

Pressure Transducer 2403SAT

Bonded Foil Sensing Technology

Designed Using Advanced Computer Modeling Tools

For optimum performance, the sensing element was designed using Finite Element Analysis and other computer modeling tools. Key features of the sensing element are isolation from induced stresses (generated from installation torque, temperature excursions, vibration and shock), and high over-pressure protection.

Manufactured for Aerospace Grade Applications

Reliability and accuracy are built into every transducer using advanced manufacturing techniques. Critical procedures such as heat-treat and bonding are controlled through vacuum furnaces. Welding and calibration are accomplished with fully automated work cells. State of the art characterizing electronics meet MIL-STD 461 EMI standards, and are engineered for severe vibration and shock environments. Extreme environmental burn-in ensures the transducer's reliability and accuracy will be maintained over time.

Class S, Class B, or MIL-STD Electronics

High reliability electronic components are available to meet the most stringent flight requirements. Providing a choice of selections permits cost optimization while meeting program life needs.

Standard and Customer Configurations Available

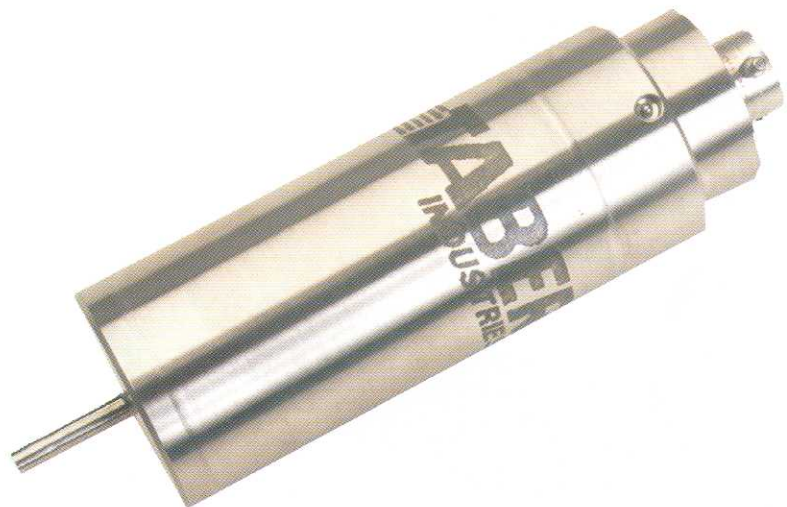
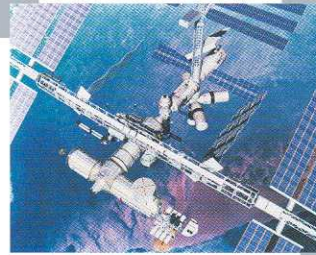
The Model 2403SAT was designed for the smaller satellites based on the heritage and success of the Model 2403. Materials of construction, mechanical and electrical interfaces are selected for reliability and ease of installation. Standard and custom test programs are offered.

Standard Features

0-50 thru 0-5000 psi

Class B high reliable electronics

+/- 0.1% FSO per annum long term stability



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"Space Flight Heritage"
0-50 thru 0-5k psia

Mechanical

Pressure Ranges	Ranges from 0-50 thru 0-5k psia (Free of charge special range or engineering units.)	
Proof Pressure	50 to 300 psi:	4X std. range
	500 to 5k psi:	2X std. range
Pressure Port	1/4" Tube Stub * (Alternate pressure ports available)	
Elect. Connection	Mates w/ MS3116-10-6S *	
Materials	304L, 17-4 Stainless Steel * (Plus materials of electrical connector)	
Dimensions	Per outline drawing below	
Weight	Less than 170 g	

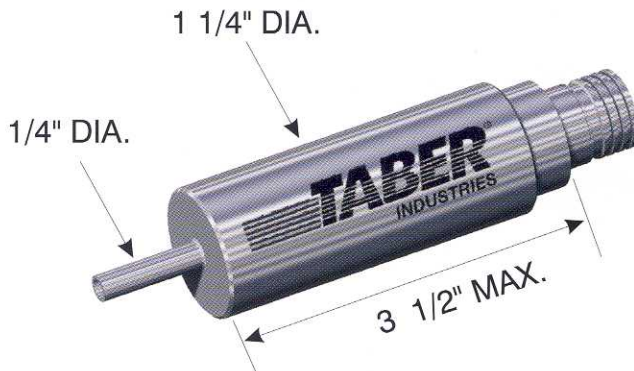
Electrical

Electronic Components	Class B
Input Voltage	20 - 36 Vdc Unregulated
Power Supply Rejection	± 0.002% per Volt input change
Output	0 - 5 Vdc Isolated *
Zero Balance	± 1.0% FSO *
FSO Setting	± 0.5% FSO *
Resolution	Infinite (± 0.001% FSO usable)
Response Time	Less than 3 ms (10-90% FSO)
Insulation Resistance	Greater than 100 M Ohms @ 50 Vdc
Reverse Polarity Protected	Yes
Output Short Circuit Protected	Yes
EMI/RFI Protected	Yes

Environmental

Compensated Temp Range	20 to 76° C (70 to 170° F) *
Operating Temp Range	-54 to +121° C (-65 to 250° F)
Storage Temp Range	-54 to +121° C (-65 to 250° F)
Triaxial Shock	30 g's for 11 ms without calibration shift
Vibration rating	25 grms
Acceleration error	From ± 0.0015% FSO/g to ± 0.2% FSO/g (highest to lowest pressure range)

* Options available



Performance

Static Accuracy	± 0.2% FSO * (BFSL, RSS) (Combined effects of non-linearity, hysteresis and repeatability)
Repeatability	± 0.075% FSO
Temperature Error Band	± 1% FSO * over comp range (Combined effects of Zero and FSO with reference at 28° C)
Long Term Stability	± 0.1% FSO per annum

STD Wiring Info

0-5 V	+In	-In	+Out	-Out
PTOS6E-10-6P	A	B	C	D

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