Setra’s Model 224 ultra-high purity pressure transducer is designed for the most demanding specialty gas monitoring and control applications, where construction integrity, purity and performance cannot be sacrificed.

The 224 has a small, streamlined sensor chamber for easy purgeability. The sensor is designed to provide superior mechanical and thermal stability, especially in transient temperature conditions resulting from flowing gases. Isolation of the sensing element from the pressure fitting virtually eliminates any torque effect.

This superior mechanical and thermal stability is achieved through Setra’s patented variable capacitance sensor. Its fundamentally simple design features VAR 316L SS wetted parts, passivated to 5 Ra (7 Ra, max.) finish for system continuity, and an insulated electrode plate fastened to the center of the sensor diaphragm, which forms a variable capacitor. As pressure increases or decreases, the capacitance changes. This change in capacitance is detected and converted to a linear analog signal by Setra’s unique electronic circuit.

Various tube diameters are available with optional face seal fittings. Sturdy construction allows for trouble-free installation and high tolerance of system torsion and welding effects, providing confident installations.

Model 224 transducers are able to endure bakeout to 185°F (85°C), without affecting calibration. Every sensor is mass spectrometer helium leak tested to 1 x 10⁻⁹ ATMCC/sec.

This ultra-high purity series is based on Setra’s proven capacitive sensing technology and the highly accurate and stable voltage or current output signals are virtually EMI/RFI immune.

### Pressure Ranges

<table>
<thead>
<tr>
<th>Pressure Ranges</th>
<th>Bar Ranges</th>
<th>Proof Pressure (psi)</th>
<th>Burst Pressure (psi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>1.7</td>
<td>40</td>
<td>1500</td>
</tr>
<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>
</tr>
<tr>
<td>250</td>
<td>17</td>
<td>350</td>
<td>5000</td>
</tr>
<tr>
<td>500</td>
<td>35</td>
<td>650</td>
<td>7500</td>
</tr>
<tr>
<td>1000</td>
<td>70</td>
<td>1250</td>
<td>7500</td>
</tr>
<tr>
<td>3000</td>
<td>200</td>
<td>3500</td>
<td>10,000</td>
</tr>
<tr>
<td>-14.7 psig to:</td>
<td>-1 or 0 to:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-14.7 to 85.3</td>
<td>----</td>
<td>150</td>
<td>3000</td>
</tr>
<tr>
<td>-14.7 to 235.3</td>
<td>----</td>
<td>350</td>
<td>5000</td>
</tr>
<tr>
<td>-14.7 to 985.3</td>
<td>----</td>
<td>1250</td>
<td>7500</td>
</tr>
<tr>
<td>-14.7 to 2985.3</td>
<td>----</td>
<td>3500</td>
<td>10,000</td>
</tr>
</tbody>
</table>

NOTE: Setra quality standards are based on ANSI-Z540-1. The calibration of this product is NIST traceable. Patents Pending.

---

**Applications**

- High Purity Gas Delivery Systems
- Semiconductor Process Tools
- Pharmaceutical & Biotech Process
- Gas Cabinets

**Benefits**

- Superior Stability Avoids Downtime
- EMI/RFI Immunity Prevents False Shutdown
- Sturdy Design Allows Trouble-Free Installations
- Minimal Torque Effect
- High Burst Pressure Ratings
- Easy Purgeability
- Virtually Insensitive to Thermal Transients in Flow Stream
- Optional ETL Certified as Conforming to UL-1604 and ATEX 94/9/EC Approval Available for 4 to 20 mA Output Units
- **CC and RoHS Compliant**

When it comes to a product to rely on - choose the Model 224. When it comes to a company to trust - choose Setra.

ISO-9001 Certified

**Visit Setra Online:**

http://www.setra.com

800-257-3872
Model 224 Specifications

### Performance Data
- **Accuracy RSS**: ±0.25% FS or ±1.0% of Reading
- **Non-Linearity**: ±0.15% FS
- **Hysteresis**: ±0.20% FS
- **Non-Repeatability**: ±0.02% FS

### Environmental Data
- **Operating Temperature**
  - °F (°C): -40 to +185 (-40 to +85)
- **Storage Temperature**
  - °F (°C): -40 to +185 (-40 to +85)

### Electrical Data (Voltage)
- **Excitation**: 10 to 30 VDC for 5V FSO
  - 13 to 30 VDC for 10V FSO
- **Output**
  - ±50mV (for 10 VDC output).
- **Current Consumption**: <8 mA

### Model 224 Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Range</th>
<th>Pressure Fittings</th>
<th>Pressure</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>224G</td>
<td>224</td>
<td>Absolute ±1%</td>
<td>A = #4 M/M Fixed Face Seals</td>
<td>11 = 4-20mA</td>
</tr>
<tr>
<td></td>
<td>G</td>
<td>Compound ±0.2%</td>
<td>B = #4 M/M Swivel Face Seals</td>
<td>2B = 0-5 VDC</td>
</tr>
<tr>
<td></td>
<td>G</td>
<td>Gauge ±0.25%</td>
<td>C = #4 M/M Swivel Face Seals</td>
<td>2L = 0-10VDC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>D = 0-2.5VDC</td>
<td>33 = 0.2-5.2VDC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>E = 0-2.0VDC</td>
<td>59 = 0.2-10.2VDC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>F = ±0.25% FS</td>
<td>N1 = 4-20mA*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>G = ±1.0% FS</td>
<td>*Note: Unit is not certified for hazardous locations when ordered with Option M1.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>H = ±1.0% FS</td>
<td><strong>Zero output factory set to within ±.08mA.</strong></td>
</tr>
</tbody>
</table>

### Electrical Data (Current)
- **Circuit**: 2-Wire
- **Output**: 4 to 20 mA* (±0.25% FS w/Cal. Cert.)
- **External Load**: 0 to 800 ohms
- **Supply Voltage (VDC)**
  - ±0.004 x (Resistance of receiver + line)
  - ±0.004 x (Resistance of receiver + line)
  - ±0.004 x (Resistance of receiver + line)

### Pressure Media
- Liquids or gases compatible with 316L Stainless Steel.

### Approvals
- Non-Incendive: Certified for use in potentially hazardous locations:
  - **North America**: ETL certified as conforming to UL 1604 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)

### Code all blocks in table.
- Example: Part No. 224G3CPGGA11B1F for a 224 Transducer 0 to 3000 PSIG Range, #4 M/M Fixed Face Seals, 4 to 20 mA Output, 4 pin Bayonet Connector, and ±0.25% FS Accuracy.