

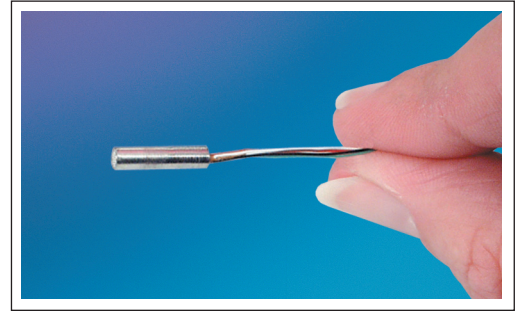


# HIGH SENSITIVITY MINIATURE PRESSURE TRANSDUCER

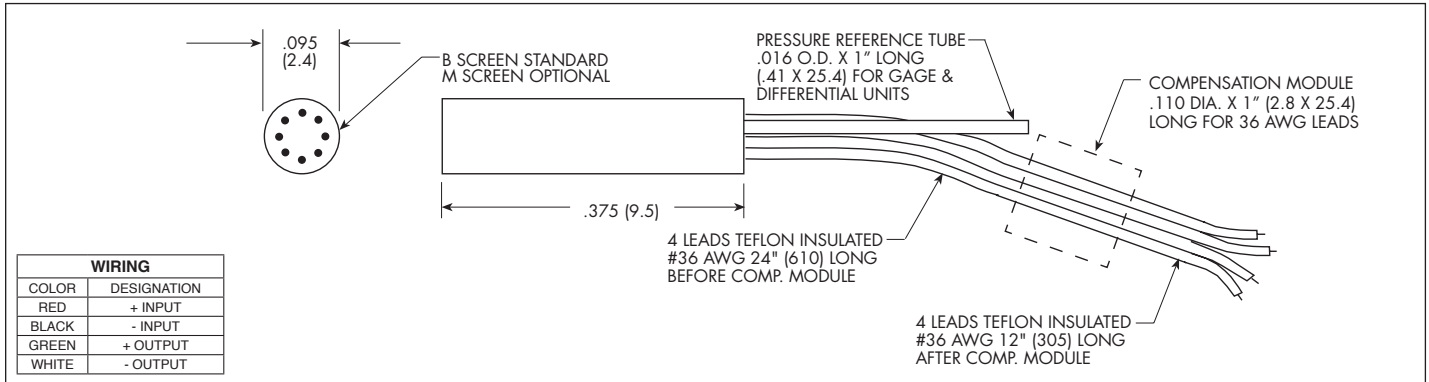
## XCS-093 SERIES

- High Sensitivity
- Patented Silicon on Silicon Integrated Sensor **VIS**<sup>®</sup>
- Superior Signal To Noise Ratio
- Static And Dynamic Capability

The XCS Series uses a diaphragm of advanced design which gives a substantially higher basic output allowing for high mV/psi sensitivities and improved signal to noise ratio.



Kulite recommends the [KSC Series](#) of signal conditioners to maximize the measurement capability of the XCS-093 transducer.



INPUT	Pressure Range	0.35 5	0.7 10	1.0 15	1.7 25	3.5 BAR 50 PSI
	Operational Mode	Absolute, Gage, Differential				
	Over Pressure	2 Times Rated Pressure				
	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)	150 mV (Nom.)		200 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
	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>
ENVIRONMENTAL	Insulation Resistance	100 Megohm Min. @ 50 VDC				
	Operating Temperature Range	-65°F to +250°F (-55°C to +120°C)				
	Compensated Temperature Range	+80°F to +180°F (+25°C to +80°C) Any 100°F Range Within The Operating Range on Request				
	Thermal Zero Shift	± 1% FS/100°F (Typ.) (± 2% FS/100°F Max)				
	Thermal Sensitivity Shift	± 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 (36 AWG Shielded Teflon Cable Optional)				
	Weight	.4 Gram (Nom.) Excluding Module and 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. (S) 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.