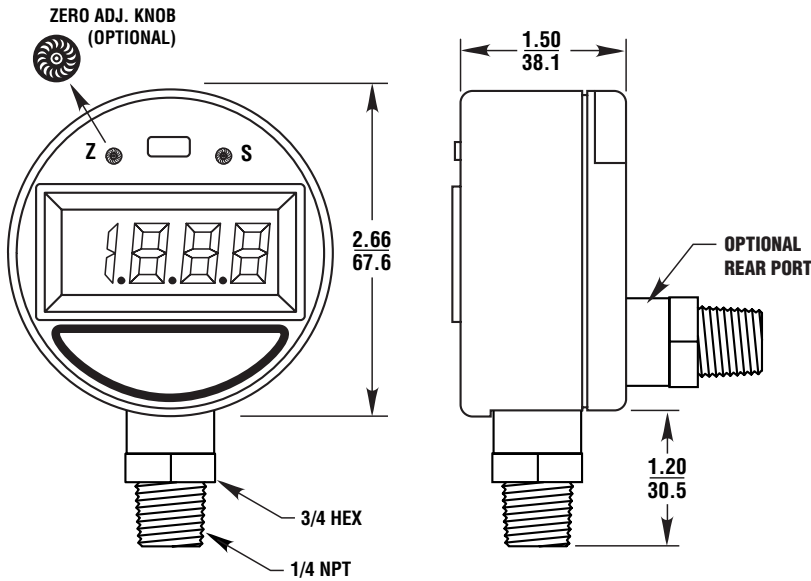


B5



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■ Dimensions — in./mm



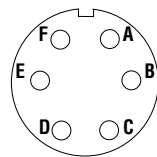
■ Wiring

PG-2000 Pin Out Table

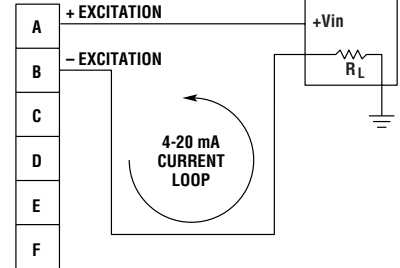
	4-20 mA	0-2 VDC	Ex Pwr
6 Pin Circular	A + Excitation	N/C	N/C
	B - Excitation	N/C	N/C
	C N/C	N/C	N/C
	D N/C	N/C	N/C
	E N/C	N/C	N/C
	F N/C	N/C	N/C
1/8" Plug	Tip N/C	+ Output	+ Pwr
	Ctr N/C	- Output	- Pwr
	Body N/C	N/C	N/C

N/C indicates no connection.

6 Pin Connector



Typical 4-20 mA Circuit Gauge Connector



Electrical Cable Specifications

AWG: 26

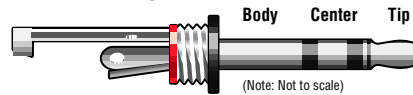
Stranding: 7/34

Type: MIL-W-16878E

Shield: 36 AWG TPC Braid

Jacket: PVC

External Power Plug



## Option Tables

### Unit of Measure Table

There are 9 choices available:

psi	mmHg*
bar	inHg
mbar*	kgcm <sup>2</sup>
kPa	fsw
INWC*	

\* Requires G2 option

### Port Table

F0	Bottom
F1	Rear
F2	Bottom with O <sub>2</sub> clean
F3	Rear with O <sub>2</sub> clean

### Electrical Cable Length Table

Cable Length	Output Signal	
	4-20 mA	0-2 VDC
W0 0 ft.	✓	✓
W1 2 ft. (0.6 m)	✓	✓
W2 5 ft. (1.5 m)	✓	✓
W3 10 ft. (3 m)	✓	n/a
W4 25 ft. (7.6 m)	✓	n/a
W5 50 ft. (15.2 m)	✓	n/a

### Process Connection Table

P0	1/4-18 NPTM
P2	1 1/2 in. sanitary
P5	1/4-18 NPTF
P7	7/16-20 SAE male
P8	7/16-20 SAE female
P10	9/16-18 SAE male
P11	VCR male
P12	VCR swivel male
P13	VCR swivel female
P14	1/8-27 NPTM
P15	1/8-27 NPTF
P16	PT 1/4 (BSPM 1/4)
P17	3/8 BSPM
P19	3/8 in. x 1 1/2 in. stub tube
P20	Mini seal 1/4-18 NPTF to mini seal 1/4-18 NPTM
P21	Mini seal 1/4-18 NPTF to mini seal 1/2-14 NPTM
P22	G3/8 (3/8 BSPP) male

## Ordering Information

PG-2000 -	Range	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Unit of Measure</b>	See Unit of Measure Table													
<b>Pressure Type</b>	See Pressure Type Table													
<b>Auto Off</b>	See Auto Off Table													
A0	No auto off													
A4	20 minute auto off													
<b>Zero Adjustment</b>	See Zero Adjustment Table													
Z0	Cover screw													
Z1	Z knob													
<b>Port</b>	See Port Table													
F0-F3	See Port Table													
<b>Operation</b>	See Operation Table													
L0-L4	See Operation Table													
<b>Electrical Connection</b>	See Electrical Connection Table													
E0	No connector													
E1	6 pin circular with mate													
E2	1/8 in., 3-conductor external power and mate													
<b>Electrical Cable Length</b>	See Electrical Cable Length Table													
W0-W5	See Electrical Cable Length Table													
<b>Process Connection</b>	See Process Connection Table													
P0-P22	See Process Connection Table													
<b>Accuracy</b>	See Accuracy Table													
N0	±0.25%													
N1	±0.25% with NIST certification (select ranges only)													
N3	Greater than ±0.25%													
N4	Greater than ±0.25% with NIST certification													
<b>Materials</b>	See Materials Table													
M0	SS 15-5													
M1	316L SS (under 100 psi, 316L SS/Hastelloy®)													
M5	Hastelloy® (minimum quantities required)													



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### Pressure Type Table

G	Gauge
G2	High resolution gauge
CG	Compound gauge
V	Vac
A	Absolute
S	Sealed

### Operation Table

Operation	Electrical Connector
L0 9 V battery	E0
L1 4-20 mA output	E1
L2 0-2 VDC output	E2
L4 External power	E2

### Accessories

Please order separately, by part number.

Description	Part Number
Panel mount flange (rear port only)	512596
AC power adapter with DC output	511641
Rubber boot	512625



For information on Pressure Sanitary Fittings, see page B53.