Model 205
Gauge & Absolute Pressure Transducer

Setra’s Model 205 is a high accuracy transducer for measuring gauge, absolute and compound pressure offering superior performance at an affordable price. Its single piece machined capacitance sensor enables accuracies up to ±0.073% FS giving the 205 superior linearity to competitive sensors that use two-piece welded sensing elements. The 205’s compact design offers customers a space saving solution for measuring pressure in Test and Measurement applications. The 205 has standard pressure ranges from 25 PSI to 5,000 PSI to cover the most common pressure sensing applications.

High Accuracy For Demanding Applications
The Model 205 pressure transducer’s variable capacitance design uses a single piece machined sensor, eliminating failures from insufficient welds. The sensor is linearized and thermally compensated during manufacturing to optimize the sensor’s linearity for maximum accuracy in demanding Test & Measurement and OEM applications.

Small Footprint
The Model 205’s design offers high performance in a small package. The sensor is only 1.75” wide by 2” tall, allowing OEMs and test stand engineers to reduce the overall design footprint of the end product.

High Performance Sensor
The Model 205 offers high price-to-performance sensor for measuring absolute pressure. The simple configurable design enables the transducer to be configured for an absolute reference by adding a hermetically sealed pressure reference cap to the existing sensor design, allowing the price to remain affordable without sacrificing quality.

- High Price-to-Performance Ratio
- Fast Dynamic Response
- Excellent Stability

Model 205 Features:
- ±0.073% FS Accuracy
- 5 VDC Output
- High Cycle Life
- Fast Response, Less than 1 ms
- Solid One-Piece Stainless Steel Sensor
- Fast Warm-Up
- Meets CE Conformance Standards

Applications:
- High Accuracy General Purpose
- R&D Test and Measurement
- Dynamometers
- Engine Test Cells
Model 205
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ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Model</th>
<th>Pressure Range</th>
<th>Units</th>
<th>Pressure Type</th>
<th>Fitting</th>
<th>Output</th>
<th>Termination</th>
<th>Accuracy</th>
<th>Options²</th>
</tr>
</thead>
<tbody>
<tr>
<td>205</td>
<td>0 to 25 PSI</td>
<td>G</td>
<td>Gauge</td>
<td>1/4&quot; NPT Internal</td>
<td>0 to 5 VDC</td>
<td>02</td>
<td>±0.11% FS</td>
<td>NN None</td>
</tr>
<tr>
<td>025</td>
<td>0 to 25 PSI</td>
<td>P</td>
<td>Pressure</td>
<td>3/8&quot; NPT</td>
<td>0 to 5 VDC</td>
<td>02</td>
<td>±0.11% FS</td>
<td>NN None</td>
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<tr>
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<td>50 PSI</td>
<td>P</td>
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<td>02</td>
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<td>NN None</td>
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<tr>
<td>250</td>
<td>250 PSI</td>
<td>P</td>
<td>Pressure</td>
<td>3/8&quot; NPT</td>
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<tr>
<td>500</td>
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<tr>
<td>10K</td>
<td>1000 PSI</td>
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<td>Absolute</td>
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<tr>
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<tr>
<td>50K</td>
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<td>Absolute</td>
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<td>0 to 5 VDC</td>
<td>02</td>
<td>±0.11% FS</td>
<td>NN None</td>
</tr>
</tbody>
</table>

Dimensions:

- Pressure Port: 1/4" - 18 NPT Internal
- Bottom View

Proof Pressure:

- Standard Pressure Ranges (PSI):
  - 0-25 PSI
  - 0-50 PSI
  - 0-100 PSI
  - 0-250 PSI
  - 0-500 PSI
  - 0-1000 PSI
  - 0-3000 PSI
  - 0-5000 PSI

- Burst Pressure Rating (PSI):
  - 50
  - 75
  - 150
  - 200
  - 375
  - 500
  - 1000
  - 3750
  - 6000

- Approx. Natural Frequency:
  - 2.0
  - 2.5
  - 3.5
  - 5.0
  - 8.0
  - 11.0
  - 15.0
  - 25.0

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

Performance Data:

- Accuracy RSS
  - ±0.11% FS (at constant temperature)
- Non-linearity (BFSL):
  - ±0.10% FS
- Hysteresis:
  - 0.05% FS
- Non-repeatability:
  - 0.02% FS
- Thermal effects:
  - ±0.02% FS/°F (±0.036% FS/ºC)
  - ±0.015% FS/°F (±0.027% FS/ºC)
  - ±0.02% FS/°F (0.1% residual shift after 5 minutes)

Environmental Data:

- Temperature:
  - +32 to +150 °F (0 to +650 °C)
- Operating temperature limit:
  - +400 °F (204 °C)
- Storage temperature limit:
  - -65 °F to +250 °F (-54 °C to +121 °C)
- Dynamic Performance:
  - 1 ms
- Shock:
  - 500 g
- Vibration:
  - 2 g
- Static Acceleration:
  - 0.05 psig
- Acceleration:
  - 10g

Pressure Media Available Options:

- Option #602 Special Output 1-5 VDC
- Option #702 Extended Compensated Temperature -65° to +250° (-54° to +121°)
- Option #803-825 Up to 25 ft. of cable can be supplied
- Option #865 NEMA4 Weatherproof Enclosure
- Option #901 11-Point Calibration Certificate

General Specifications:

- Case:
  - Stainless Steel
- Electrical Connection:
  - 2 ft. Multiconductor Cable
- Pressure Fitting:
  - 1/4" NPT Internal
- Weight:
  - 4 ounces
- Output Impedance:
  - 400 ohms
- Output Noise:
  - ±100 Microvolts RMS (0 Hz to 10 KHz)
- Mechanical Options:
  - Option #901 11-Point Calibration Certificate

NOTE: Both output leads are nominally 1.6 VDC above the negative excitation lead at zero pressure. Either negative excitation or negative output should be connected to case (ground). But both leads cannot be connected to case (ground). Unit is calibrated at the factory with the negative excitation connected to case (ground).