DPG 1600 DIGITAL PRESSURE GAUGE USER'S GUIDE

Installation and Precautions

Install or remove gauge using wrench on hex fitting only. Do not attempt to tighten by turning housing or any other part of the gauge.
Use fittings appropriate for the pressure range of the gauge.
Do not apply vacuum to gauges not designed for vacuum operation.
Due to the hardness of 316 stainless steel, it is recommended that a thread sealant be used to ensure leak-free operation.

NEVER insert objects into the gauge port or blow out with compressed air. Permanent damage not covered by warranty will result to the sensor.

Power-Up

1. Press and hold the pushbutton for approximately 1 second.
2. The full-scale range is indicated and the display segments are tested.
3. The actual pressure and units are displayed.

Power-Up With Zero (Gauge reference models only)

1. Be sure the gauge port is exposed to normal atmospheric pressure and no pressure is applied. The zeroing function is only activated at each power-up and the stored zero correction is erased when the gauge is shut off.
2. Press and hold the pushbutton.
3. The full-scale range is indicated and the display segments are tested.
4. Continue to press the pushbutton until 0 0 0 0 is displayed and then release the button. This indicates that the gauge has been zeroed.
5. The actual pressure is displayed.

Attempting to zero the gauge with pressure greater than approximately 3% of full-scale applied will result in an error condition, and the display will alternately indicate Err 0 and the actual measured pressure. The gauge must be powered down to reset the error condition.

Absolute reference gauges do not use the zero feature since they read atmospheric pressure under normal conditions.

Normal Operation

Following the start-up initialization, the display indicates the pressure reading updated approximately 3 times per second. The auto shutoff timer starts when the gauge is powered up or whenever the button is pushed, unless the gauge was ordered without an auto shutoff time (**-ON** option).

If excessive vacuum is applied to a pressure-only gauge, the display will indicate -Err until the vacuum is released. Applying vacuum to a gauge designed for pressure may damage the pressure sensor. If excessive pressure is applied (112.5% over range), an out-of-range indication of OL --- or OL -.-.-.- will be displayed depending on model.

Minimum and Maximum Readings

Minimum and maximum readings are continuously stored and updated whenever gauge is on. The stored readings can be manually cleared if desired. The HI and LO memory is also cleared whenever the gauge is off.

Press and hold the pushbutton for about 1 second until HI is displayed. The maximum stored value is displayed.

After HI is displayed, press and hold the pushbutton again for about 1 second until LO is displayed. The minimum stored value is displayed.

After LO is displayed, press and hold the pushbutton again for about 1 second until AP (Applied Pressure) is displayed. The HI and LO memory is not erased and the gauge returns to normal operation with the display indicating the current pressure.

Press and continue to hold the pushbutton until the display indicates clr HI/LO (about 3 seconds total) and then release the pushbutton. Both HI and LO values are cleared and the gauge returns to the normal mode and displays the current pressure.

Display Backlighting (BBL models only)

Display backlighting can be turned on by momentarily pressing the button whenever the gauge is on. The backlighting will turn on for one minute and then automatically shut off. This also restarts the auto shutoff timer. The display backlighting will not be apparent under bright lighting conditions.

Shut-Down

To shut off the gauge manually at any time, press and hold the pushbutton until the display indicates OFF (about 5 seconds) and then release.

For gauges with auto shutoff, the display indicates OFF five seconds prior to auto shutoff. The pushbutton can be pressed to keep the gauge on. The auto shutoff and backlight (if equipped) timers are reset whenever the pushbutton is pressed and released.

If the gauge was ordered without auto shutoff (**-ON** option) it will stay on until manually shut off or until the batteries are depleted. Turn gauge off when not in use to conserve battery life.

