Setra's Model 204 is the "standard" for the measuring gauge and absolute pressure in the test and measurement industry. Decades worth of installations have helped the 204 build a reputation of reliability and remains the trusted choice for critical installations. The 204 delivers a high performance ±0.073% FS accuracy over a wide temperature range which outperforms competitive transducers in the mid to high pressure market. The 204 offers multiple options to meet both simple and demanding application requirements that are not provided on competitive transducers.

Long-term reliability
The Model 204 pressure transducer uses a simple and reliable variable capacitance sensor design. The 204 provides repeatable and dependable readings in rugged applications through its efficient sensor design.

Accuracy & performance
The Model 204 is a test and measurement grade transducer for mid to high pressure ranges. The 204 covers a large selection of pressure ranges with ±0.073% FS accuracy over a wide temperature range. The Model 204 provides response time of <1 ms, exceeding the performance of many competitors.

Customization is standard
Unlike many competitors, the 204 offers many mechanical and electrical options that can be integrated into existing system designs. These options reduce engineering design time, allowing for earlier project completion and quicker time to market.

Model 204
High Accuracy Gauge & Absolute Pressure Transducer

Features
• Ideal for high accuracy applications
• Excellent thermal effects
• Highly configurable design
• ±0.073% FS accuracy
• 0-5 VDC
• Fast response, less than 1 ms
• Low output noise
• Solid one-piece stainless steel sensor
• Meets CE conformance standards

Applications
• High accuracy general purpose
• R&D test and measurement
• Vacuum systems
• Dynamometers
• Engine test cells
Specifications

Performance data

<table>
<thead>
<tr>
<th>Specification</th>
<th>Accuracy RSS(^1) (at constant temp)</th>
<th>±0.11% FS</th>
<th>±0.14% for 10,000 PSIG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-linearity (BFSL)</td>
<td>±0.07% FS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hysteresis</td>
<td>0.08% FS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-repeatability</td>
<td>0.02% FS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Environmental data

<table>
<thead>
<tr>
<th>Specification</th>
<th>Operating temperature(^2)°F(°C)</th>
<th>0 to +175 (-18 to +80)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage temperature</td>
<td>°F(°C)</td>
<td>-65 to +250 (-55 to +120)</td>
</tr>
<tr>
<td>Vibration</td>
<td></td>
<td>2g from 5 Hz to 500 Hz</td>
</tr>
<tr>
<td>Shock</td>
<td></td>
<td>50g</td>
</tr>
<tr>
<td>Acceleration</td>
<td></td>
<td>10g maximum</td>
</tr>
</tbody>
</table>

Physical description

<table>
<thead>
<tr>
<th>Specification</th>
<th>Physical description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure fittings</td>
<td>1/4” -18 NPT internal</td>
</tr>
<tr>
<td>Excitation</td>
<td>22 to 30 VDC, 24 VDC (normal) Reverse excitation protected</td>
</tr>
<tr>
<td>Output</td>
<td>0 to 5 VDC(^3)</td>
</tr>
<tr>
<td>Power consumption</td>
<td>10 mA (0.25 Watts)</td>
</tr>
<tr>
<td>Output impedance</td>
<td>&lt;10 Ohms</td>
</tr>
<tr>
<td>Output noise</td>
<td>&lt;100 Microvolts RMS (0 Hz to kHz)</td>
</tr>
</tbody>
</table>

Thermal effects\(^2\)

<table>
<thead>
<tr>
<th>Specification</th>
<th>Zero/ span shift %FS/100°F (%FS/50°C)</th>
<th>&lt;±0.4 (&lt;±0.36)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Span shift %FS/100°F (%FS/50°C)</td>
<td></td>
<td>&lt;±0.3 (&lt;±0.27)</td>
</tr>
</tbody>
</table>

Static acceleration effect

| Approx. natural frequency (KHz)   | 5 x 10-5 cu. in.                     |

Warm-up shift

| Approx. natural frequency (KHz)   | +0.5% total (+0.1% residual shift after 5 minutes) |

