

# Falcon II DPG500BBL

- **±1% Accuracy**
- **Easy to Read Backlit Display**
- **Pressure or Vacuum Applications**
- **Compound Ranges Available**
- **Rugged Extruded Aluminum Case**
- **Replaceable AAA Batteries**

## ELECTRICAL SPECIFICATIONS

### Standard ranges

±15 psi,  
0-5, 0-15, 0-30, 0-50, 0-100 psi

### Pressure/vacuum reference

Gauge (psig) or absolute (psia)

### Optional units

Any engineering units such as kPa, atm, bar, mbar, inHg, mmHg, inH<sub>2</sub>O, ftH<sub>2</sub>O, torr, kg/cm<sup>2</sup>, cmH<sub>2</sub>O, oz/in<sup>2</sup>

### Display (type, size, update rate)

3½ digit LCD, ½" digit height, 3 readings per second nominal  
Red LED backlight activated by holding ON button

### Controls & location

Display zero/span, non-interactive, ±15% range;  
top-accessible, multiturn potentiometers

### Accuracy (linearity, hysteresis, repeatability)

±1% of full scale or better, ±1 least significant digit

### Temperature stability

±0.01% of span per degree C (typical)  
±0.04% of span per degree C (max) 0-50°C

### Battery

Two 1.5 Volt AAA Alkaline

### Auto Shutoff

5 minutes standard  
Factory settable to 1, 5, or 10 minutes

### Battery life

75 to 500 hours depending on backlight usage

### Low Battery indication

Standard; "LOBAT" on display

## ENVIRONMENTAL SPECIFICATIONS

### Storage temperature

-45 to +75°C

### Operating temperature

-10 to +70°C

### Compensated temperature

0 to +60°C

*Digital Pressure Gauge  
Battery Powered  
Backlit Display*



## MECHANICAL SPECIFICATIONS

### Size

3.38"W x 2.88"H x 1.65"D, not including pressure fitting  
Add approximately 0.75" to height for pressure fitting

### Weight

9 oz. (approx.)

### Material

Extruded, aluminum case, epoxy powder coated  
Polycarbonate cover, front and rear gaskets

### Color

Light gray body, light gray/blue front

### Pressure/vacuum connection and material

Brass, ¼" NPT male

### Media compatibility

Compatible with air, dry gases, and most non-corrosive media  
Consult factory for special media compatibility requirements

### Electrical connection

None required

### Overpressure

3x rated or 200 psi, whichever is less

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## Description

The DPG500 series is a versatile family of industrial pressure/vacuum gauges. All DPG500 models feature a large (1/2"H) 3 1/2 digit display in a rugged, splashproof extruded aluminum case. A 1/4" NPT fitting is standard for the pressure connection. Media compatibility includes air, dry gases, and most non-corrosive media. The DPG500 series features a wide operating temperature range of -10 to +70°C. Many different standard pressure/vacuum ranges (in a choice of engineering units) with both gauge and absolute references are available. The DPG500 series also features ±1% accuracy, 3X rated (or 200 psi, whichever is less) overpressure specifications.

The battery powered **DPG500BBL** features a backlit display for low-light or night time use. It is ideally suited as a portable test gauge or for permanent installations with occasional display-activation requirements. The LED backlight is only active while the ON button is held down. The **DPG500BBL** includes auto-shutoff circuitry to conserve battery life.

## Electrical Connection

The **DPG500BBL** is powered by its internal lithium battery. No external electrical connection is required.

## Operation

Once the **DPG500BBL** is mounted on the pressure or vacuum system, press the ON button on the face to activate the display. The gauge will stay on for a period of time determined by the auto-shutoff time selected when the gauge was ordered. After this time the gauge will automatically shut off to conserve battery life.

When the battery voltage falls sufficiently, "LOBAT" will appear in upper left-hand corner of the display. The battery should be replaced soon after the LOBAT indicator comes on or unreliable readings may result.

## Calibration

Lift calibration label to access individual controls on the top of the unit to adjust the zero and span of the display.

For GAUGE reference units the setting of the "Zero" control is correct when the gauge reads zero, with the "-" sign occasionally flashing, when the pressure port is open to the ambient.

Accurate calibration of the "Span" control requires an accurate pressure reference and should only be attempted if the user has access to a pressure reference of known accuracy. The quality of the calibration is only as good as the accuracy of the calibration equipment and ideally should be better than ±0.3% for full accuracy of the **DPG500BBL**.

If "Span" calibration is attempted, the "Zero" calibration should be done first. Then, apply full-scale pressure to the pressure port and adjust the "Span" control for the correct reading.

Calibration of ABSOLUTE reference units is more difficult and is not recommended in the field, unless the user has access to the special equipment required to calibrate absolute-reference units, especially vacuum generation or atmospheric pressure measurement equipment.

Users who do not have the required calibration equipment should return the gauge to Cecomp Electronics for certified recalibration. N.I.S.T. traceability is available.

## Battery Replacement

All **DPG500BBL** models are powered by two replaceable AAA batteries. Battery life of the **DPG500BBL** is about 75 hours if the backlighting is used continuously and up to 500 hours if the backlighting is not used at all. When the "LOBAT" indicator appears both batteries must be replaced.

Remove the 6 Phillips head screws on the back of the unit.

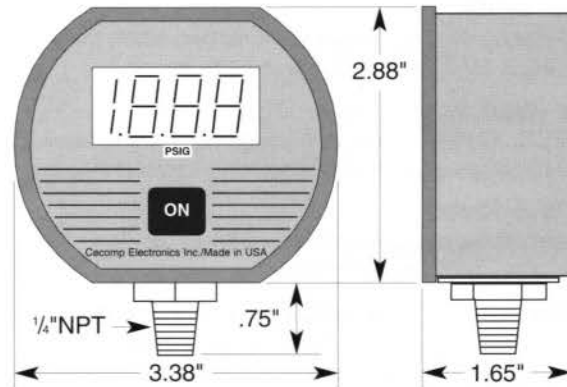
Carefully remove both AAA batteries from the holders by lifting up the positive end of the battery (opposite the spring). Take care not to bend or distort the battery retention springs.

DO NOT discard the old battery into fire, any other sources of extreme heat, or in any other hazardous manner. Please consult local authorities if there is any question of proper disposal procedures.

Replace the batteries only with high quality AAA alkaline batteries. It is acceptable to use AAA lithium batteries.

Observe the polarity of the batteries when replacing them. The negative (flat) end of each battery should be inserted first and should face the spring in the battery holder.

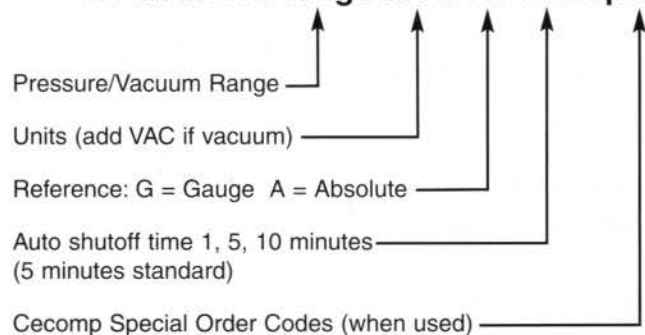
Replace the back cover, being sure to also include the rubber sealing gasket.



Cecomp Electronics maintains a constant effort to upgrade and improve its products, therefore specifications are subject to change.

## MODEL NUMBERING SYSTEM

### DPG500BBL range units ref-min-special



**Example:** DPG500BBL250PSIG-10 = DPG500, Battery powered, Backlit display, 250 psig, 10 minute shutoff