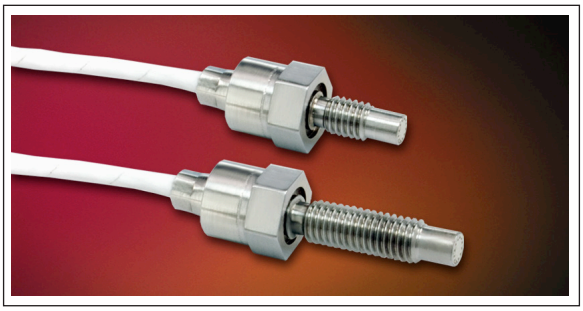
MINIATURE RUGGEDIZED HIGH TEMPERATURE PRESSURE TRANSDUCER

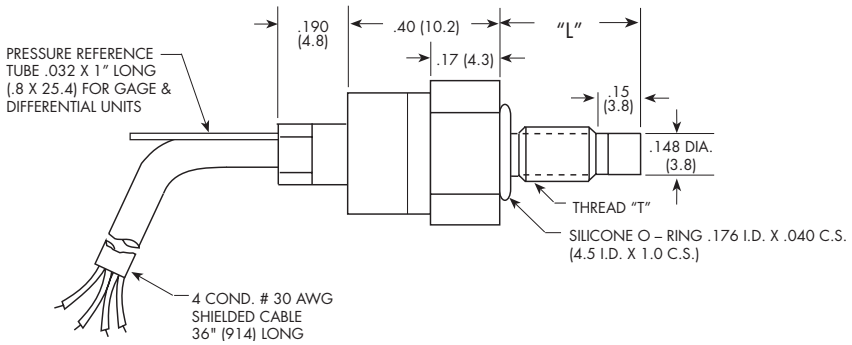
XTEL-190(S/L)(M) SERIES

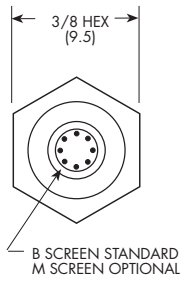
- Wide Temperature Capability -65°F To 525°F
- Easy Installation
- Patented Leadless Technology **VIS**®
- High Natural Frequency

The ruggedness of this sensor has not compromised its performance. It was designed for ease of installation and will operate properly in most conductive liquids and gases. Coupled with high temperature, its Patented Leadless Construction makes it possible for the sensing unit to be installed in such a way that will not compromise its high natural frequency. Its wide operating range (-65°F to +525°F) makes it ideal for numerous applications in Aerospace and other areas of industry. Part performance not guaranteed if used in water.



Kulite recommends the KSC Series of signal conditioners to maximize the measurement capability of the XTEL-190 transducer.





FUNCTION	
WIRING COLOR	
RED	+ INPUT
WHITE	- OUTPUT
BLACK	- INPUT
GREEN	+ OUTPUT

P/N	"T"	"L"	
190S	10-32 UNF-2A	.437	11.1 mm
190SM	M5 x .8	.437	11.1 mm
190L	10-32 UNF-2A	.760	19.3 mm
190LM	M5 x .8	.760	19.3 mm

INPUT	Pressure Range	0.7 10	1.0 15	1.7 25	3.5 50	7 100	17 250	35 500	70 1000	140 BAR 2000 PSI
	Operational Mode	Absolute, Gage, Differential		Absolute, Gage, Sealed Gage, Differential			Absolute, Sealed Gage			
	Over Pressure	2 Times Rated Pressure to 500 PSI (35 BAR), 1.5 Times Rated Pressure Above 500 PSI (35 BAR)								
	Burst Pressure	3 Times Rated Pressure to a Maximum of 5000 PSI (350 BAR)								
	Pressure Media	Most Conductive Liquids and Gases - Please Consult Factory (All Media May Not Be Suitable With O-Ring Supplied)								
	Rated Electrical Excitation	10 VDC								
	Maximum Electrical Excitation	12 VDC								
	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.)	175	200	240	300	380	550	700	1000	1400
	Acceleration Sensitivity % FS/g Perpendicular	$1.0x10^{-3}$	$6.5x10^{-4}$	$5.0x10^{-4}$	$3.0x10^{-4}$	$1.5x10^{-4}$	$1.0x10^{-4}$	$6.0x10^{-5}$	$4.5x10^{-5}$	$2.0x10^{-5}$
	Insulation Resistance	100 Megohm Min. @ 50 VDC								
ENVIRONMENTAL	Operating Temperature Range	-65°F to +525°F (-55°C to +273°C) (Media) -65°F to +450°F (-55°C to +232°C) (Ambient)								
	Compensated Temperature Range	+80°F to +450°F (+25°C to +232°C)								
	Thermal Zero Shift	± 1% FS/100°F (Typ.)								
	Thermal Sensitivity Shift	± 1% /100°F (Typ.)								
	Mechanical Shock	20g Half Sine Wave 11 msec. Duration								
	Linear Vibration	20g Peak, Sine 10 to 2000 Hz								
PHYSICAL	Electrical Connection	4 Conductor 30 AWG Shielded Cable 36" Long								
	Weight	4 Grams (Nom.) Excluding Cable								
	Pressure Sensing Principle	Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon Patented Leadless Technology								
	Mounting Torque	15 Inch-Pounds (Max.) 1.7 Nm								

Note: Custom pressure ranges, accuracies and mechanical configurations available. Dimensions are in inches. Dimensions in parenthesis are in millimeters. All dimensions nominal. (R) 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.*

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