Proof pressure

<table>
<thead>
<tr>
<th>Pressure ranges 0 PSIA or 0 PSIG to:</th>
<th>Proof pressure (PSI)</th>
<th>Burst pressure rating (PSI)</th>
<th>Approx. natural frequency (KHz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>50</td>
<td>150</td>
<td>2.0</td>
</tr>
<tr>
<td>50</td>
<td>75</td>
<td>200</td>
<td>2.5</td>
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<tr>
<td>100</td>
<td>150</td>
<td>500</td>
<td>3.5</td>
</tr>
<tr>
<td>250</td>
<td>375</td>
<td>1000</td>
<td>5.0</td>
</tr>
<tr>
<td>500</td>
<td>750</td>
<td>1500</td>
<td>8.0</td>
</tr>
<tr>
<td>1000</td>
<td>1250</td>
<td>3000</td>
<td>11.0</td>
</tr>
<tr>
<td>3000</td>
<td>3750</td>
<td>4500</td>
<td>15.0</td>
</tr>
<tr>
<td>5000</td>
<td>6000</td>
<td>7500</td>
<td>25.0</td>
</tr>
<tr>
<td>10,000 PSIG only</td>
<td>11,000</td>
<td>12,500</td>
<td>30.0</td>
</tr>
<tr>
<td>0-14.7 PSIV</td>
<td>50</td>
<td>150</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Notes:

1. Units calibrated at nominal 70°F.
2. Approximately 50% higher for 0-14.7 psiv range.
3. Calibrated into 50K ohm load. Operable into 5000 ohms or greater.
4. Zero output factory set to within ±10 mV. Span (Full Span) output factory set to within ±10 mV.
5. Calibrated at factory with a 24 VDC loop supply voltage and a 250 ohm load.
6. Calibrated at factory with a 24 VDC loop supply voltage and a 250 ohm load.

Specifications subject to change without notice.
## Ordering information

Example part number: 2391005PB1F2S02WNN

**Model 239**, ±5 PSID pressure range, 1/8” NPT Int. fitting, ±2.5 VDC, 2’ Cable Length, ±0.14% FS Accuracy, No Options.

### Table: Ordering Information

<table>
<thead>
<tr>
<th>Model 2041</th>
<th>Model 204</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure range</td>
<td>Output</td>
</tr>
<tr>
<td>02PG</td>
<td>02SP</td>
</tr>
<tr>
<td>02PA</td>
<td>02SP</td>
</tr>
<tr>
<td>02PD</td>
<td>-</td>
</tr>
<tr>
<td>05PG</td>
<td>05PA</td>
</tr>
<tr>
<td>05PA</td>
<td>05PD</td>
</tr>
<tr>
<td>05PD</td>
<td>05PD</td>
</tr>
<tr>
<td>10PG</td>
<td>10PA</td>
</tr>
<tr>
<td>10PA</td>
<td>10PD</td>
</tr>
<tr>
<td>10PD</td>
<td>10PD</td>
</tr>
<tr>
<td>25PG</td>
<td>25PA</td>
</tr>
<tr>
<td>25PA</td>
<td>25PD</td>
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<td>25PD</td>
<td>25PD</td>
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<tr>
<td>50PG</td>
<td>50PA</td>
</tr>
<tr>
<td>50PA</td>
<td>50PD</td>
</tr>
<tr>
<td>50PD</td>
<td>50PD</td>
</tr>
<tr>
<td>10CPG</td>
<td>10CPA</td>
</tr>
<tr>
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<td>10CPD</td>
</tr>
<tr>
<td>10CPD</td>
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</tr>
<tr>
<td>30CPG</td>
<td>30CPA</td>
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<tr>
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<tr>
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<td>50CPD</td>
</tr>
<tr>
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<td>50CPD</td>
</tr>
<tr>
<td>10kPG</td>
<td>10kPA</td>
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<tr>
<td>10kPA</td>
<td>10kPD</td>
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<td>10kPD</td>
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<table>
<thead>
<tr>
<th>Pressure fitting</th>
<th>Termination</th>
</tr>
</thead>
<tbody>
<tr>
<td>2F</td>
<td>0-5 VDC</td>
</tr>
<tr>
<td>2Y</td>
<td>0-2.5 VDC</td>
</tr>
<tr>
<td>27</td>
<td>1-5 VDC</td>
</tr>
<tr>
<td>28</td>
<td>1-6 VDC</td>
</tr>
<tr>
<td>2C</td>
<td>0-10 VDC</td>
</tr>
<tr>
<td>2U</td>
<td>1-10 VDC</td>
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</table>

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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</thead>
<tbody>
<tr>
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### Table: Pressure Fitting Specifications

<table>
<thead>
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<th>Pressure Fitting</th>
<th>Output</th>
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</thead>
<tbody>
<tr>
<td>2F</td>
<td>0-5 VDC</td>
</tr>
<tr>
<td>2Y</td>
<td>0-2.5 VDC</td>
</tr>
<tr>
<td>27</td>
<td>1-5 VDC</td>
</tr>
<tr>
<td>28</td>
<td>1-6 VDC</td>
</tr>
<tr>
<td>2C</td>
<td>0-10 VDC</td>
</tr>
<tr>
<td>2U</td>
<td>1-10 VDC</td>
</tr>
</tbody>
</table>

