



TRANSDUCER

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# PRESSURE TRANSDUCERS FOR AIRCRAFT

Flight Control | Braking | Thrust Reverse | Landing Gear



RTCA DO-160 Qualified ■

Optional "Switch" Output ■

2500 to 5000 PSIG Range ■

**P R E C I S I O N  
S E N S O R S**



## 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
- Antilock Braking
- Engine Bleed Air
- De-icing
- Air Filtration
- Air Speed
- Altitude

## 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

PSIG	BAR	PROOF PRESSURE (PSI)	BURST PRESSURE (PSI)
2500	172	3750	10,000
3000	276	6000	10,000
5000	345	7500	10,000

## 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

## 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 PSIG
- No Internal Seals
- Secondary Containment
- 3 Year Warranty



## MECHANICAL SPECIFICATIONS

- Sensor Material:** 17-4 PH SS
- Housing:** 300 Series SS
- Weight:** 0.30 LBS. MAX.
- Pressure Connections:** AS4395 Types\*
- Electrical Termination:** D38999 Types\*

\* Can be customized to individual application

## QUALITY SYSTEM

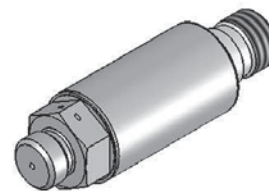
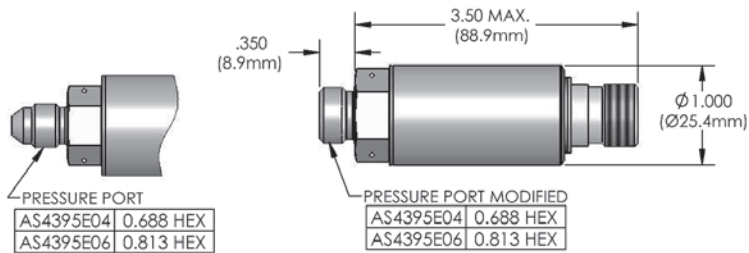
Certification of Approval  
to ISO 9001:2000 and AS9100  
Revision B/Section 1



# PERFORMANCE SPECIFICATIONS:

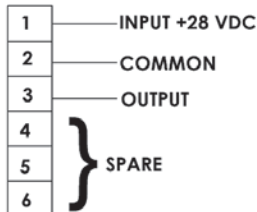
TECHNICAL SPECIFICATIONS		INSTALLATION INFORMATION	
Pressure Range	0-2500 Through 0-5000 PSIG	Input Voltage	15 to 45 VDC Reverse Polarity Protected
Output Voltage	0.5 to 5.5 VDC Full Scale, Others Available	Supply Current	Less than 15 mA
Accuracy	±1% Total Error Band* -20 to 85°C, ±1.5% -40 to 120°C	Output Current	4mA Max.
Repeatability	Less than ±0.05% Span	Dielectric Resistance	1250 VDC, < 1mA Leakage
Stability	Less than ±0.25% Span per year	Insulation Resistance	Greater than 100 MΩ at 500 VDC
Proof Pressure	150% FS Up to 7,500 PSIG	Optional Factory Set Switch	Form C Contacts Rated 400mA, 40VDC
Burst Pressure	200% FS Up to 10,000 PSIG		
ENVIRONMENTAL SPECIFICATIONS			
Operating Temperature Range	-55 to 85°C (-67 to 185°F)	Operating Altitude Range	-2,000 FT to +70,000 FT
Storage Temperature Range	-55 to 125°C (-67 to 257°F)		
RTCA DO-160 COMPLIANCE			
Section 4: Temp and Altitude	D2	Section 15: Magnetic Effect	Z
Section 5: Temperature Variation	A	Section 16: Power Input	Z
Section 6: Humidity	C	Section 17: Voltage Spike	A
Section 7: Operational Shocks and Crash Safety	B	Section 18: Audio Frequency Conducted Susceptibility – Power Inputs	Z
Section 8: Vibration	CAT R, Curves E, E1	Section 19: Induced Signal Susceptibility	ZC
Section 9: Explosion Proof	ENV II	Section 20: Radio Frequency Susceptibility	T
Section 10: Waterproofness	S	Section 21: Emission of Radio Frequency Energy	M
Section 11: Fluids Susceptibility	F	Section 22: Lightning Induced Transient Susceptibility	B4K44
Section 12: Sand And Dust	D	Section 23: Lightning Direct Effects	Consult Factory
Section 13: Fungus Resistance	F	Section 24: Icing	A
Section 14: Salt Spray	S	Section 25: ESD	A
		Section 26: Fire, Flammability	A
RELIABILITY		MISCELLANEOUS	
Cycle Life	5 Million Pressure Cycles	Response Time	Less than 1 msec
MTBF	200,000 hrs	Warm Up Time	Less than 1 minute
		Orientation Effect	Less than ±0.01% FS

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

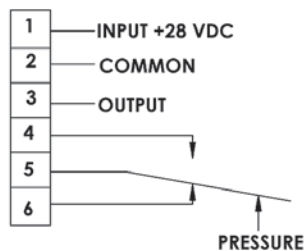


## DIMENSIONAL DETAIL

### SCHEMATIC TRANSDUCER ONLY



### SCHEMATIC TRANSDUCER WITH SWITCH



## ASK AN ENGINEER

### GENERAL INFORMATION

Full Name

Phone Number

Company Name

Fax Number

E-Mail Address

Ask Your Question

Submit

## HOW TO SPECIFY

1. Call us at 203.877.2795 and ask for an engineer.
2. Locate our representative in your area via our website.
3. Utilize our "Ask An Engineer" form at [www.precisionsensors.com](http://www.precisionsensors.com).

## OR... E-MAIL US AT

**Sales Department:**  
sales@precisionsensors.com

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**Service Department:**  
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