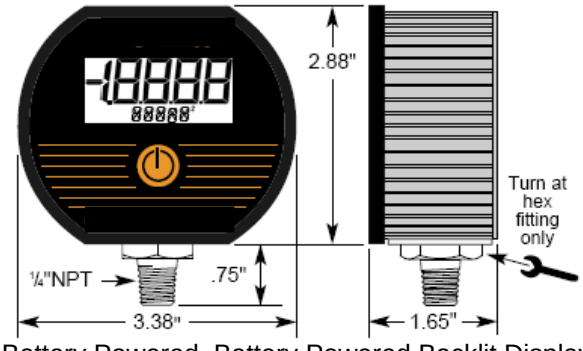
Calibration

The DPG 1600 gauges use internal controls for calibration. The calibration instructions are available from Cooper Instruments & Systems. Gauges can be recalibrated by any metrology lab with pressure calibration equipment at least 4 times more accurate than the gauge. Gauges may also be returned for factory recalibration and refurbishment. NIST traceability is available.

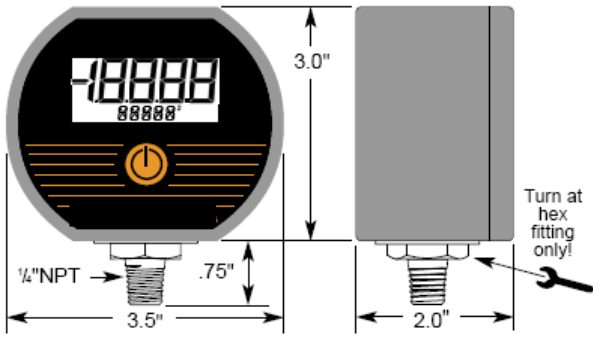
Battery Replacement

A low battery indication will be shown in the upper left-hand corner of the display when the battery voltage falls sufficiently. The battery should be replaced soon after the LOBAT indicator comes on or unreliable readings may result.

1. Remove the 6 Phillips head screws on the back of the unit.
2. Remove batteries by lifting up the positive end of the battery (opposite the spring) taking care not to bend the battery holder spring.
3. Discard old batteries properly, DO NOT discard into fire, sources of extreme heat, or in any other hazardous manner.
4. Always replace both batteries at the same time with high quality alkaline batteries.
5. Install batteries with correct orientation. The negative (flat) end of each battery should be inserted first facing the battery holder spring.
6. Replace the back cover, including the rubber sealing gasket.



Battery Powered, Battery Powered Backlit Display



NEMA 4X, Battery Powered, NEMA 4X, Battery Powered Backlit Display

Warranty Repair Policy

Limited Warranty On Products

Any of our products which, normal operating conditions, proves defective in material or in workmanship within one year from the date of shipment by Cooper, will be repaired or replaced free of charge provided that you obtain a return material authorization from Cooper and send the defective product, transportation charges prepaid with notice of the defect, and establish that the product has been properly installed, maintained, and operated within the limits of rated and normal usage. Replacement or required product will be shipped F.O.B. our plant. The terms of this warranty do not extend to any product or part thereof which, under normal usage, has an inherently shorter useful life than one year. The replacement warranty detailed here is the buyer's exclusive remedy, and will satisfy all obligations of Cooper whether based on contract, negligence, or otherwise. Cooper is not responsible for any incidental or consequential loss or damage which might result from a failure of any and all other warranties, express or implied, including implied warranty of merchantability or fitness for particular purpose. Any unauthorized disassembly or attempt to repair voids this warranty.

Obtaining Service Under Warranty

Advance authorization is required prior to the return to Cooper. Before returning the item, contact the Repair Department c/o Cooper Instruments at (540) 349-4746 for a Return Material Authorization number. Shipment to Cooper shall be at buyer's expense and repaired or replacement items will be shipped F.O.B. our plant in Warrenton, Virginia. Non-verified problems or defects may be subject to a $100 evaluation charge. Please return the original calibration data with the unit.

Repair Warranty

All repairs of Cooper products are warranted for a period of 90 days from date of shipment. This warranty applies only to those items that were found defective and repaired, it does not apply to products in which no defect was found and returned as is or merely recalibrated. Out of warranty products may be capable of being returned to the exact original specifications or dimensions.

* Technical description of the defect: In order to properly repair a product, it is absolutely necessary for Cooper to receive information specifying the reason the product is being returned. Specific test data, written observations on the failure and the specific corrective action you require are needed.