Model 217
Ultra High Purity Pressure Transducers
Gauge, Compound and Absolute PSI and Bar Ranges

Setra’s Model 217 Transducer is designed for modular “Block” gas sticks and panels. The 217 is ideal for pressure measurement applications that require exceptional insensitivity to environmental extremes, such as temperature transients resulting from the flow of cold gas.

The Model 217, available with a C-Seal or W-seal down-mount pressure port, has a small swept sensor chamber for easy purgeability. All wetted parts are 316L VIM/VAR stainless steel passivated to 5 Ra (7 Ra. max.) finish, which eliminates surface irregularities and provides the proper surface chemistry for corrosion resistance, assuring contaminant-free gas distribution. Every sensor is mass spectrometer helium leak tested to 1 x 10⁻⁹ atm.cc/sec.

The 217 is offered with a 5 VDC, 10 VDC or 4-20 mA output. A variety of standard electrical terminations are offered.

The top external zero and span adjustments complete this unique design for all UHP down-mount applications. Setra’s patented variable capacitance sensor features a 316L stainless steel diaphragm and an insulated electrode plate. A variable capacitor is formed between the sensor body and the electrode plate. An increase in pressure causes a slight rounding of the diaphragm, which decreases the capacitance. The capacitance change is detected and converted to a highly accurate linear DC electric signal by Setra’s unique custom integrated circuit, utilizing a patented charge balance principle.

Setra’s entire Ultra-High Purity series is based on Setra’s proven capacitive sensing technology with highly accurate and stable voltage or current output signals that are virtually EMI/RFI immune.

Setra maintains a 700 square-foot, vertical laminar flow, Class 100 clean room, where all UHP products are carefully cleaned, tested, inspected, double bagged and back-filled with high-purity nitrogen and sealed for shipping.

Applications
- Modular “Block” Gas Sticks and Panels
- High Purity Gas Delivery Systems
- Semiconductor Process Tools

Benefits
- Superior Stability Avoids Downtime
- Available with C-Seal or W-Seal Pressure Port
- EMI/RFI Immunity Prevents False Shutdown
- Sturdy Design Allows Trouble Free Installations
- Optional UL 1604 and ATEX 94/9/EC Approval Available for 4 to 20 mA Output Units
- Meets CE Conformance Standards

When it comes to a product to rely on - choose the Model 217. When it comes to a company to trust - choose Setra.

ISO 9001: 2000 Certified

Visit Setra Online: http://www.setra.com

800-257-3872

Pressure Ranges

<table>
<thead>
<tr>
<th>0 psig, 0 psia or -14.7 psig to:</th>
<th>Bar Ranges -1 or 0 to:</th>
<th>Proof Pressure (psi)</th>
<th>Burst Pressure (psi)</th>
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</thead>
<tbody>
<tr>
<td>25</td>
<td>1.7</td>
<td>40</td>
<td>1500</td>
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<tr>
<td>50</td>
<td>3.4</td>
<td>75</td>
<td>3000</td>
</tr>
<tr>
<td>100</td>
<td>7</td>
<td>150</td>
<td>3000</td>
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<td>70</td>
<td>1250</td>
<td>7500</td>
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<td>8000</td>
</tr>
<tr>
<td>3000</td>
<td>200</td>
<td>3500</td>
<td>10,000</td>
</tr>
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</table>

NOTE: Setra quality standards are based on ANSI-Z540-1. The calibration of this product is NIST traceable.
U.S. Patent nos. 3859575
**Performance Data**

- Accuracy RSS* (at constant temp): ±0.25% FS or ±1.0% Reading
- Non-Linearity, BESL: ±0.15% FS
- Hysteresis: 0.20% FS
- Non-Repeatability: 0.02% FS
- Thermal Effects**:
  - Compensated Range °F (°C): +15 to +150 (-9 to +65)
  - Zero Shift %FS/10°F (°C): 2.0 (1.8)
  - Span Shift %FS/10°F (°C): 2.0 (1.8)

*RSS of Non-Linearity, Non-Repeatability and Hysteresis.

**Units calibrated at nominal 70°F. Maximum thermal error computed from this datum.

** Environmental Data**

- Operating °F (°C): -40 to +185 (-40 to +85)
- Storage °F (°C): -22 to +176 (-30 to +80)

*Operating temperature limits of the electronics only.

- Weight: 6.5 oz (184g)

** Specifications subject to change without notice.**

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**Environmental Data**

- Temperature
  - Operating °F (°C): -40 to +185 (-40 to +85)
  - Storage °F (°C): -22 to +176 (-30 to +80)

- Current Unit Ordered w/Option N1
  - Operating °F (°C): -40 to +185 (-40 to +85)

*Operating temperature limits of the electronics only.

**Pressure Media**

- Liquids or gases compatible with 316L Stainless Steel.

**Approvals**

- Non-Incendive: Certified for use in potentially hazardous locations:
  - North America: Optional UL 1604 approval available for units ordered with 4 to 20 mA current output. (Select N1 Option)
  - Europe: Optional ATEX 94/9/EC approval available for units ordered with 4 to 20 mA current output. (Select N1 Option)

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**Model 217 Specifications**

**Physical Description**

- Case: Stainless Steel
- Electrical Connection: 6ft Multiconductor Cable, Bayonet or D-sub Connector
- Pressure Fitting: Down Mount "C" Seal or "W" Seal
- Vent: Through Zero and Span Access Screws
- Weight: 6.5 oz (184g)

**Electrical Data (Voltage)**

- Circuit: 3-Wire (Exc, Out, Com)
- Excitation: 10 to 30 VDC for 5V FSO
- Output: 0 to 5VDC or 0.2 to 5.2 VDC
- ±0.15% FS

**Electrical Data (Current)**

- Circuit: 2-Wire
- Output: 4 to 20 mA
- External Load: 0 to 800 ohms
- Minimum supply voltage (VDC): 10 + 0.02 x (Resistance of receiver plus line)
- Maximum supply voltage (VDC): 30 + 0.004 x (Resistance of receiver plus line)
- ±0.25% FS or ±1.0% Reading

**Ordering Information**

- Code all blocks in table.

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**Electrical Connection**

- 6ft. Multiconductor Cable, Bayonet or D-sub Connector

**Pressure Fitting**

- Down Mount "C" Seal or "W" Seal

**Vent**

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