**PRODUCT DESCRIPTION**

The Anderson Digital Pressure Gauge platform is designed specifically for monitoring critical pressures in sanitary applications. The product line was developed to address several trends relative to performance, safety, and readability criteria of our core customers. The Anderson Digital Pressure Gauge provides a battery-powered, local display of pressure that is 6 times more accurate than its mechanical counter-part. Additionally, this product has 3 times the over-range capacity and 5-10 times the resolution of traditional mechanical pressure indicators. The switch version includes 2 fully adjustable switches with low-voltage relay outputs for simple control and/or alarming applications.

**SPECIFICATIONS**

### Performance
- **Accuracy:** ±0.2% of transducer URL (30, 100, 200, 300, 500 psi)
- **Repeatability:** ±0.06% of transducer URL (30, 100, 200, 300, 500 psi)
- **Temperature stability:** ±0.10 psi / 10ºF change in process or ambient
- **Over-range Capacity:** 2X URL

### Operational
- **Process Temp Limits:** -4º to 127ºC (25º to 260ºF) continuous
- **Ambient Temp Limits:** 4º to 49ºC (40º to 120ºF)
- **Engineering Units:** Programmable by user, see matrix for selections.
- **Compound ranges:** Full Vacuum to selected positive pressure. If set to "HG, display reads in "HG when in the vacuum range and PSIG when there is positive pressure.
- **Min / Max Pressure:** Captured and stored in non-volatile memory, may be cleared via tamper-resistant toggle.

### Electrical
- **Power:** 2 “AA” replaceable batteries with one-year minimum expected life with industrial grade batteries (gauge only); 9-30 Volts external DC power (with switches) with battery back-up of non-volatile programmed values.
- **Relay Outputs (Switch only):** Two (2) independent, adjustable setpoint relays: One amp contact rating at 24 volts DC, SPST; Contacts open with no power to unit (failsafe) each programmable to close above or below setpoint.

### Mechanical
- **Display:** LCD, with 0.9” height
- **Wetted Material:** 316 “L” Stainless Steel, welded and polished to max Rₐ = 8 microrinches (0.2 microns) for EP and max Rₐ = 25 microrinches for EN.
- **Housing:** 304 Stainless Steel, welded
- **Lens:** Polysulphone

### Approvals and Documentation
- **Sanitary:** Meet current ASME BPE-2002 standards; Authorized to display the 3-A Symbol, Third Party Verified.
- **PED:** Complies with the Pressure Equipment Directive relative to Sound Engineering Practices.
- **Electrical:** Tested to IEC 61326 Standard for Emissions and Immunity in Industrial locations.
- **Hazardous Locations:** UL for Intrinsically Safe requirements pending.
- **Material, Conformance and Calibration:** Certificates provided with product also available on-line using serial number (applies to EP only).
The Anderson Digital Pressure Gauge and Switch is factory calibrated and configured to the range and units specified by the order matrix number. Displayed pressure units, alarm setpoint, hysteresis and action values may be easily modified by the user. The calibrated range of the gauge, however, may not be modified in the field. Gauge calibration may be performed through the following User Interface Guide.

The Digital Pressure Gauge configuration parameters are sorted into three different user modes, and are accessible via the three switches located under the protection of the removable gauge back. To access the switches simply remove the two screws, and the cover with gasket. While the cover is removed, do not allow moisture to enter the gauge housing.

### USER DISPLAY

**Primary Process Display**
- Four digit 0.9" LED with adjustable decimal point position to indicate pressure value.

**Secondary Display**
- Indicates pressure units or parameter information.

**Alarm 1 and 2 Indicators**
- Flashes if setpoint tripped.
- Displays continuously during setpoint viewing or programming.

**Battery Status Indicator**
- Three bars indicate battery condition is good.

### BATTERY REPLACEMENT

A three segment battery indicator allows the operator to monitor battery life of the DPG, and plan ahead for a battery change. When a low threshold is reached, the final indicator bar blinks on and off. Internal circuitry regulates battery voltages to ensure all factory specifications are met, even with a decrease in battery voltage. When an unacceptable level is reached, the DPG will shut down.

<table>
<thead>
<tr>
<th>Battery Condition</th>
<th>Display</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Battery</td>
<td>☑️</td>
</tr>
<tr>
<td>Decreased Battery</td>
<td>☑️</td>
</tr>
<tr>
<td>Low Battery</td>
<td>☑️ ☑️</td>
</tr>
</tbody>
</table>

**NOTE:** When removing batteries, wait a minimum of (2) two minutes before re-installing.

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### USER INTERFACE GUIDE

The Anderson Digital Pressure Gauge and Switch is factory calibrated and configured to the range and units specified by the order matrix number. Displayed pressure units, alarm setpoint, hysteresis and action values may be easily modified by the user. The calibrated range of the gauge, however, may not be modified in the field. Gauge calibration may be performed through the following User Interface Guide.

