**Electrical Specifications**

**Ranges and Resolution**

<table>
<thead>
<tr>
<th>Ranges</th>
<th>Resolution</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>400 psig</td>
<td>±0.025%</td>
<td>psi</td>
</tr>
<tr>
<td>1000 psig</td>
<td>±0.01%</td>
<td>psi</td>
</tr>
<tr>
<td>3000 psig</td>
<td>±0.005%</td>
<td>psi</td>
</tr>
</tbody>
</table>

**Accuracy**

- Standards: ±0.25% of full scale ±1 least significant digit
- Optional: ±0.1% FS ±1LSD (most ranges)
- ±0.01% FS ±0.5LSD (select ranges)

**Display**

- Update rate: 3 readings per second
- Nominal display: 1000 psi

**Controls**

- Non-interactive zero and span, ±10% range
- Test calibration level: 0-100% range
- Setpoint 1 and Setpoint 2: 0-100% range
- Retransmission zero/span: Internal potentiometers

**Alarm Deadband**

- Hysteresis: 1% of full scale
- Alarm Outputs: Dual form C (SPDT) relay contacts, 1A/24VDC, 0.5A/115VAC, non-inductive
- Setpoint and Setpoint 2 settings via top-accessible multturn potentiometers
- HI (SP1), LO (SP2) alarms normal action (failsafe) configuration standard
- 3 ft long, 6-conductor 22 AWG cable
- Optional HI/LO, LO/LO, normal or reverse acting

**Alarm Indicators**

- Bi-color (red/green) LEDs on front panel

**Alarm Response Time**

- True analog output, 50 milliseconds typical response time
- 0-20mA output, 4-20mA analog output determined by power source. See graph.

**Test Function**

- Front panel TEST button, when depressed toggles SP1 and SP2 alarms to opposite states, and sets display and retransmission output to user-set test level.

**Mechanical Specifications**

- **Size**: 3.38” W x 2.88” H x 1.65” D housing
- **Weight**: 9 ounces
- **Material**: Extruded aluminum case, epoxy powder coated
- **Color**: Light gray body, light gray/blue front
- **Pressure/Vacuum Connection and Material**: 1/4” NPT male, 316 stainless steel
- **Media Compatibility**: All wetted parts are 316 SS

**Environmental Specifications**

- **Overpressure**: 3000 psig range and metric equivalents: 4500 psig
- **Burst Pressure**: 4x rated pressure minimum or 10,000 psi, whichever is less

**Environmental Specifications**

- **Storage Temperature**: −40 to 203°F (−40 to 95°C)
- **Operating Temperature**: −4 to 185°F (−20 to 85°F)
- **Compensated Temperature**: 32 to 158°F (0 to 70°C)
Falcon Digital Pressure Gauges with Dual Alarms and Analog Output

dition with continuity between the “C” and “NO” leads. The relay will be OPEN (not energized) for an alarm (red LED) condition with continuity between the “C” and “NC” leads. The 1R, 2R, or 3R configurations are Reverse acting and provide no alarm indication when the gauge power is off. The alarm relay will be OPEN (not energized) for a non-alarm (green LED) condition with continuity from “C” to “NC” leads. The alarm relay will be CLOSED (energized) for an alarm (red LED) condition with continuity between the “C” and “NO” leads.

Alarm Hysteresis – The bi-directional alarm hysteresis of 1% of span eliminates alarm chatter due to minor fluctuations in pressure. For example, this is approximately 1 psi in a 100 psi gauge. If the SP1 (HI alarm) is set to 50.0 psi, the alarm will trip above 50.0 psi. After the alarm has tripped, pressing the SP1 button will show approximately 49 psi, the pressure at which the alarm will release.

Contact Rating and Protection – The alarm relay contacts are rated at 1A/24VDC or 0.5A/115VAC. Using mechanical relay contacts above their rating, or with large inductive loads, will shorten their useful life. In circuits other than low-level switching or pilot duty, use external protection such as a snubber or an arc suppression network to protect the contacts. No internal fusing is included in the alarm contact circuits. The circuit external to the gauge alarm outputs should be fused by the user in applications as good design practice dictates.

TEST Button

The TEST button toggles the alarm output relays to their opposite state and also switches the display and retransmission output to a level determined by the setting of the Test potentiometer. This allows testing of the alarms and retransmission output independent of the system pressure. To set the TEST output level, press and hold the front panel TEST button and adjust the top-mounted Test potentiometer to set the retransmission output to the desired test level as indicated on the display.

Calibration

Lift calibration label on the top of the unit to access individual controls to adjust the zero and span of the display. GAUGE reference units may be re-zeroed without affecting the span calibration. The gauge port must be open to the ambient with no pressure or vacuum applied. Adjust the Zero control until the gauge reads zero with the minus (−) sign occasionally flashing. Span calibration 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 at least four times the gauge accuracy. Zero calibration must be done before span calibration. Record readings at three to five points over the range of gauge and adjust span control to minimize error and meet specifications.

ABSOLUTE reference gauges require vacuum generation and atmospheric pressure measurement equipment for accurate calibration and thus are more difficult to field calibrate. Gauges may be returned to Cecomp for factory certified recalibration. NIST traceability is available.

Part Numbers

DPG1000DAR range units ref - alarm - output

Pressure/Vacuum Range

Options

Example: DPG1000DAR15PSIG-1N1 = DPG1000DAR, 15.00 psig, HI/LO normal action alarm relays, 4-20 mA output