

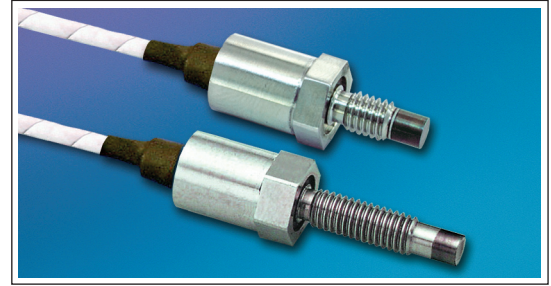


# MINIATURE RUGGEDIZED PRESSURE TRANSDUCER

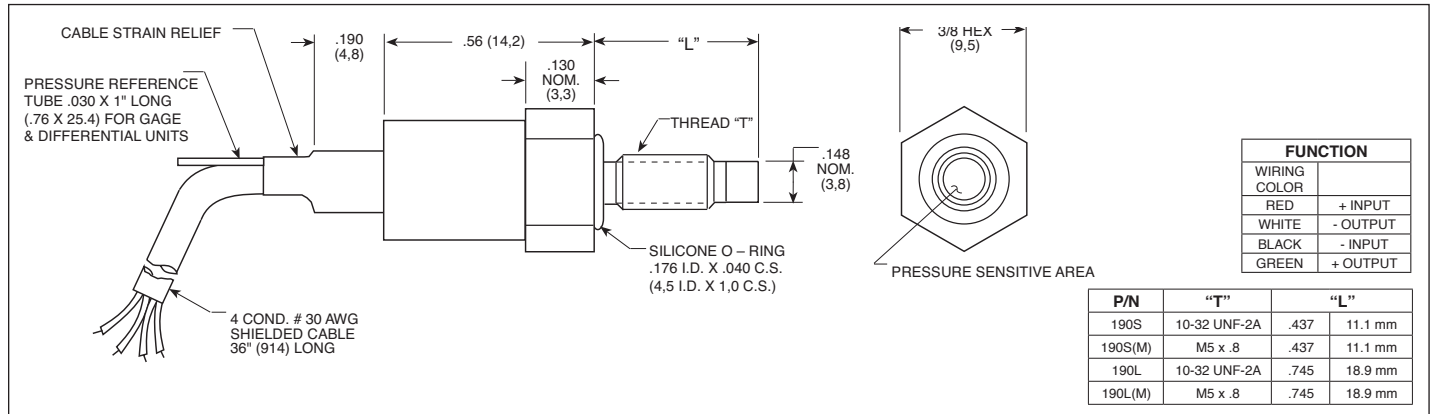
## XTM-190 (M) SERIES

- Excellent Stability
- High Natural Frequency
- Inorganically Bonded Sensor
- Robust Construction

The XTM-190 miniature pressure transducer utilizes a metal diaphragm as a force collector with a Piezoresistive Sensor as its sensing element. With the threaded body, hexagonal head and o-ring seal, the XTM-190 is easy to mount and simple to apply. The small size and flush diaphragm permit direct installation of the transducer in the wall of pressure containers, tubes, pipes, etc., eliminating the need for costly, space consuming hardware. Differential versions of all ranges up to 500 psi are available. The reference pressure source should be dry, noncorrosive gas. Absolute and sealed versions of the XTM-190 have a reference vacuum sealed in the transducer.



Kulite recommends the [KSC Series](#) of signal conditioners to maximize the measurement capability of the XTM-190 transducer.



INPUT	Pressure Range	1.7 25	3.5 50	7 100	17 250	35 500	70 1000	170 2500	350 BAR 5000 PSI	
	Operational Mode	Absolute, Gage, Differential	Absolute, Gage, Sealed Gage, Differential			Absolute, Sealed Gage				
	Over Pressure	3.5 50	7 100	14 200	35 500	70 1000	140 2000	210 3000	420 BAR 6000 PSI	
	Burst Pressure	3 Times Rated Pressure to a Maximum of 6500 PSI (450 BAR)								
	Pressure Media	Any Liquid or Gas Compatible With 17-4 PH or 15-5 Stainless Steel (All Media May Not Be Suitable With O-Ring Supplied)								
	Rated Electrical Excitation	10 VDC/AC								
	Maximum Electrical Excitation	12 VDC/AC								
OUTPUT	Input Impedance	650 Ohms (Min.)								
	Output Impedance	1000 Ohms (Nom.)								
	Full Scale Output (FSO)	75 mV (Nom.)								
	Residual Unbalance	± 5 mV (Typ.)								
	Combined Non-Linearity, Hysteresis and Repeatability	±1% FSO BFSL (Typ.)								
	Resolution	Infinitesimal								
	Natural Frequency (KHz) (Typ.)	75	95	125	210	290	410	560	930	
ENVIRONMENTAL	Acceleration Sensitivity % FS/g Perpendicular	2.3x10 <sup>-3</sup>	1.4x10 <sup>-3</sup>	9.6x10 <sup>-4</sup>	6.2x10 <sup>-4</sup>	4.3x10 <sup>-4</sup>	3.0x10 <sup>-4</sup>	2.1x10 <sup>-4</sup>	1.3x10 <sup>-4</sup>	
	Insulation Resistance	100 Megohm Min. @ 50 VDC								
	Operating Temperature Range	-20°F to +350°F (-29°C to +175°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	± 2% FS/100°F (Typ.)								
	Thermal Sensitivity Shift	± 2% /100°F (Typ.)								
	Linear Vibration	10-2,000 Hz Sine, 20g. (Max.)								
PHYSICAL	Electrical Connection	4 Conductor 30 AWG Shielded Cable 36" Long								
	Weight	8 Grams (Nom.) Excluding Cable								
	Pressure Sensing Principle	Inorganically Bonded Piezoresistive Sensor								
	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. (T) 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.