



**INSTRUMENTS, LLC**  
Direct Drive Difference  
**SIERRA PRECISION**

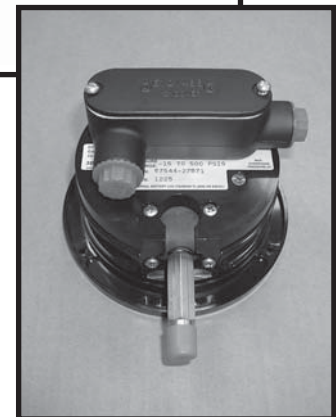
# DPG-6700 Loop Power Digital Pressure Gauge

## Features

- **Loop Powered** – 10-32 VDC power. 24 VDC loop power or DC power acceptable. On-board back-up battery: Lithium cell - 4 yr. life.
- **Precise Measurements** – 0.25% of FS. Pressure ranges from 0-50 to 0-9999 psig – some ranges feature vacuum to -14.5 psig
- **Temperature Compensation** – accuracy not de-rated over the range 32-131 deg F
- **Intrinsically Safe** – Built to comply with requirements for Class 1, Division 2, Groups C and D hazardous areas. Class 1, Division 1, Groups C and D, when used with a CSA certified zener barrier.
- **Signal Output** – Scaleable 4-20 mA dc
- **Electronic Switches** – 2 each independent, solid state design, isolated open drain FET – rated @ 100 Vdc, 1 amp continuous
- **Analog/Digital Display** – 4 digit (0.75" high) LCD with 25-segment bar graph
- **Field Ready** – 4 1/2" ABS case w/a field adjustable (bottom to back) process fitting
- **Damping** – stabilize readings with adjustable LCD filter
- **Hi/Lo** – Capture/display pressure extremes
- **Options** – Chemical seals and SS case



*Pictured with Optional  
Conduit Connection*



## Product Description

The DPG-6700 from 3D Instruments, a 4 1/2" loop powered digital pressure gauge, incorporates outstanding pressure sensors from 0-50 to 0-9999 psig to provide accuracy of 0.25% of full scale. Special temperature compensation circuitry maintains this accuracy fixed over a temperature range of 32° to 131° F!! Wetted components are 316SS for compatibility with many aggressive process medias.

Powered by either a 10-32 VDC loop or AC/DC adapter, the DPG-6700 offers both a scaleable 4-20 mA dc signal output and dual electronic switches with adjustable setpoint and hysteresis. To provide for back-up power, a high energy 3.6v lithium cell coupled with low-power circuitry offer an incredible 4 year battery life! An auto shut-off feature allows adjustment from 0-720 minutes.

The DPG-6700 is housed in a robust ABS case outfitted with a unique field adjustable process connection fitting/flange arrangement. All functions including: Power, Zero, Engr. Units and Hi/Lo are selectable via a Polyester keypad for reliable operation in poor weather conditions. A special 4-digit LCD with oversized 0.75" digits and a 25-segment analog bar graph combine to provide unsurpassed resolution and readability. Other features include: multiple Engr. Units, display dampening and low battery indication.

Combining precision measurement technology, robust design and a wide array of pressure ranges makes the DPG-6700 digital pressure gauges the ideal choice to tackle your demanding pressure monitoring or test/calibration applications.

*3D The "Direct Drive Difference" in Digital*

# DPG-6700 Digital Pressure Gauge

## General Specifications

### Accuracies:

0.25% of full scale for positive pressure.

Vacuum:

- Pressure Range 100 psi & below: +/- .3 psig

- Pressure Range 200 - 1000 psi: +/- 1 psig

- Pressure Range above 1000 psi: unrated

Includes all variations due to non-linearity, hysteresis, repeatability and temperature over the Compensated Range.

Loop 4 - 20 mA: 0.25% of full scale

Range (PSI)	Resolution	Over Pressure(PSI)
-14.5 - 50	0.1	100
-14.5 - 100	0.1	200
-14.5 - 200	0.1	400
-14 - 500	1	1000
-14 - 1000	1	2000
0-2500	1	5000
0-5000	1	10000
0-10000	1	20000

### Environmental

Compensated range: 32 to 131° F (0 to 55° C)

Operating range: -40 to 185° F (-40 to 85° C)

Storage range: -40 to 185° F (-40 to 85° C)

### Sensors:

Media-isolated. Suitable for gases and liquids compatible with 316SS.

