

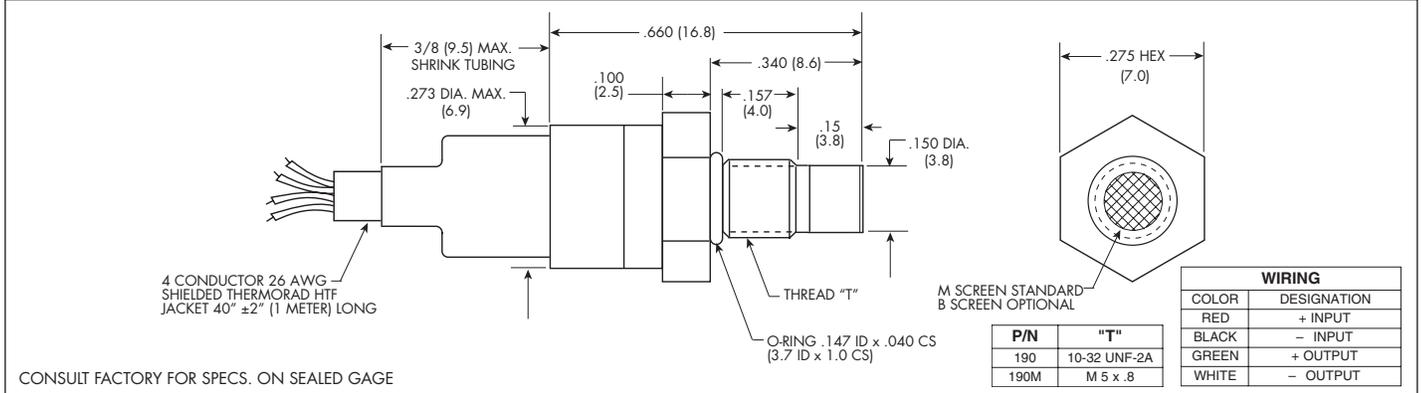


# MINIATURE IS<sup>®</sup> PRESSURE TRANSDUCER

## XTL-193-190 (M) SERIES (Formerly XTL-76A-190)

- Robust Construction
- Ultra Miniature Construction
- Patented Leadless Technology VIS<sup>®</sup>

The XTL-193 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 ideally suitable for applications where space is limited. A high natural frequency makes this device ideal for dynamic response applications.



<b>INPUT</b> Pressure Range	1.7 25	3.5 50	7 100	17 250	35 500	70 1000	140 2000	210 BAR 3000 PSI
Operational Mode	Absolute, Sealed Gage							
Over Pressure	2 Times Rated Pressure							
Burst Pressure	3 Times Rated Pressure to a Maximum of 6000 PSI (420 BAR)							
Pressure Media	All Nonconductive, Noncorrosive Liquids or Gases (Most Conductive Liquids and Gases - Please Consult Factory)							
Rated Electrical Excitation	10 VDC							
Maximum Electrical Excitation	15 VDC							
Input Impedance	1000 Ohms (Min.)							
<b>OUTPUT</b> 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 (KHz) (Typ.)	240	300	380	550	700	1000	1400	1650
Acceleration Sensitivity % FS/g Perpendicular	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>	1.9x10 <sup>-5</sup>
Transverse	6.0x10 <sup>-5</sup>	6.0x10 <sup>-5</sup>	2.0x10 <sup>-5</sup>	9.0x10 <sup>-6</sup>	6.0x10 <sup>-6</sup>	3.0x10 <sup>-6</sup>	2.0x10 <sup>-6</sup>	2.0x10 <sup>-6</sup>
Insulation Resistance	100 Megohm Min. @ 50 VDC							
<b>ENVIRONMENTAL</b> 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	50g Peak, Sine 10 to 2000 Hz							
Humidity	100% Relative Humidity							
Mechanical Shock	100g half Sine Wave 11 msec. Duration							
<b>PHYSICAL</b> Electrical Connection	4 Conductor 26 AWG Shielded Thermorad HTF Jacket 40" ± 2" (1 Meter) 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							

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