AccuSense™
Model ASM
High Accuracy
Pressure Transducer

Setra's Model ASM is the highest accuracy transducer for measuring gauge, absolute, compound and vacuum pressure in the AccuSense™ product line. Its ±0.05% FS accuracy is calibrated using the "End Point Method", which improves linearity when compared to competitive transducers which use the "Best Fit Straight Line Method" of calibration. The ASM's calibration is tamper proof by utilizing a SecureCal™ calibration key, which eliminates inadvertent adjustments, while allowing authorized users to adjust the sensor's calibration coefficients for a true sensor calibration. The design of the ASM offers class leading overpressure capability and multiple pressure and electrical fittings for a wide range of applications.

High Accuracy For Demanding Applications
The Model ASM pressure transducer uses a resonant variable capacitance sensor. This sensor is linearized and thermally compensated through a computerized curve fitting algorithm that optimizes the sensor's linearity for maximum accuracy in demanding applications.

Robust Design & Construction for Reliable Service
The Model ASM is designed and built to withstand demanding applications. The laser welded sensor construction, designed with a positive overpressure stop, enables the sensor to resist overpressure conditions up to 10X in all pressure ranges.

Secure and Fast Calibration & Service
The Model ASM is ideal for the Test & Measurement industry because it adheres to the stringent accuracy requirements. In order to make adjustments, the ASM utilizes the SecureCal™ calibration key, providing secure calibration. The SecureCal™ provides the ability to calibrate zero and span coefficients through a simple push button and rotary adjustment dial. The SecureCal™ also offers the option to restore factory defaults for fail-safe sensor calibration.

Reliable Testing Data
Minimize Downtime
Reduce Calibration Time

Model ASM Features:
• High Accuracy: ±0.05% FS
• End Point Method Linearity
• Low Differential Pressure Ranges
• High Overpressure Capability: >10X Range
• Low Thermal Error
• Excellent Stability: <0.15% FS/YR
• Calibrate Using SecureCal™ Calibration Key
• High Line Pressure Capability
• Unidirectional & Bidirectional Models Available

Applications:
• Engine Test Stands
• Particle Test & Analysis
• Industrial (High Accuracy)
• Manifold Pressure
• Refrigeration Testing
## Ordering Information

### Model ASM

<table>
<thead>
<tr>
<th>Model</th>
<th>Pressure Ranges</th>
<th>Type</th>
<th>Pressure Port</th>
<th>Output</th>
<th>Elec. Termination</th>
<th>Accuracy</th>
<th>Option</th>
<th>Description</th>
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<tr>
<td>ASM1</td>
<td>Model ASM psi</td>
<td>PSIG</td>
<td>Gauge</td>
<td>Female</td>
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### Model Pressure Ranges

1. **Prooof Pressure**: The maximum recoverable pressure that may be applied without changing performance beyond specification: ±0.1% Zero Shift, Typical
2. **Burst Pressure**: The maximum pressure that may be applied to the positive pressure port without rupturing the sensing element.
3. **Vacuum**: The pressure ranges compatible with vacuum service with acceptable performance.

### Accuracy Data

- **Accuracy RSS**: <±0.05% FS
- **Accutunity**: <±0.1% FS

### Accessories

- See data sheet for more information on Setra’s SecureCal™ Calibration Key.
- 6-Pin Bayonet Connector Assembly w/ Strain Relief. Order Separately: Part No. 600751

### General Specifications

#### Performance Data

- Zero Offset Position Effect
- Electrical Terminations
- Long-term Stability
- Response Time to Pressure Input (From 100% to 10% of pressure range)
- Hotter or lower limits available (consult factory).

#### Physical Description

- Housing: Stainless Steel
- Operating Temperature Limits:
  - Case: -40 to +185 °F (-40 to +85 °C)
  - Electronics: -4 to +140 °F (-20 to +60 °C)
- Weight: 9 oz (254 g)
- Life Cycle Rating: >10^6 Pressure Cycles
- Response Time to Pressure Warm-up: <80 ms for Current Output; <10 ms for Voltage Output

#### Environmental Data

- Case Materials: Stainless Steel
- Wettability: 17-4 PH Stainless Steel
- Life Cycle Rating: >10^6 Pressure Cycles
- Humidity: <80% RH
- Vibration: 10g from 1 kHz to 2kHz
- Temperature: -40 to +185 °F (-40 to +85 °C)
- Pressure: 10 CP (1000 psi)
- Altitude: 10,000 feet
- Storage: -40 to +185 °F (-40 to +85 °C)
- Wetted Materials: 17-4 PH Stainless Steel
- Temperature Coefficient of Resistance: <±0.5%/°F
- Temperature Coefficient of Moisture/Splash: <±0.1%/°F

#### Electrical Data

- Input Resistance: 500K ohm
- Power Source: 10VDC (±20%)
- Temperature Band (-20°C to 60°C)
- Hysteresis: <±0.03% FS Typ.
- Non-Linear: <±0.025% FS Typ.
- Regulatory Data: CE Compliant & RoHS Compliant
- Miswiring: Reverse Excitation Protection
- Life Cycle Rating: >10^6 Pressure Cycles
- Noise: <0.01 dB
- Response Time to Pressure Warm-up: <80 ms for Current Output; <10 ms for Voltage Output
- Temperature Coefficient of Rainfall: <±0.1°/°F
- Temperature Coefficient of Moisture/Splash: <±1.5°/°F
- Response Time to Pressure Warm-up: <80 ms for Current Output; <10 ms for Voltage Output
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