



# HIGH TEMPERATURE STATIC-DYNAMIC PRESSURE TRANSDUCER

## XTEL-4-SD-625 SERIES

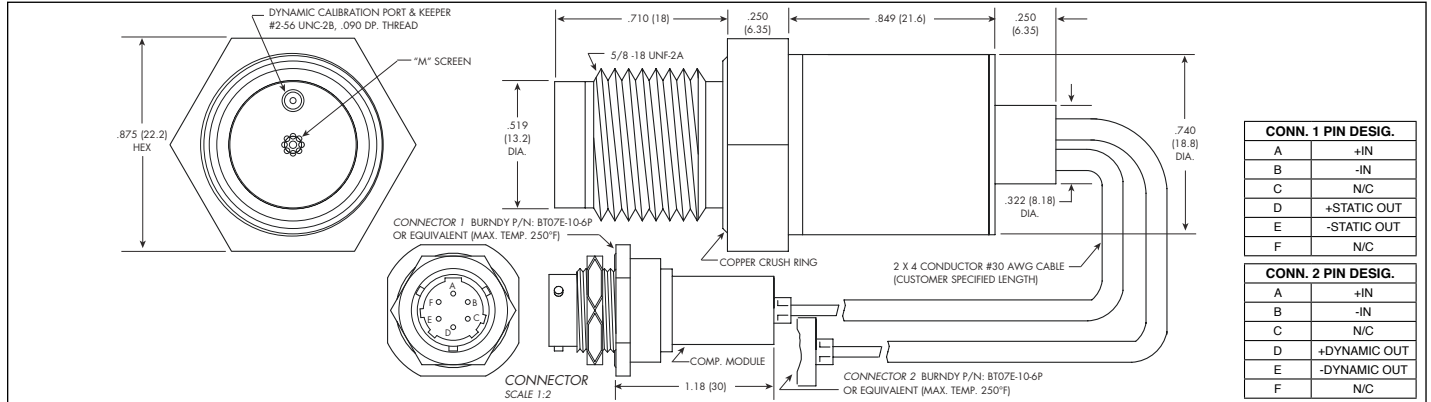
- Superior Signal to Noise Ratio of Dynamic Sensor
- Innovative Mechanical Filtering System
- Miniature, Robust Construction
- Ultra High Temperature
- Patented Leadless Technology **VIS**<sup>®</sup>
- Separated Static-Dynamic Output
- Inconel 625 Screw Housing
- Dual SOI Sensor on a Single Structure
- Excellent Long Term Stability
- High Accuracy
- -65°F to +750°F (-55°C to +400°C) Front End\*



The XTEL-4-SD-625 (Inconel) Series are high temperature extremely rugged pressure transducers which are ideal for the measurement of flow instabilities and steady pressures in gas turbine combustors and compressors. The XTEL-4-SD-625 (Inconel) uses an innovative low-pass mechanical filter to enable

the measurement of low-level dynamic pressures in high pressure environments with superior signal to noise ratios.

Kulite recommends the **KSC Series** of signal conditioners to maximize the measurement capability of the XTEL-4-SD-625 transducer.



INPUT	Dynamic/Static Sensor Pressure Range	1.0/14 15/200	1.7/21 25/300	2.8/35 BAR 40/500 PSI
	Operational Mode of Dynamic Sensor	Differential by Design		
	Operational Mode of Static Sensor	Absolute		
	Over Pressure	400	600	1000 PSI
	Burst Pressure	600	900	1250 PSI
	Pressure Media	Air (Consult Factory For Details)		
	Rated Electrical Excitation	10 VDC		
	Maximum Electrical Excitation	12 VDC		
	Input Impedance	1000 Ohms (Min.)		
	Output Impedance	1000 Ohms (Nom.)		
OUTPUT	Resolution	Infinitesimal		
	Full Scale Output (FSO) of Dynamic/Static Sensor	75 mV/100 mV (Nom.)		
	Residual Unbalance	± 5 mV (Typ.)		
	Bandwidth of Dynamic Sensor (Flat ± 2dB)	15 ± 10 Hz to 6.5 kHz		
	Bandwidth of Static Sensor (Flat ± 2dB)	DC to 6.5 kHz		
	Combined Non-Linearity, Hysteresis and Repeatability	± 0.1% FSO BFSL (Typ.) ± 0.5% FSO (Max.)		
	Acceleration Sensitivity Dynamic Sensor % FS/g Perpendicular	5.1x10 <sup>-4</sup>	3.2x10 <sup>-4</sup>	2.2x10 <sup>-4</sup>
	Acceleration Sensitivity Dynamic Sensor % FS/g Transverse	5.0x10 <sup>-5</sup>	3.5x10 <sup>-5</sup>	2.0x10 <sup>-5</sup>
	Acceleration Sensitivity Static Sensor % FS/g Perpendicular	3.3x10 <sup>-5</sup>	2.3x10 <sup>-5</sup>	1.6x10 <sup>-5</sup>
	Acceleration Sensitivity Static Sensor % FS/g Transverse	3.5x10 <sup>-6</sup>	2.4x10 <sup>-6</sup>	1.7x10 <sup>-6</sup>
ENVIRONMENTAL	Operating Temperature Range	-65°F to +750°F (-55°C to +400°C) - Front End Only* -65°F to +525°F (-55°C to +274°C) - Cable		
	Compensated Temperature Range	+80°F to +650°F (+25°C to +343°C)		
	Thermal Zero Shift	± 1.5% FS/100°F (Typ.)		
	Thermal Sensitivity Shift	± 1.5% /100°F (Typ.)		
PHYSICAL	Electrical Connection	2 x 4 Conductor 30 AWG Shielded Cable (Customer Specified Length)		
	Sensing Principle	Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon Patented Leadless Technology		
	Weight	80 Grams (Nom.) Excluding Module and Leads		
Mounting Torque	55 Inch-Pounds (Max.) 6 Nm			

