**PRESURE TRANSDUCERS FOR AIRCRAFT**

Flight Control | Braking | Thrust Reverse | Landing Gear

**RTCA DO-160 Qualified**

■ Optional “Switch” Output
■ 2500 to 5000 PSIG Range

**ASK AN ENGINEER**

**GENERAL INFORMATION**

<table>
<thead>
<tr>
<th>Full Name</th>
<th>Phone Number</th>
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<tbody>
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<table>
<thead>
<tr>
<th>Company Name</th>
<th>Fax Number</th>
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<table>
<thead>
<tr>
<th>E-Mail Address</th>
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</tbody>
</table>

Ask Your Question

**HOW TO SPECIFY**

- Call us at 203.877.2795 and ask for an engineer.
- Locate our representative in your area via our website.

**OR... E-MAIL US AT**

Sales Department:
sales@precisionsensors.com

Technical Department:
askanengineer@precisionsensors.com

Service Department:
servicedepartment@precisionsensors.com

Quality Assurance:
quality@precisionsensors.com

**UNITED ELECTRIC CONTROLS**

Precision Sensors Division

50 Seemans Lane
Milford, CT 06460 USA
Telephone: 203.877.2795 Fax: 203.877.8752
Email: sales@precisionsensors.com
www.precisionsensors.com
TRANSDUCERS FOR CRITICAL AIRCRAFT APPLICATIONS

For more than 45 years, leading aerospace companies have relied on Precision Sensors products to monitor and control aircraft systems, including:

- Cabin Air Pressure
- Engine Oil Pressure
- Heating and Cooling
- Fuel Level and Fuel Flow
- Thrust Reverse
- Altitude
- Engine Bleed Air
- De-icing
- Air Filtration
- Air Speed

XP SERIES TRANSDUCERS

Precision Sensors XP Series Transducers are designed for demanding aerospace applications that include the monitoring or control of flight surfaces, braking, thrust reversers and landing gear actuators. With no internal seals to degrade or cause leakage, the flameproof stainless steel welded design eliminates installation effects. Polysilicon sensor technology results in the highest level of dielectric strength for improved electronic isolation. XP Series Transducers are available with an optional factory set electronically isolated switch output.

PRESSURE RANGES

<table>
<thead>
<tr>
<th>PSIG</th>
<th>BAR</th>
<th>PROOF PRESSURE (PSI)</th>
<th>BURST PRESSURE (PSI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2500</td>
<td>172</td>
<td>3750</td>
<td>10,000</td>
</tr>
<tr>
<td>3000</td>
<td>276</td>
<td>6000</td>
<td>10,000</td>
</tr>
<tr>
<td>5000</td>
<td>345</td>
<td>7500</td>
<td>10,000</td>
</tr>
</tbody>
</table>

MECHANICAL SPECIFICATIONS

Sensor Material: 17-4 PH SS
Housing: 300 Series SS
Weight: 0.30 LBS. MAX.
Pressure Connections: A54395 Types*
Electrical Termination: D38999 Types*

Optional switch feature can be used to warn of a pending out-of-range condition, verify a condition or shut down a system.

FEATURES

- RTCA DO-160 Qualified
- 5 Million Cycle Life
- High Level Amplified Output
- Stainless Steel Construction
- Compatible with all Hydraulic Fluids
- Ranges from 2500 to 5000 PSI
- No Internal Seals
- Secondary Containment
- 3 Year Warranty

QUALITY SYSTEM

Certification of Approval to ISO 9001:2000 and AS9100
Revision B/Section 1

OPTIONAL SWITCH FEATURE

The optional switch feature can be used to warn of a pending out-of-range condition, verify a condition or shut down a system.

Switch Points: Customer Specified and Factory Set
Switch Contacts: Form C (SPDT)
Switch Rating: 400mA, 40VDC, 5 Million Cycles
Qualified To: DO-160

ENVIRONMENTAL SPECIFICATIONS

- Section 1: Mounting Orientation
  - ENV II
  - Section 9: Explosion Proof
  - Section 10: WaterProofness
  - Section 11: Fluids Susceptibility
  - Section 12: Sand And Dust
  - Section 13: Fungus Resistance
  - Section 14: Salt Spray
- Section 15: Magnetic Effect
- Section 16: Power Input
- Section 17: Voltage Spike
- Section 18: Audio Frequency Conducted
- Section 19: Induced Signal Susceptibility
- Section 20: Radio Frequency Susceptibility
- Section 21: Emission of Radio Frequency Energy
- Section 22: Lightning Induced Transient Susceptibility
- Section 23: Lightning Direct Effects
- Section 24: Icing
- Section 25: ESD
- Section 26: Fire, Flammbability

