

IP65 Digital Pressure Gauge User Manual

Series: PG2



Doc #9004737
Rev A1, 10/2016

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Introduction

Thank you for purchasing a series PG2 IP65 digital pressure gauge from APG. We appreciate your business! Please take a few minutes to familiarize yourself with your PT-L and this manual.

The series PG2 measures gas and liquid pressure with high accuracy at an affordable price. Its rugged weatherproof design stands up to outdoor and industrial environments. The 4-digit backlit display with four selectable units makes readings easily visible to prevent reading errors. The PG2 comes with 304L stainless steel wetted material for a wide range of compatible liquids and gases.

Reading your label

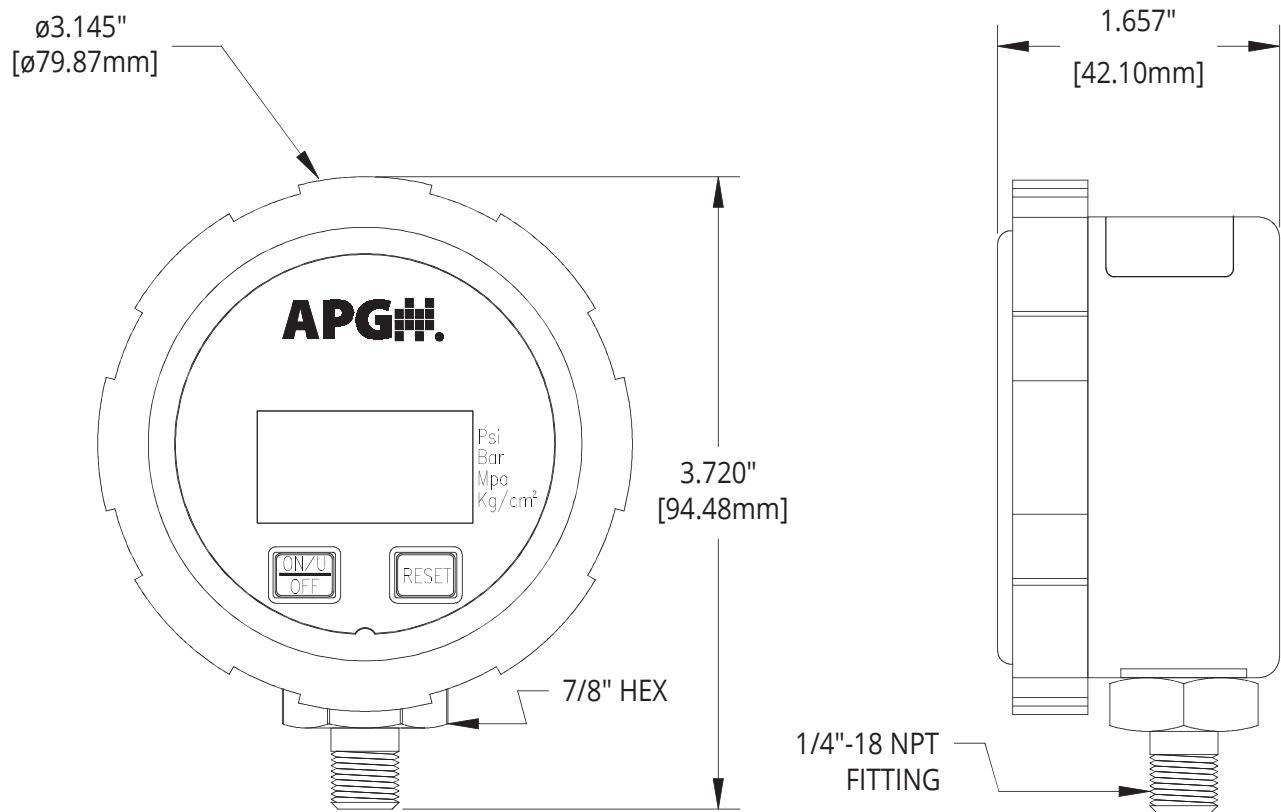
Every APG instrument comes with a label that includes the instrument's model number, part number, serial number, and a wiring pinout table. Please ensure that the part number and pinout table on your label match your order.

Warranty and Warranty Restrictions

This product is covered by APG's warranty to be free from defects in material and workmanship under normal use and service of the product for 24 months. Contact Technical Support to receive a Return Material Authorization before shipping your product back.

