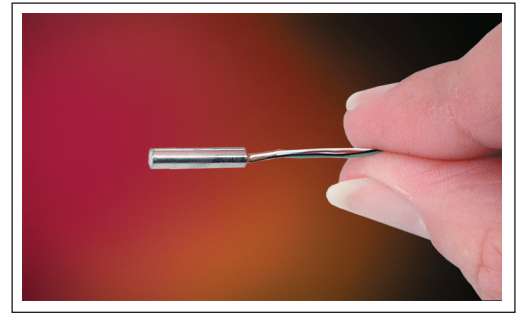




# HIGH TEMPERATURE MINIATURE PRESSURE TRANSDUCER WITH INTERNAL COMPENSATION

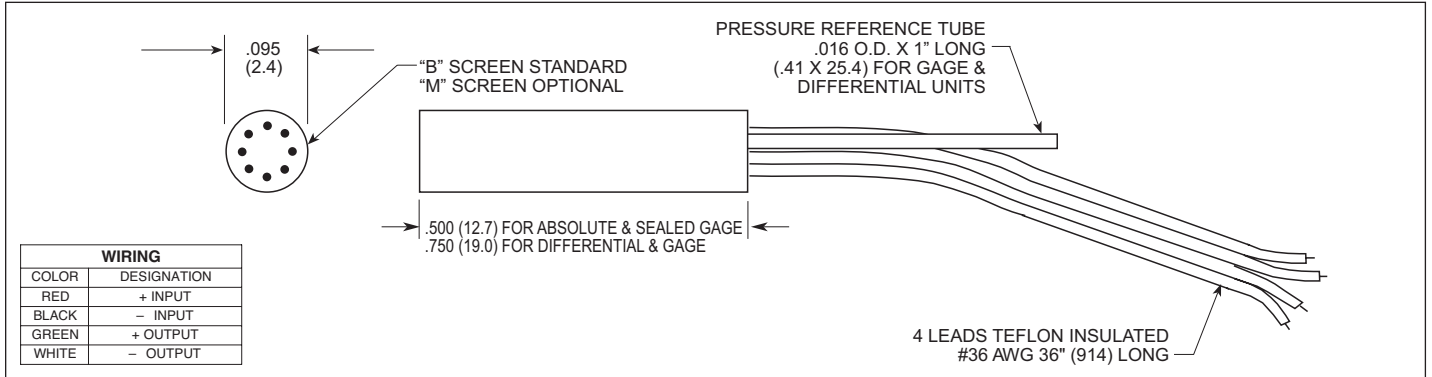
## XCE-IC-093 SERIES

- Wide Temperature Capability -65°F To 525°F
- Ideal For Turbine Engine Probes and Wind Tunnel Applications
- 50 Year History Of Successful Applications In Wind Tunnel And Flight Test Programs
- Patented Silicon on Silicon Integrated Sensor **VIS**<sup>®</sup>
- Size And Shape Ideal For Incorporation In User Designed Probes
- Excellent Static And Dynamic Performance



The XCE-IC-093 Series allow for a very rugged package suited for probes, pressure rakes and other similar test set ups. This transducer is well suited for both dynamic and static pressure measurements in benign or harsh environments. Its wide operating temperature range (-65°F to +525°F) makes it ideal for numerous applications in Aerospace and other areas of industry. Internal compensation allows for ease of installation by eliminating the external compensation module.

Kulite recommends the **KSC Series** of signal conditioners to maximize the measurement capability of the XCE-IC-093 transducer.



INPUT	Pressure Range	0.35 5	0.7 10	1 15	1.7 25	3.5 50	7 100	17 250	35 500	70 BAR 1000 PSI	
	Operational Mode	Gage, Differential		Absolute, Gage, Differential		Absolute, Gage, Sealed Gage, Differential		Absolute, Sealed Gage			
	Over Pressure	2 Times Rated Pressure With No Change In Calibration									
	Burst Pressure	3 Times Rated Pressure									
	Pressure Media	All Nonconductive, Noncorrosive Liquids or Gases									
	Rated Electrical Excitation	10 VDC/AC									
	Maximum Electrical Excitation	12 VDC/AC									
	Input Impedance	1000 Ohms (Min.)									
OUTPUT	Output Impedance	1000 Ohms (Nom.)									
	Full Scale Output (FSO)	100 mV (Nom.)									
	Residual Unbalance	± 5 mV (Typ.)									
	Combined Non-Linearity, Hysteresis and Repeatability	± 0.1% FSO BFSL (Typ.), ± 0.5% FSO (Max.)									
	Resolution	Infinitesimal									
	Natural Frequency of Sensor Without Screen (KHz) (Typ.)	150	175	200	240	300	380	550	700	1000	
	Acceleration Sensitivity % FS/g Perpendicular	1.5x10 <sup>-3</sup>	1.0x10 <sup>-3</sup>	6.5x10 <sup>-4</sup>	5.0x10 <sup>-4</sup>	3.0x10 <sup>-4</sup>	1.5x10 <sup>-4</sup>	1.0x10 <sup>-4</sup>	6.0x10 <sup>-5</sup>	4.5x10 <sup>-5</sup>	
ENVIRONMENTAL	Insulation Resistance	100 Megohm Min. @ 50 VDC									
	Operating Temperature Range	-65°F to +525°F (-55°C to +273°C)									
	Compensated Temperature Range	80°F to +450°F (25°C to +235°C)									
	Thermal Zero Shift	± 2% FS/100°F (Typ.) (± 3% FS/100°F Max.)					± 1% FS/100°F (Typ.) (± 2% FS/100°F Max.)				
	Thermal Sensitivity Shift	± 2% /100°F (Typ.) (± 3% /100°F Max.)					± 1% /100°F (Typ.) (± 2% /100°F Max.)				
	Mechanical Shock	20g Half Sine Wave 11 msec. Duration									
PHYSICAL	Linear Vibration	20g Peak, Sine 10 to 2000 Hz									
	Electrical Connection	4 Leads 36 AWG 36" (914) Long									
	Weight	.3 grams (Nom.) for .500 Length Excluding Leads / .4 grams (Nom.) for .750 Length Excluding Leads									
Pressure Sensing Principle	Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon										

Note: Custom pressure ranges, accuracies and mechanical configurations available. Dimensions are in inches. Dimensions in parenthesis are in millimeters. All dimensions nominal. (E) Continuous development and refinement of our products may result in specification changes without notice. Copyright © 2020 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.