The Digital Pressure Gauge configuration parameters are sorted into three different user modes, and are accessible via the three switches located under the protection of the removable gauge back. To access the switches simply remove the two screws, and the cover with gasket. While the cover is removed, do not allow moisture to enter the gauge housing.

**RUN Mode**
- (read values only)
- Normal Display: Pressure & Units
- Alarm Setpoint and Action
- Alarm 1 Hysteresis
- Alarm 2 Setpoint and Action
- Alarm 2 Hysteresis
- Low Range Limit
- Upper Range Limit
- Dampening Factor
- Maximum Captured Pressure
- Minimum Captured Pressure
- Calibration Offset Value
- Calibration Gain Value

**SETPOINTS Mode**
- (modify alarm values)
- Alarm 1 Setpoint Value
- Alarm 1 Action
- Alarm 1 Hysteresis
- Alarm 2 Setpoint Value
- Alarm 2 Action
- Alarm 2 Hysteresis

**CALIBRATE Mode**
- (modify field calibration parameters)
- Calibration Offset
- Calibration Gain
- Pressure Units Displayed
- Dampening Factor
- Decimal Point Position
- Maximum Pressure Captured
- Minimum Pressure Captured
- Restore Factory Configuration

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**VALUE Switch**
- UP to increase
- DOWN to decrease

**MODE Switch**
- UP for SETPOINTS
- DOWN for CALIBRATION

**MENU Switch**
- UP for SCROLL FWD
- DOWN for SCROLL BACK

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Digital Gauge shown with back removed to expose batteries and switches.
ALARM SETPOINT PROGRAMMING
(MODE Switch in the UP Position)

- **Alarm 1 Setpoint**: 
  - ![Setpoint](image)
  - **Value**: 0.
  - **Units**: VAL
- **Alarm 2 Setpoint**: 
  - ![Setpoint](image)
  - **Value**: 0.
  - **Units**: VAL
- **Alarm 1 Action**: 
  - ![Action](image)
  - **Value**: OFF
- **Alarm 2 Action**: 
  - ![Action](image)
  - **Value**: OFF
- **Alarm 1 Hysteresis**: 
  - ![Hysteresis](image)
  - **Value**: 0.
- **Alarm 2 Hysteresis**: 
  - ![Hysteresis](image)
  - **Value**: 0.

CALIBRATION / CONFIGURATION PROGRAMMING
(MODE Switch in the DOWN Position)

- **Calibration Menus**: 
  - ![Menus](image)
- **Calibration Offset**: 
  - ![Offset](image)
  - **Value**: 0.
- **Calibration Span**: 
  - ![Span](image)
  - **Value**: 100.
- **Displayed Units**: 
  - ![Units](image)
  - **Value**: Un.
- **Dampening Factor**: 
  - ![Factor](image)
  - **Value**: 0.1
- **Decimal Position**: 
  - ![Position](image)
  - **Value**: 0000
- **Maximum Pressure Captured**: 
  - ![Captured](image)
  - **Value**: 900.
- **Minimum Pressure Captured**: 
  - ![Captured](image)
  - **Value**: 0
- **Restore Factory Defaults**: 
  - ![Defaults](image)

- **Notes**:
  - Calibration mode.
  - MENU SCROLL BACK to proceed.
  - Offset calibration adjustment. Adds to reading. Range +/- 10% of Span.
  - Span calibration adjustment. Multiplies reading. Range: 0.90-1.10
  - Displayed units set to in. Hg, PSI a, PSI abs, in. Hg, kPa, MPa, Bar.
  - Digital Filter settable from 0.0 to 10.0 (no dampening = 0.0)
  - Decimal point position. (Setting is not stored in non-volatile memory)
  - Hold UP switch for 3 seconds to reset.
  - Calibration mode is not stored in non-volatile memory.
  - Gauge (G, M, B, C) and Absolute (A) pressure units may not be interchanged, and must match original hardware configuration.
RELAY WIRING (DIGITAL PRESSURE SWITCH ONLY)

9-30 VDC, 250 mA typical external power required to energize relays.

CABLE REQUIREMENTS
- 5 conductor, standard, 18-24 AWG,
- 4-8 mm (0.16-0.31”) Cable Sheath OD

Connector p/n: 42119AO000
(Turck eurofast®, 5-wire, 5-pin, female)

DIMENSIONAL DRAWINGS

Connection present on switch version only