



# MINIATURE PRESSURE TRANSDUCER

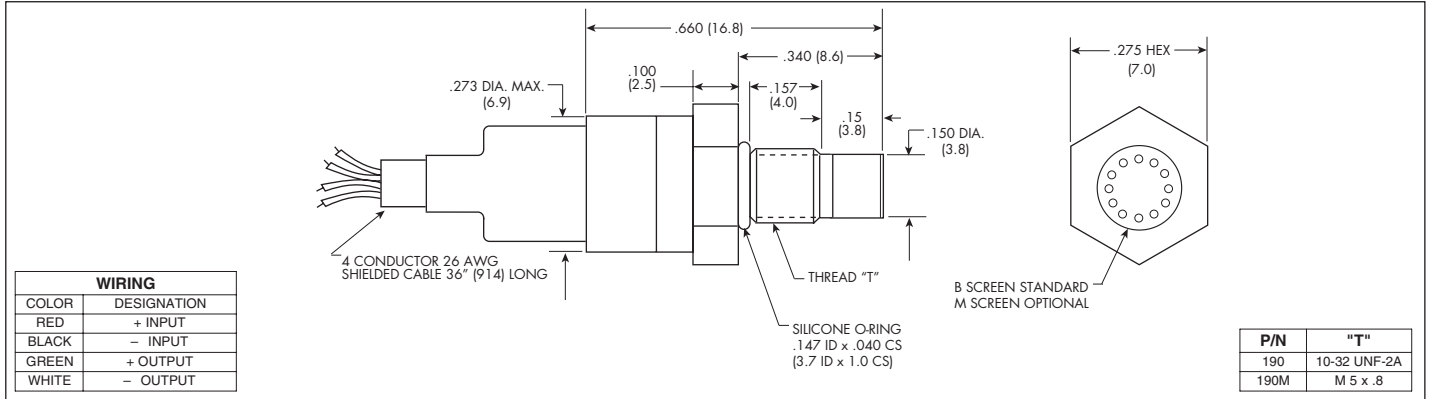
## XTL-193-190 (M) SERIES

- Robust Construction
- Ultra Miniature Construction
- Patented Leadless Technology **VIS**<sup>®</sup>
- Compatible With Most Automotive Fluids

The XTL-193-190 pressure transducer series incorporates the latest pressure sensing technology – Kulite's dielectrically isolated, silicon on silicon, patented leadless sensing element, which enables this device to be used in harsh environments. This device delivers a FSO of 100mV when excited with a 10VDC supply. The ultra miniature construction, provides a compact, robust package. This combined with the high temperature capability of +400°F, makes the XTL-193-190 ideally suitable for applications where space is limited.



Kulite recommends the [KSC-2](#) signal conditioner to maximize the measurement capability of the XTL-193-190 transducer.



	0.7 10	1.0 15	1.7 25	3.5 50	7 100	17 250	35 500	70 1000	140 BAR 2000 PSI
<b>INPUT</b>	Absolute		Absolute, Sealed Gage						
Operational Mode	Absolute		Absolute, Sealed Gage						
Over Pressure	2 Times Rated Pressure								
Burst Pressure	3 Times Rated Pressure								
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.)								
<b>OUTPUT</b>	1000 Ohms (Nom.)								
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)	175	200	240	300	380	550	700	1000	1400
Acceleration Sensitivity % FS/g Perpendicular	1.0x10 <sup>-3</sup>	6.5x10 <sup>-4</sup>	5.0x10 <sup>-4</sup>	5.0x10 <sup>-4</sup>	1.5x10 <sup>-4</sup>	1.0x10 <sup>-4</sup>	6.0x10 <sup>-5</sup>	4.5x10 <sup>-5</sup>	2.0x10 <sup>-5</sup>
Insulation Resistance	100 Megohm Min. @ 50 VDC								
<b>ENVIRONMENTAL</b>	Operating Temperature Range								
Operating Temperature Range	-65°F to +400°F (-55°C to +204°C)								
Compensated Temperature Range	-40°F to +350°F (-40°C to +175°C)								
Thermal Zero Shift	± 1% FS/100°F (Typ.)								
Thermal Sensitivity Shift	± 1% /100°F (Typ.)								
Linear Vibration	10-2000 Hz Sine, 100g. (Max.)								
Mechanical Shock	20g half Sine Wave 11 μ sec. Duration								
<b>PHYSICAL</b>	Electrical Connection								
Electrical Connection	4 Conductor 26 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. (G) 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.