### Table: Termination Options

<table>
<thead>
<tr>
<th>Termination</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>2C</td>
<td>±0.073% FS</td>
</tr>
<tr>
<td>2U</td>
<td>±0.11% FS</td>
</tr>
</tbody>
</table>

### Table: Pressure Range Options

<table>
<thead>
<tr>
<th>Pressure Range</th>
<th>Units with pressure range &gt; 5,000 PSI have accuracy of ±0.14% FS only.</th>
</tr>
</thead>
<tbody>
<tr>
<td>02PG</td>
<td>±0.073% FS</td>
</tr>
<tr>
<td>02PA</td>
<td>±0.11% FS</td>
</tr>
<tr>
<td>02PD</td>
<td>±0.14% FS</td>
</tr>
<tr>
<td>05PG</td>
<td>±0.073% FS</td>
</tr>
<tr>
<td>05PA</td>
<td>±0.11% FS</td>
</tr>
<tr>
<td>05PD</td>
<td>±0.14% FS</td>
</tr>
<tr>
<td>10PG</td>
<td>±0.073% FS</td>
</tr>
<tr>
<td>10PA</td>
<td>±0.11% FS</td>
</tr>
<tr>
<td>10PD</td>
<td>±0.14% FS</td>
</tr>
<tr>
<td>25PG</td>
<td>±0.073% FS</td>
</tr>
<tr>
<td>25PA</td>
<td>±0.11% FS</td>
</tr>
<tr>
<td>25PD</td>
<td>±0.14% FS</td>
</tr>
<tr>
<td>50PG</td>
<td>±0.073% FS</td>
</tr>
<tr>
<td>50PA</td>
<td>±0.11% FS</td>
</tr>
<tr>
<td>50PD</td>
<td>±0.14% FS</td>
</tr>
<tr>
<td>10CPG</td>
<td>±0.073% FS</td>
</tr>
<tr>
<td>10CPA</td>
<td>±0.11% FS</td>
</tr>
<tr>
<td>10CPD</td>
<td>±0.14% FS</td>
</tr>
<tr>
<td>30CPG</td>
<td>±0.073% FS</td>
</tr>
<tr>
<td>30CPA</td>
<td>±0.11% FS</td>
</tr>
<tr>
<td>30CPD</td>
<td>±0.14% FS</td>
</tr>
<tr>
<td>50CPG</td>
<td>±0.073% FS</td>
</tr>
<tr>
<td>50CPA</td>
<td>±0.11% FS</td>
</tr>
<tr>
<td>50CPD</td>
<td>±0.14% FS</td>
</tr>
<tr>
<td>10kPG</td>
<td>±0.073% FS</td>
</tr>
<tr>
<td>10kPA</td>
<td>±0.11% FS</td>
</tr>
<tr>
<td>10kPD</td>
<td>±0.14% FS</td>
</tr>
</tbody>
</table>

### Table: Options

<table>
<thead>
<tr>
<th>Options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Compensated temperature range (-65 to 250°F)</td>
</tr>
<tr>
<td>T</td>
<td>Clean for oxygen</td>
</tr>
<tr>
<td>D</td>
<td>Mate with Datum</td>
</tr>
<tr>
<td>E</td>
<td>Special excitation voltage ±±24 VDC</td>
</tr>
<tr>
<td>G</td>
<td>Special excitation voltage ±±15 VDC</td>
</tr>
<tr>
<td>L</td>
<td>Special excitation voltage ±±15 VDC</td>
</tr>
<tr>
<td>M</td>
<td>Etched SS tags</td>
</tr>
<tr>
<td>N</td>
<td>None</td>
</tr>
<tr>
<td>R</td>
<td>Remote calibration (adjustable)</td>
</tr>
<tr>
<td>S</td>
<td>Remote calibration adjustable (fixed)</td>
</tr>
</tbody>
</table>

### Notes

1. Units with pressure range > 5,000 PSI have accuracy of ±0.14% FS only.
2. Both boxes must be filled in alphanumeric order:
   - If No options: N + N
   - If 1 option: Option Code + N
   - If 2 options: Option Code + Option Code
3. 2x Thermal Effects Specification
4. Options M, R, and S will have Y1 Cable as STD.

Note: Setra adheres to strict quality standards including ISO 9001 and ANSI Z540-1. The calibration of this product is NIST traceable.

Specifications subject to change without notice.

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## Dimensions

![Dimensions Diagram]

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