RELIABILITY

Cycle Life: 5 Million Pressure Cycles
MTBF: 200,000 hrs

MISCELLANEOUS

- Orientation Effect
  - Less than 0.01°F FS
- Response Time
  - Less than 1 msec
- Warm Up Time
  - Less than 1 minute

PERFORMANCE SPECIFICATIONS:

<table>
<thead>
<tr>
<th>TECHNICAL SPECIFICATIONS</th>
<th>INSTALLATION INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure Range</td>
<td>0-2500 Through 0-5000 PSI</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Output Voltage</td>
<td>0.5 to 5.5 VDC Full Scale, Others Available</td>
</tr>
<tr>
<td>Accuracy</td>
<td>±1% Total Error Band*</td>
</tr>
<tr>
<td>Repeatability</td>
<td>±0.25% Span</td>
</tr>
<tr>
<td>Stability</td>
<td>Less than ±0.0% Span</td>
</tr>
<tr>
<td>Proof Pressure</td>
<td>150% FS Up to 7,500 PSI</td>
</tr>
<tr>
<td>Burst Pressure</td>
<td>200% FS Up to 10,000 PSI</td>
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* Total Error Band includes temperature effects, zero and span errors, non-linearity, hysteresis, and non-repeatability calculated using terminal point method.
### XP Series Transducers

Precision Sensors XP Series Transducers are designed for demanding aerospace applications that include the monitoring or control of flight surfaces, braking, thrust reversers and landing gear actuators. With no internal seals to degrade or cause leakage, the flameproof stainless steel welded design eliminates installation effects. Polysilicon sensor technology results in the highest level of dielectric strength for improved electrical isolation. XP Series Transducers are available with an optional factory set electronically isolated switch output.

### Technical Specifications

**Pressure Ranges**

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**Features**

- RTCA DO-160 Qualified
- 5 Million Cycle Life
- High Level Amplified Output
- Stainless Steel Construction
- Compatible with all Hydraulic Fluids
- Ranges from 2500 to 5000 PSI
- No Internal Seals
- Secondary Containment
- 3 Year Warranty

**Accuracy**

±1% Total Error Band* 
-20 to 85°C, ±1.5% -40 to 120°C

**Output Voltage**

0.5 to 5.5 VDC Full Scale, Others Available

**Supply Current**

Less than 15 mA

**Input Voltage**

15 to 45 VDC
Reverse Polarity Protected

**Output Current**

4mA Max.

**Input Power**

Less than 15 mA

**Response Time**

Less than 1 msec

**MTBF**

200,000 hrs

**Warm Up Time**

Less than 1 minute

**Reliability**

- Cycle Life: 5 Million Pressure Cycles
- Response Time: Less than 1 msec
- MTBF: 200,000 hrs
- Warm Up Time: Less than 1 minute

**Quality System**

Certification of Approval
- to ISO 9001:2000 and AS9100
- Revision B/Section 1

**Optional Switch Feature**

The optional switch feature can be used to warn of a pending out-of-range condition, verify a condition or shut down a system. The switch can be used for

- Customer Specified and Factory Set
- Form C (SPDT)
- 400mA, 40VDC, 5 Million Cycles
- DO-160 Qualified

**Environmental Specifications**

- Operating Temperature Range: -55 to 85°C (-67 to 185°F)
- Storage Temperature Range: -20 to 85°C (-40 to 120°F)
- Operating Altitude Range: -2,000 FT to +70,000 FT
- Operating Altitude Range: 2,000 ft to +70,000 ft

**General Specification**

- 400mA, 40VDC, 5 Million Cycles
- DO-160 Qualified

* * Total Error Band includes temperature effects, zero and span errors, non-linearity, hysteresis, and non-repeatability calculated using terminal point method.
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ASK AN ENGINEER

GENERAL INFORMATION

Full Name
Company Name
Phone Number
Fax Number
E-Mail Address

Ask Your Question

Submit

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• Utilize our “Ask An Engineer” form at www.precisionsensors.com.

OR... E-MAIL US AT

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Technical Department:
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Service Department:
servicedepartment@precisionsensors.com

Quality Assurance:
quality@precisionsensors.com

RTCA DO-160 Qualified
Optional “Switch” Output
2500 to 5000 PSIG Range

UNITED ELECTRIC CONTROLS

PRECISION SENSORS FOR AIRCRAFT

Flight Control | Braking | Thrust Reverse | Landing Gear

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