Chapter 1: Specifications and Options

- **Dimensions**



- **Specifications**

Performance

Pressure Ranges	0 to 5K PSIS
Over Pressure	2X Full Scale
Burst Pressure	3X Full Scale

Accuracy

Linearity, Hystereses & Repeatability	±0.5% of Full Scale (BFSL) up to 1000 psis ±1% of Full Scale (BFSL) above 1000 psis
Thermal Zero Shift	±0.04% FS/°C (±0.07% FS/°F)
Thermal Span Shift	±0.04% FS/°C (±0.07% FS/°F)
Long Term Stability	±0.05% FS/year

Environmental

Operating/Compensated Temperature	-10 to 60°C (14 to 140°F)
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Electrical

Battery	(1) 3V CR123A Lithium
Battery Life	2-3 years (typical)

Materials of Construction

Wetted Materials	304L Stainless Steel
Housing Materials	Fiberglass reinforce PP plastic

Mechanical

Process Connection	1/4" male NPT
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Environmental

Enclosure Protection	IP65
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- **Model Number Configurator**

Model Number: PG2 - _____
A

A. Common Pressure Ranges

- | | |
|--------------------------------------|---------------------------------|
| ☐ 0030 | 0.00 - 30.00 psi Gauge Pressure |
| ☐ 0050 | 0.00 - 50.00 psi Gauge Pressure |
| ☐ 0100 | 0.0 - 100.0 psi Gauge Pressure |
| ☐ 0200 | 0.0 - 200.0 psi Gauge Pressure |
| ☐ 0300 | 0.0 - 300.0 psi Gauge Pressure |
| ☐ 0500 | 0.0 - 500.0 psi Gauge Pressure |
| ☐ 1000 | 0 - 1000 psi Sealed Pressure |
| ☐ 5000 | 0 - 5000 psi Sealed Pressure |

Chapter 2: Installation and Removal Procedures and Notes

- **Tools Needed**

- 7/8" Wrench for your PG2's process connection.
- Thread tape or sealant compound for threaded connections.

- **Mounting Instructions**

Mounting your pressure gauge is easy if you follow a few simple steps:

- Never over-tighten the gauge. This can compress the diaphragm, changing how it reacts to pressure. In all cases, tighten the gauge as little as possible to create an adequate seal.
- Always use thread tape or sealant compound on tapered threads. Wrap thread tape in the opposite direction of the threads so it does not unravel as you screw the sensor into place. Unraveling can cause uneven distribution and seal failure. For straight threads use an o-ring.
- Always start screwing in your gauge by hand to avoid cross-threading. Thread failure can be a problem if you damage threads by over-tightening them or by crossing threads.

- **Removal Instructions**

Removing your pressure gauge from service must be done with care. It's easy to create an unsafe situation, or damage your sensor, if you are not careful to follow these guidelines:

- Make sure the pressure is completely removed from the line or vessel where your sensor is installed. Follow any and all procedures for safely isolating any media contained inside the line or vessel.
- Remove the gauge with a 7/8" sized wrench.
- Carefully clean the gauge's fitting and diaphragm of any debris (see General Care) and inspect for damage.
- Store your sensor in a dry place, at a temperature between -40° F and 180° F.



DANGER: Removing your series PG2 Pressure Gauge while there is still pressure in the line could result in injury or death.

