 Agency Approval
Factory Mutual Approved Intrinsically Safe for Hazardous Locations
USA & Canada

Class I, Division 1, Groups A, B, C, D
T3C Ta = –40 to 82°C; T4 Ta = –40 to 66°C,
CL I Zone 0 AEx/Ex ia IIC Ta = –40 to 82°C; T4 Ta = –40 to 66°C

Ranges and Resolution
See table below. Engineering units are factory set
Consult factory for special engineering units.
Resolution is fixed and limited to available display digits
Ranges listed as 20, 200, or 2000 display 19.99, 199.9, or 1999.
See DPG2000B series with D4 option for compound ranges
and ranges with increased resolution.

Accuracy
Includes linearity, hysteresis, repeatability
±0.25% of full scale ±1 least significant digit
HA option: ±0.1% of full scale ±1 least significant digit.
See range table below for availability.

Display
3 readings per second nominal display update rate
3.5 digit (1999) LCD, 0.5” H digits
BL model: Red LED display backlight

Batteries
Two 1.5 V AAA (Panasonic LR03) alkaline cells
B: Approx. 1000 hours
BL: Approx. 150 to 1000 hours depending on backlight usage
Low battery symbol on display

Auto Shutoff
Factory set
5, 10, or 30 minutes

Controls
Front button turns gauge on and starts auto shutoff timer
BL models: Front button turns gauge on and starts auto shutoff timer.
Hold front button to operate backlight.

Calibration
Non-interactive zero and span pots, ±10% of range
Top-mounted potentiometers covered with reusable label.

Weight
9 ounces (approx.)
Shipping wt. 1 pound (approx.)

Housing Materials and Circuit Board Protection
Epoxy powder coated aluminum case, rear cover, and bezel.
Front and rear rubber gaskets, polycarbonate label.
Includes stainless steel stiffener plate to reinforce sensor area.
Conformal coating on circuit boards for moisture resistance.

Connection and Sensor Material
1/4” NPT male fitting
Sensor and all wetted parts are 316L stainless steel

Overpressure, Burst, Vacuum Service
3000 psig range: 5000 psig overpressure
5000 psig range: 7500 psig overpressure
All others: 2X pressure range overpressure
Burst pressure: 4X sensor pressure rating, or 10,000 psi,
whichever is less.
Vacuum service: 15 psig, ±15 psig, 100 psig, 200 psig,
15 psia, 30 psia, 100 psia

Temperature Ranges
Compensated: 32 to 158°F (0 to 70°C)
Storage: –40 to 203°F (–40 to 95°C)
Operating: –40 to 180°F (–40 to 82°C)

Ranges and Resolution

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<th>Res</th>
<th>inHg</th>
<th>Res</th>
<th>Torr</th>
<th>Res</th>
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How to Specify

| Type   | DPG2000B range=5 options | 5 minute shutoff
|--------|--------------------------|------------------|
|        | DPG2000B range=10 options | 10 minute shutoff
|        | DPG2000B range=30 options | 30 minute shutoff
|        | DPG2000BBL range=5 options | 5 minute shutoff, backlight display
|        | DPG2000BBL range=10 options | 10 minute shutoff, backlight display
|        | DPG2000BBL range=30 options | 30 minute shutoff, backlight display

Accessories—order separately

HA
High accuracy, ±0.1% FS ±1 LSD. Not available with 3 psi, bipolar, absolute, or vacuum sensors, and some 3.5 digit display ranges. See table at left for availability.

TP
Top port, gauge port on top of case

RB
Protective rubber boot

CD
Calibration data; 5 test points and date

NC
NIST traceability documentation, 5 points and date

Example: DPG2000BBL300PSIG-5
Battery powered, backlight display, 0-300 psig, 5 minute auto shutoff.
Note: Model number on gauge may vary from part number ordered.

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Instructions

Approved Locations
The DPG2000B series is approved for use in the following Hazardous Locations.

