

# RUGGEDIZED MULTI-PURPOSE AEROSPACE PRESSURE TRANSDUCER



Designed with the extreme requirements of space flight and ground service in mind, ruggedized, all welded, customizable **Series SST 44X** pressure transducer is ideal for all applications. Whether used to measure and control launch vehicle propulsion systems or supply and storage systems for vehicle fluids on ground service equipment, these high accuracy pressure transducers will meet all the demands the aerospace industry throws at it. The **SST 44X** resistance to vibration and shock, moisture ingress, and EMI/RFI along with media compatibility and higher than standard overpressure performance make it the ideal choice for all pressure sensing.

All standard features of the **Series SST 44X** can be customized to fit any application. Let our applications engineers help tailor this sensor to your specific needs.

## FEATURES

- All welded SS construction
- Vibration and shock resistant
- Cryogenic options
- Digital and analog outputs
- Fully customizable
- Light weight designs
- LOX cleaning capable
- High pressure secondary containment

## APPLICATIONS

- Fuel storage and dispensing
- On vehicle propulsion
- Test stands
- ECLSS
- Bleed air systems

## MECHANICAL CHARACTERISTICS

Standard Ranges	0-15, 20, 30, 50, 75, 100, 250, 500, 750, 1000, 1500, 2000, 3000, 5000, 7500, 10000, 15000 PSIA / PSIG
Proof Pressure	1.5x standard or 500 PSI (whichever is greater)
	1.8x option available
	10k max gas / 15k max oil
Burst Pressure	2.5x range
Operating Media	Fluids and gases compatible with with 15-5 and 304L/316L stainless steel (Inconel and other materials optional)
Enclosure	Body of stainless steel
Pressure Fitting	7/16"-20 UNF (Per AS4395E04 or AS1098 E04)
	1/4" Weld Tube, 0.035 Wall, 1.0" Straight
	<i>For additional pressure fittings, please consult factory</i>
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	4.5 oz unamplified (amplified approx. 8.5 oz)

## ELECTRICAL CHARACTERISTICS

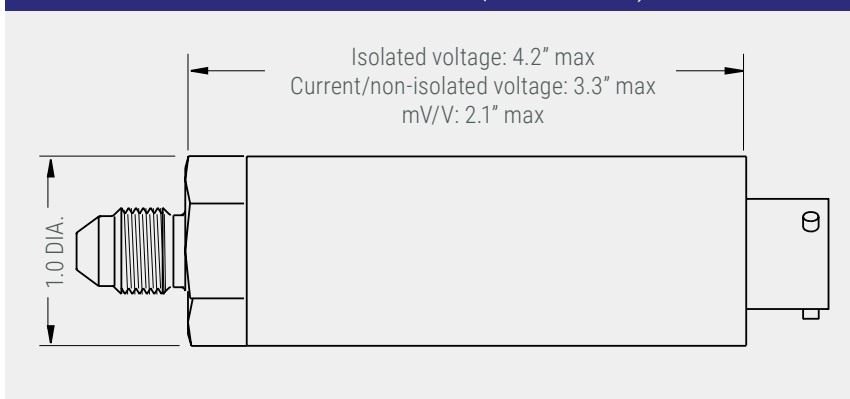
### ANALOG OUTPUTS

Excitation	3 mV/V $\pm$ 0.15 mV	10 Vdc
	4-20mA Current Loop:	9-36 Vdc for 2-wire
	Isolated Voltage Output (0-5 Vdc, 0-10 Vdc):	25-35 Vdc (standard)
		14-32 Vdc (no charge option)
	8-18 Vdc (no charge option)	
Non-Isolated Voltage Output:	8-32 Vdc, 3- or 4-wire (standard)	
<i>Additional outputs and related excitations available</i>		

### COMMON

Insulation Resistance	> 100 megohms at 50 Vdc at 70°F
Electrical Termination	MIL-C-26482 Class, PTIH-10-6P, or 18" integral cable
	Integral 6-conductor cable in two lengths: 18" and 36" <i>Optional electrical terminations available</i>

## DIMENSIONS (INCHES)



## ENVIRONMENTAL CHARACTERISTICS

Compensated Temperature Range	-65°F to +250°F (Process Temperature)
Operating Temperature Range	-65°F to +250°F (Ambient and Process Temperature)
	<i>Note: Maximum Operating Temperature for digital output is +185°F</i>

## PERFORMANCE

### STATIC ACCURACY

Linearity:  $\pm$ 0.20% FSO  
Hysteresis:  $\pm$ 0.20% FSO  
Repeatability:  $\pm$ 0.10% FSO

### RESOLUTION

Analog: Infinite  
Digital: Options available

### THERMAL ZERO SHIFT

<  $\pm$ 0.01% FSO/°F (standard)  
<  $\pm$ 0.005% FSO/°F (\$100 adder)

### THERMAL SPAN SHIFT

<  $\pm$ 0.01% FSO/°F (standard)  
<  $\pm$ 0.005% FSO/°F (\$100 adder)

### ZERO BALANCE

$\pm$ 0.5% FSO

### SPAN

$\pm$ 0.5% FSO at 70°F <  $\pm$ 0.25% FSO

### AVAILABLE OPTIONS

- Internal shunt resistor
- Multi-temperature thermal sensor characterization
- Custom ATP
- Program management
- Dual output (temperature & pressure)
- Internal platinum RTD
- EMI protection available per MIL-STD-461