Chapter 3: User Interface and Gauge Operation

- User Interface

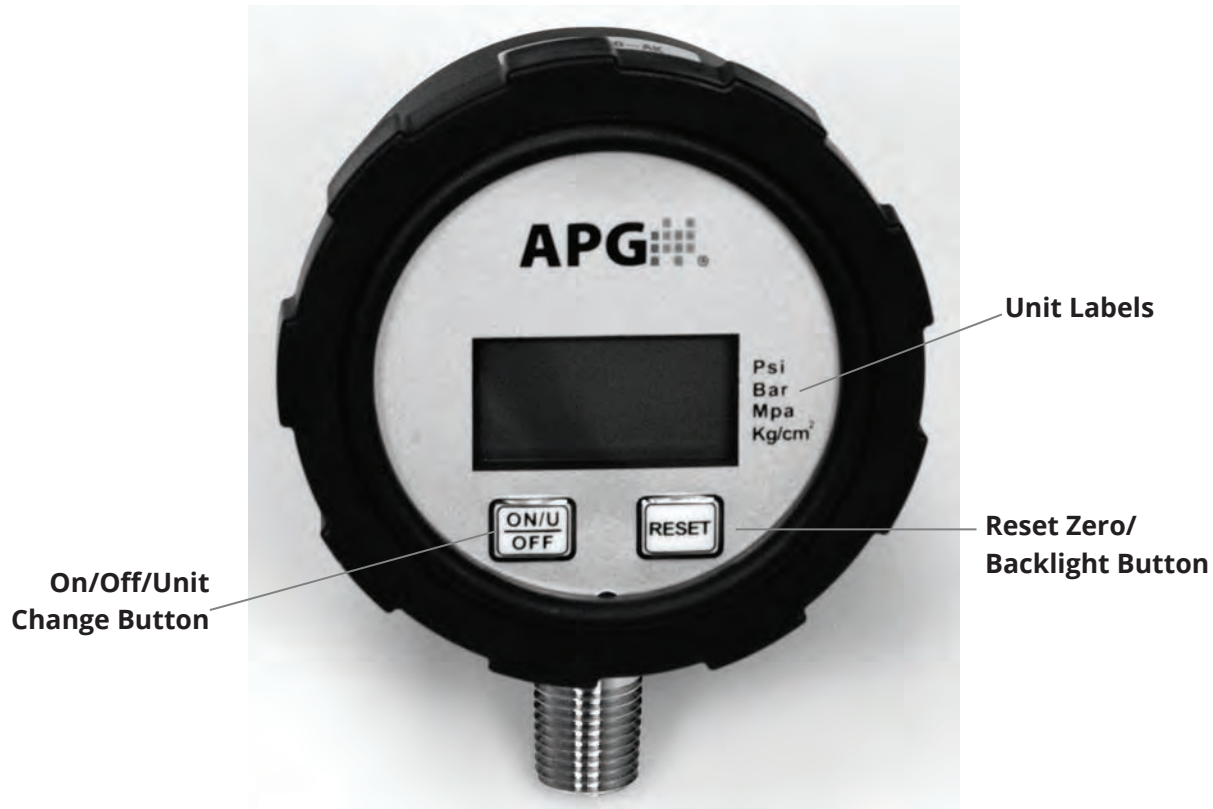


Figure 3.1

On/Off/Unit Change Button

Press to turn on gauge.
Press to cycle through units on right side of display.
Press and hold for three seconds to turn off gauge.

Reset Zero/Backlight Button

Press to turn on backlight. Backlight turns off after five seconds.
Press and hold for three seconds to re-zero gauge. Display will show 8.8.8.8 before resetting.

- **Rezero Gauge**

To rezero gauge, press and hold the Reset Zero/Backlight Button for three seconds. The display will show **8.8.8.8** before resetting.

i IMPORTANT: Do not re-zero display while gauge is installed. Always ensure gauge is exposed to atmosphere before re-zeroing.

If atmospheric pressure is above 1 psi, use this alternate process to rezero the gauge:

- Press and hold the On/Off/Unit Change button for three seconds to turn off gauge.
- While the gauge is turned off, press and hold the On/Off/Unit Change button for five seconds, until the display shows **8.8.8.8**.
- Release the On/Off/Unit Change Button.
- Wait for three seconds, then press and hold the Reset Zero/Backlight Button for three seconds. The display will show **8.8.8.8** before resetting.

- **Enable/Disable Gauge Auto-Off**

Press and hold both buttons for two to three seconds to enable or disable 10 minute gauge auto-off function. Display will show **-on-** for auto-off enabled or **-off-** for disabled.

- **Change Battery**

If the battery is low, the display will show **Lob** and turn off after 3 seconds. To replace the battery:

- Unscrew the front plastic ring and remove the front LCD plate.
- Remove the battery and replace with a new 3V lithium metal battery, making sure that the (+) and (-) polarities match. The display will show the current pressure is the battery is installed correctly.
- Replace the LCD plate and re-screw the front plastic ring, making sure it sits snugly against the body of the gauge. An improperly seated ring compromises the IP65 rating of the gauge.

Chapter 4: Maintenance

• General Care

Your series PG2 pressure gauge is very low maintenance and will need little care as long as it was installed correctly. However, in general, you should:

- Rezero gauge once a year.
- Keep the gauge and the area around it generally clean.
- Avoid applications for which the gauge was not designed, such as extreme temperatures, contact with incompatible corrosive chemicals, or other damaging environments.
- Inspect the threads whenever you remove the gauge from duty or change its location.
- Avoid touching the diaphragm. Contact with the diaphragm, especially with a tool, could permanently shift the output and ruin accuracy.
- Clean the diaphragm or the diaphragm bore with extreme care. If using a tool is required, make sure it does not touch the diaphragm.
- If air bubbles form under the plastic facing of the gauge, unscrew the plastic ring and lift the plastic facing off the gauge. The plastic facing can be discarded, as it is intended only to protect the face of the gauge during shipping and installation.

i **IMPORTANT:** Any contact with the diaphragm can permanently damage the gauge. Use extreme caution.

Please have your PG2's part number and serial number available. See Warranty and Warranty Restrictions for more information.