



# MINIATURE 5VDC OUTPUT PRESSURE TRANSDUCER ETM-634(X)-312(M)

- Smallest High Performance Amplified Transducer Worldwide
- High Temperature Electronics 365°F (185°C)
- Rugged Design Provides Compatibility With Most Corrosive and Conductive Media
- Silicon on Silicon Integrated Sensor **VIS**<sup>®</sup>
- High Over Pressure Capability
- Designed and Engineered For Severe Environmental Conditions
- Intrinsically Safe Applications Available (i.e. IS-ETM-634(X)-312(M))

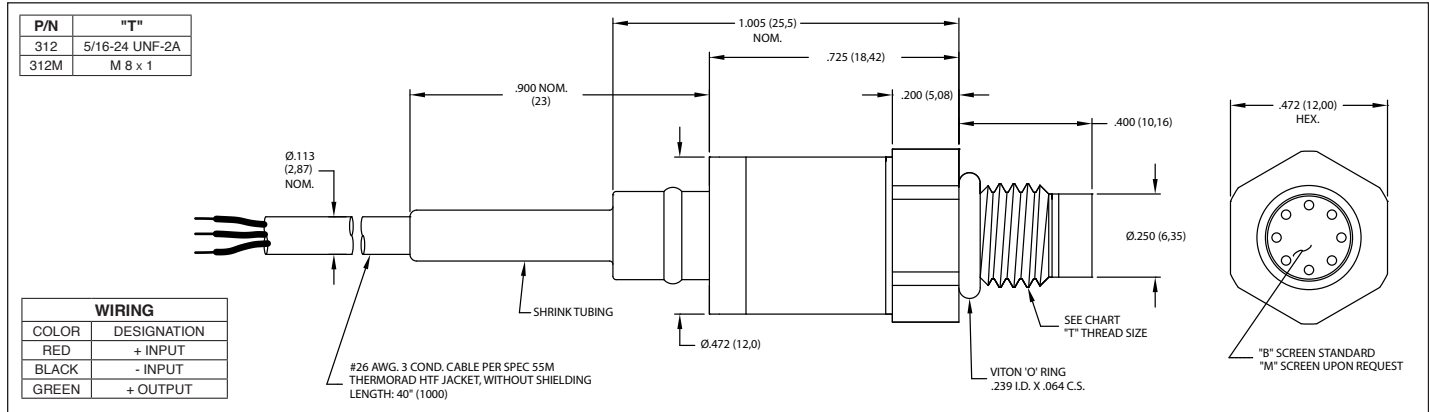


The ETM-634(X)-312(M) is one of the newest generation of Kulite standard, smallest miniature amplified transducer currently available. The metal flush diaphragm is used as a force collector. Force is transferred to a solid-state



piezoresistive sensing element via thin intervening film of non-compressible silicone oil. This sensing sub-assembly is protected from mechanical damage by a protective screen, which has been shown to have minimal influence of the frequency response of the sensor.

Incorporation of Kulite proprietary high temperature 365°F (185°C) electronics within the main body allows for operation from an unregulated power supply of 8 to 16VDC.



	20	50	80	140	210	300	350 BAR
Pressure Range	290	725	1160	2030	3045	4351	5076 PSI
Operational Mode	Absolute, Sealed Gage						
Over Pressure	2 Times Rated Pressure to 1015 PSI (70 BAR); 1.5 Times Rated Pressure > 1015 PSI (70 BAR)						
Burst Pressure	3 Times Rated Pressure to a Max of 827 BAR (12,000 PSI)						
Pressure Media	Any Liquid or Gas Compatible With 15-5 PH or 316 Stainless Steel (All Media May Not Be Suitable With O-Ring Supplied)						
Rated Electrical Excitation	12 ± 4 VDC						
Maximum Electrical Current	25 mA (Max.)						
Output Impedance	200 Ohms (Typ.)						
Full Scale Reading (X)	4.9V ± 2% (A)	4.5V ± 1.5% (B)	4.5V ± 1% (C)	4.9V ± 1.5% (D)	4.75V ± 1% (E)	4.7V ± 1% (F)	
Bandwidth (-3dB)	DC to 5 KHz						
Residual Unbalance (X)	350 ± 50 mV (A)	500 ± 75 mV (B)	300 ± 45 mV (C)	300 ± 75 mV (D)	300 ± 50 mV (E)	300 ± 50 mV (F)	
Combined Non-Linearity, Hysteresis and Repeatability	± 0.1% FSO BFSL (Typ.), ± 0.25% FSO (Max.)						
Resolution	Infinitesimal						
Acceleration Sensitivity % FS/g Perpendicular	9.5x10 <sup>-5</sup>	5.3x10 <sup>-5</sup>	3.6x10 <sup>-5</sup>	2.5x10 <sup>-5</sup>	1.9x10 <sup>-5</sup>	1.7x10 <sup>-5</sup>	1.5x10 <sup>-5</sup>
Insulation Resistance	> 100 Megohm Min. @ 50 VDC						
Operating Temperature Range	-65°F to +365°F (-55°C to +185°C)						
Compensated Temperature Range	+68°F to +350°F (+20°C to +175°C) Other Ranges Quoted on Request						
Total Error Band (Excluding End Points)	± 2% FS/100°C ≤ 217.5 PSI (15 BAR), ± 1% FS/100°C ≥ 217.5 PSI (15 BAR)						
Linear Vibration	20g Peak, Sine 10 to 2000 Hz						
Mechanical Shock	20g Half Sine Wave 11 msec. Duration						
Electrical Connection	3 Conductor 26 AWG Unshielded Cable 40" (1000) Long						
Weight	15 Grams (Max.) Excluding Cable						
Pressure Sensing Principle	Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon						
Mounting Torque	50 Inch-Pounds (Max.) 6Nm						

(X) Denotes FSR and Residual Unbalance Options (A), (B), (C), (D), (E) or (F).  
 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.