\* Limited life above 750°F (400°C), dependent on operating conditions.  
 Note: Custom pressure ranges, accuracies and mechanical configurations available. Dimensions are in inches. Dimensions in parenthesis are in millimeters. All dimensions nominal. (C) Continuous development and refinement of our products may result in specification changes without notice. Copyright © 2014 Kulite Semiconductor Products, Inc. All Rights Reserved.  
 Kulite miniature pressure transducers are intended for use in test and research and development programs and are not necessarily designed to be used in production applications. For products designed to be used in production programs, please consult the factory.



# HIGH TEMPERATURE STATIC-DYNAMIC PRESSURE TRANSDUCER

## XTEL-5-SD-625 SERIES

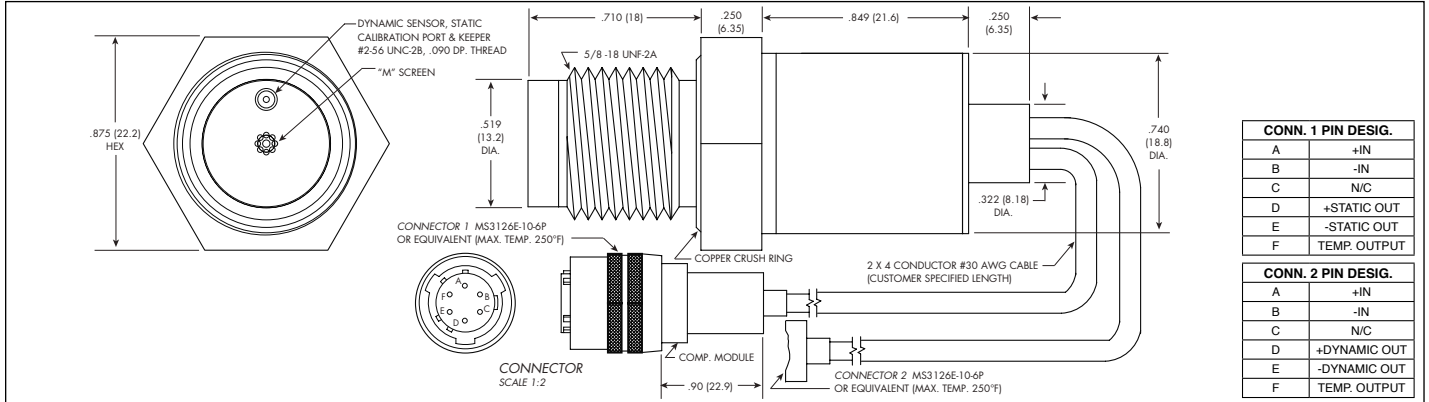
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signal to noise ratios. The XTEL-5-SD-625 provides a "5th wire" output which indicates the temperature of the piezoresistive sensing element.

Kulite recommends the **KSC Series** of signal conditioners to maximize the measurement capability of the XTEL-5-SD-625 transducer.



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	Operational Mode of Dynamic Sensor	Differential by Design		
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	Over Pressure	400	600	1000 PSI
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	Pressure Media	Air (Consult Factory For Details)		
	Rated Electrical Excitation	10 VDC		
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	Resolution	Infinitesimal		
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