- IS Class I Div 1 Group A, B, C, D
- T3 Ta = –40°C to 82°C, T4 Ta = –40°C to 66°C

Installation
- Read these instructions before installing the gauge.
- Configuration may be easier before the gauge is installed.
- Contact the factory for assistance.
- Installation instructions must be strictly followed in compliance with Intrinsic Safety National Standard NEC 504 or ANSI/ISA RP 12.6 and the National Electrical Code.
- Outdoor or wash down applications require a NEMA 4X gauge or installation in a NEMA 4X housing.
- The pressure gauge enclosure’s metal base must be mounted as part of a bonded structure.
- Use fittings appropriate for the pressure range of the gauge.
- Due to the hardness of stainless steel, it is recommended that a thread sealant be used to ensure leak-free operation.
- For contaminated media use an appropriate screen or filter to keep debris out of gauge port.
- Avoid permanent sensor damage! NEVER insert objects into gauge port or blow out with compressed air.
- Remove system pressures before removing or installing gauge.
- Install or remove gauge using a wrench on the hex fitting only. Do not attempt to turn by forcing the housing.

Operation
- Use within the pressure range indicated on gauge label.
- Avoid permanent sensor damage! Do not apply vacuum to gauges not designated for vacuum operation.
- Use only with media compatible with 316L stainless steel.
- Gauges are not for oxygen service. Accidental rupture of sensor diaphragm may cause silicone oil inside sensor to react with oxygen.
- The DPG2000B series gauges must only be operated in specified ambient temperature ranges.

Maintenance
- The non-metallic cover of the pressure gauge is considered to constitute an electrostatic discharge hazard. Clean only with a damp cloth.
- Batteries must be replaced when the battery indication comes on to prevent unreliable readings.
- WARNING: Replace batteries with approved type in non-hazardous locations only.
- Approved batteries are two Panasonic LR03 1.5 V AAA alkaline cells. Replace both batteries at the same time.
- WARNING: Substitution of batteries may impair intrinsic safety. Improper voltages will damage the gauge.

Types of Gauges
Gauge reference reads zero with the gauge port open.
Bipolar ranges read positive pressure and vacuum in the same units, and zero with the gauge port open.
Sealed reference reads zero with the gauge port open and is referenced to 14.7 psi. Used for 1000 psi and up.
Absolute reference reads atmospheric pressure with gauge port open and zero at full vacuum.

Battery Replacement
A low battery indication (eitherLOBAT or a symbol depending on the model) will be shown in the upper left-hand corner of the display when the battery voltage falls sufficiently. The batteries should be replaced when the indicator comes on or unreliable readings may result.
- WARNING: Replace batteries with approved type in non-hazardous locations only. Replace batteries with two Panasonic LR03 1.5 V AAA alkaline cells.
- Replace both batteries with new ones at the same time. Do not mix different types of batteries. Substitution of components may impair intrinsic safety.

Calibration
See calibration preparation section. See rear label of gauge for potentiometer identification model identification and range and pressure range.
- Zero for gauge reference ranges
- Zero and span for gauge range reference gauges
- Span for gauge range reference vacuum gauges

Display Backlighting
Display backlighting is not necessary in hazardous locations.
Display backlighting can be turned on by pressing and holding the front button. When the button is released the display backlighting turns off. Frequent use of the display backlight shortens battery life.

Calibration Preparation
Calibration must only be done in a non-hazardous area. See Installation and Precautions above.
Gauges are calibrated at the factory using equipment traceable to NIST. There is no need to calibrate the gauge prior to use.
Calibration should only be performed by qualified individuals using appropriate calibration standards and procedures.
Contact factory if assistance is required. Gauges can be returned to factory for certified calibration and repairs. NIST traceability is available.
Calibration intervals depend on your quality control program requirements. Many customers use an annual calibration cycle.
The calibration equipment should be at least four times more sensitive than the pressure range of the gauge.
A vacuum pump able to produce a vacuum of 100 microns (0.1 torr or 100 millitorr) or lower is required for vacuum and absolute gauges.
Warning: Never apply vacuum to gauge not designated for vacuum service. Permanent sensor damage may result.
It is good practice to install fresh batteries before calibration.
Allow the gauge to equalize to normal room temperature (about 20 minutes minimum) before calibration.

Dimensions

Battery Replacement
- 1. Remove the 6 Phillips screws on the back of the unit.
- 2. Remove batteries by lifting up the positive end of the battery (opposite the spring) to prevent unreliable readings.
- 3. Discard old batteries in fire, sources of extreme heat, or in hazardous manner.
- 4. Install batteries with correct orientation. The negative (flat) end of each battery should be inserted first facing the battery holder spring.
- 5. Replace the back cover, including the rubber gasket.

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