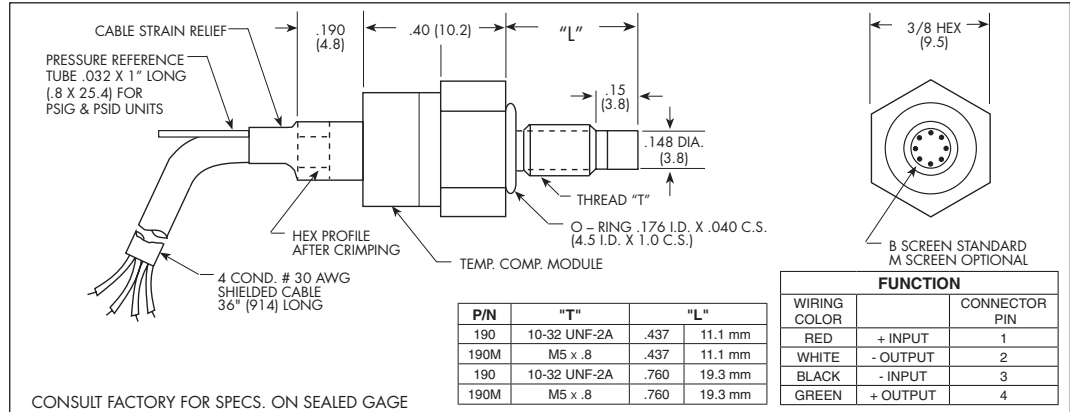
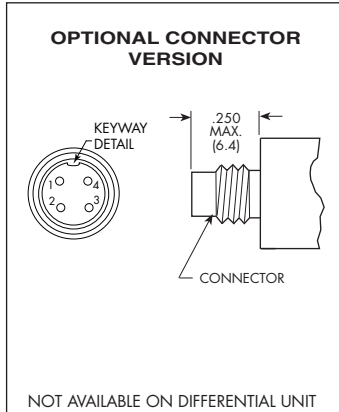
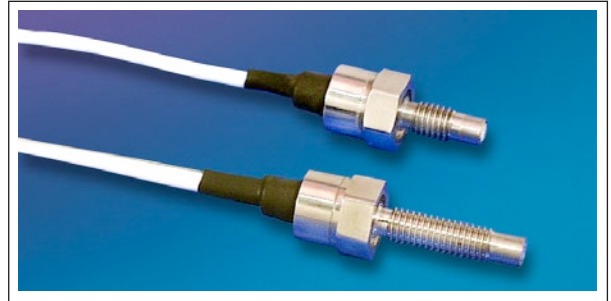




**CRYOGENIC MINIATURE RUGGEDIZED  
IS® PRESSURE TRANSDUCER  
CTL-190 (M) SERIES**

- Cryogenic Operation -320°F to +250°F (-195.5°C to +120°C)
- Low Ranges Available
- Silicon on Silicon Integrated Sensor **VIS®**
- Excellent Stability and Repeatability
- High Frequency Response

Similar in design to the XT-190 Series, these sensors are specifically intended for use in cryogenic wind tunnels. The extremely good low temperature stability of Kulite IS® Sensors make them ideally suited for this application.



INPUT Pressure Range	0.35 5	0.7 10	1.7 25	3.5 50	7 100	17 250	35 500	70 1000	140 BAR 2000 PSI
Operational Mode	Absolute, Gage, Sealed Gage, Differential					Absolute, Sealed Gage			
Over Pressure	2 Times Rated Pressure to a Maximum of 3000 PSI (210 BAR)								
Burst Pressure	3 Times Rated Pressure to a Maximum of 5000 PSI (350 BAR)								
Pressure Media	All Nonconductive, Noncorrosive Liquids or Gases								
Rated Electrical Excitation	10 VDC/AC								
Maximum Electrical Excitation	15 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 (KHz) (Typ.)	150	175	240	300	380	550	700	1000	1400
Acceleration Sensitivity % FS/g Perpendicular	1.5x10 <sup>-3</sup>	1.0x10 <sup>-3</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>	2.0x10 <sup>-5</sup>
Transverse	2.2x10 <sup>-4</sup>	1.4x10 <sup>-4</sup>	6.0x10 <sup>-5</sup>	4.0x10 <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>
Insulation Resistance	100 Megohm Min. @ 50 VDC								
ENVIRONMENTAL Operating Temperature Range	-320°F to +250°F (-195.5°C to +120°C)								
Compensated Temperature Range	-320°F to +100°F (-195.5°C to +37.5°C)								
Thermal Zero Shift	± 1% FS/100°F (Typ.)								
Thermal Sensitivity Shift	± 1% /100°F (Typ.)								
Steady Acceleration	10,000g. (Max.)								
Linear Vibration	10-2,000 Hz Sine, 100g. (Max.)								
PHYSICAL Electrical Connection	4 Conductor 30 AWG Shielded Cable 30" Long								
Weight	4 Grams (Nom.) Excluding Cable								
Pressure Sensing Principle	Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon								
Mounting Torque	15 Inch-Pounds (Max.) 1.7Nm								

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. (G)