



MINIATURE AEROSPACE PRESSURE TRANSDUCER

Experience has taught us that many applications within the space industry require sensors that provide the rugged design features of the standard series SST 44X product lines, but need a smaller package design to minimize mass and fit onto smaller vehicles. With the growth of the commercial space market and special attention being paid to small payload launch suppliers, sensing solutions are limited. The **Series SST 44X-M** line of pressure transducers is specifically designed to fill the void. The **SST 44X-M** ("M" for "Mini") is the smallest, bonded foil, high accuracy, full range sensor on the market today. The **SST 44X-M** offers the repeatability, thermal performance, stability, and vibe/shock insensitivity of bonded foil while providing the mass reduction and compact size of other technologies.

The **SST 44X-M Series** pressure transducer's reduced OD and length result in a >30% mass reduction over its counterparts and offers more than the typical mV/V signal offered by similar products. Sigma-Netics is pleased to introduce this latest addition to the SST 44X line of pressure transducers.

FEATURES

- 0.75" Max OD
- Low Mass <90 grams
- ASIC-based output
- All welded Hermetic construction
- 15-5PH SS, Inconel and Titanium wetted parts
- LOX cleaning capable
- High vibration and shock resistant

APPLICATIONS

- Single use launch vehicles
- Small UUV/UAV vehicles

MECHANICAL CHARACTERISTICS

Standard Ranges	0-100, -250, -500, -750, -1000, -1500, -2000, -3000, -5000, -7000, -10000 PSIA / PSIG / PSIS
Proof Pressure	1.5x range
Burst Pressure	2.5x range
Operating Media	Fluids and gases compatible with 15-5 stainless steel (Inconel and other materials optional)
Enclosure	Body of stainless steel
Pressure Fitting	7/16"-20 UNF per AS4395E4
	1/4"x1.0 Weld Tube (no charge option)
Natural Frequency of Sensing Diaphragm	2 kHz at 50 psi to 347 kHz at 40,000 psi
Acceleration Response	Less than $\pm 0.15\%$ FS/G at 50 psi to $\pm 0.0015\%$ FS/G at 40,000 psi
Mass	Less than 90 grams

ELECTRICAL CHARACTERISTICS

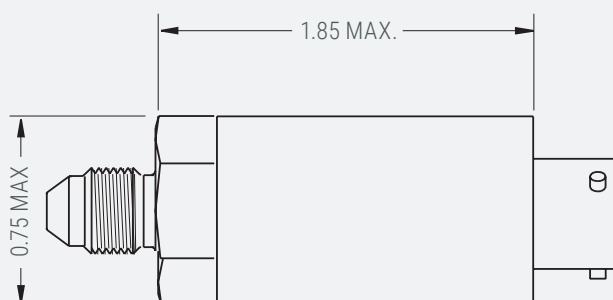
OUTPUTS

Analog/Excitation	4-20mA Current Loop:	9-36 Vdc for 2-wire
	Non-Isolated Voltage Output:	8-40 Vdc, 3- or 4-wire (standard)
Digital/Excitation	RS-232:	15-40 Vdc
	I ² C:	15-40 Vdc

COMMON

Insulation Resistance	> 100 megohms at 50 Vdc at 70°F	
Electrical Termination	MIL-C-26482 Class, No. 3113H-10-6P, or 18" integral cable	
	Optional electrical terminations available	

DIMENSIONS (INCHES)



ENVIRONMENTAL CHARACTERISTICS

Compensated Temperature Range	-65°F to +250°F (Process Temperature)
	Options available, consult factory
Operating Temperature Range	-65°F to +250°F (Ambient and Process Temperature)
	Note: Maximum Operating Temperature for digital output is +185°F

PERFORMANCE

STATIC ACCURACY

±0.25% FSO by BFSL (standard)
 ±0.15% FSO by BFSL (optional)
 ±0.5% FSO by BFSL (low cost option)

RESOLUTION

Analog: Infinite
 Digital: Options available

THERMAL ZERO SHIFT

< ±0.01% FSO/°F (standard)
 Low cost options available

THERMAL SPAN SHIFT

< ±0.01% FSO/°F (standard)
 Low cost options available

ZERO BALANCE

±0.25% FSO

SPAN

±1.0% FSO at 70°F < ±0.25% FSO

AVAILABLE OPTIONS

- LOX Cleaning (up to Level 50/50A)
- Extended Fluid Thermals (mV/V only)
- Optional Alarm Setting (digital only)
- Multi-Temperature Thermal Characterization