Burst pressure: 5x or 25,000 psi, whichever is less

### Power:

Loop Power- 10 to 32 VDC, 24 VDC nominal. Lithium 3.6 VDC back-up battery: 4 year life

### LCD:

4 digit LCD; 25-segment bar graph

### Case/Flange Material:

ABS plastic or 300 series SS; neoprene blow-out plug

### Process Connection:

¼" NPTM – 316SS

### Keypad:

4 sealed membrane switches- Polyester

### Dimensions:

(Bottom connect) 4.78"(w) x 2.50"(D) x 6.58"(L)

### Weight:

514g (18 oz) including battery

## Features

### Engineering Units:

Psig, inH2O, inHg, mmH2O, mmHg, Bar, mBar, Kg/cm<sup>2</sup>. Custom units can be programmed in. **Note: Not all Engr. Units are available on all ranges.**

### Current Loop Output:

Nominal: 4mA to 20mA; maximum range: 3mA to 25mA

### Electronic Switches:

2 ea., solid state, isolated open drain FET rated 100 VDC, 1.0 amp. continuous

### Damping:

Adj. LCD filter – approx. 1-96 seconds

### Update Rate:

Loop - LCD: 4 per second

Hi/Lo: 8 per second

Battery - LCD and Hi/Lo: 1 per second

### Hi/Lo:

Capture/query the Hi/Lo pressure values

### Tare:

0 to 20% FS zero offset capability

**Power Management:** Auto shut-off adjustable from 0-720 minutes

### Low Battery Indication:

Two indicators: 1<sup>st</sup> alternating reading of pressure and L.Bat, 2<sup>nd</sup>: a continuous reading of L.Bat

## ORDERING INFORMATION

**Example:** 4 ½" DPG-6700 with black ABS case

0-5000 psi sensor, bottom ¼" NPT male fitting: 67544-35B71

**①** **②** **③** **④** **⑤**  
**67544 - XX B XX XXX**

**① Product Description:** Loop Powered 4 ½" DPG-6700

**② Pressure Range Codes:**

**18:** -14.5 - 50 psig

**25:** -14.5 - 200 psig

**29:** -14 - 1000 psig

**35:** 0-5000 psig

**23:** -14.5 - 100 psig

**27:** -14 - 500 psig

**47:** 0-2500 psig

**38:** 0-10000 psig

**③ Process Connection:** ¼" NPT male

**④ Case Type/Process Connection:** (mounting flange is supplied standard with ABS case)

**71:** black ABS case, fitting bottom, flange detached (Flange and Fitting are field adjustable)

**15:** SS case, fitting bottom, flange front

**25:** SS case, fitting back, flange front

**35:** SS case, fitting bottom, flange back

**45:** SS case, fitting back, flange back

**55:** SS case, fitting bottom, flange none

**65:** SS case, fitting back, flange none

**⑤ Option Codes:** (leave blank if no options are required)

**COW:** Conduit connector for DPG-6700

**PNO:** DPG-Cal Kit #1 – includes a DPG-6700, Model 8110-300: 0-300 psi Pneumatic Handpump, Hose Kit and Series-200 ABS waterproof carrying case

**PRO:** DPG-Cal Kit #2 – includes a DPG-6700, Model 8111-300: Vacuum/0-300 psi Duplex Handpump, Hose Kit and Series-200 ABS waterproof carrying case

**PUO:** DPG-Cal Kit #3 – includes a DPG-6700, Model 8112-3000: 0-3000 psi Hydraulic Handpump, Hose Kit and Series-200 ABS waterproof carrying case

**GCO2:** Calibration Certificate Level #2 - 13 reading in both ascending and descending pressure at room temperature

**GCO3:** Calibration Certificate Level #3 - 13 reading in both ascending and descending pressure done at three distinct temperature...typically: 22 C, 5 C and 45 C

**RBA:** AC Adapter - 110 VAC to 12VDC – wallmount (P/N: 2001-0090)



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