



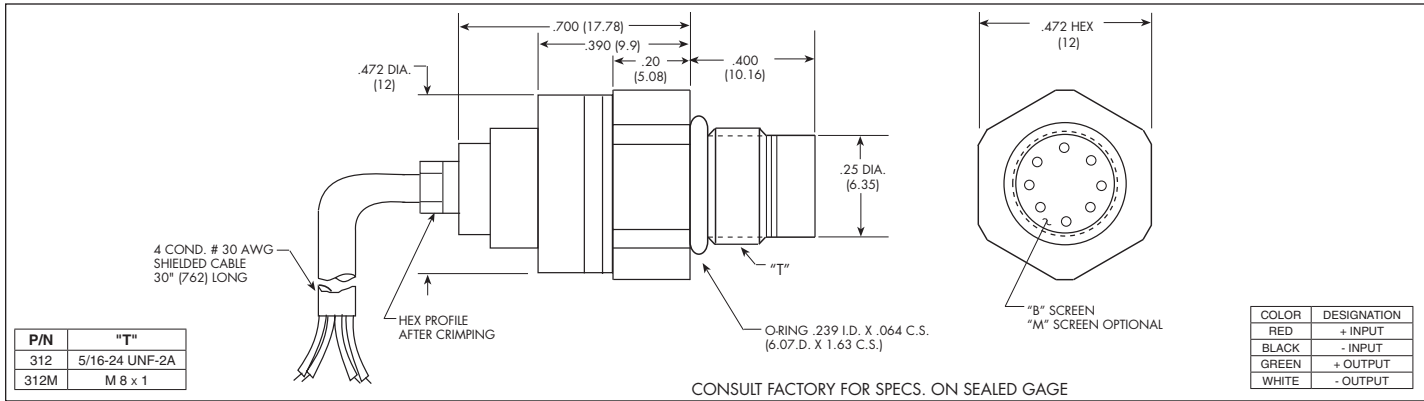
# MINIATURE HIGH TEMPERATURE IS® PRESSURE TRANSDUCER

## HEM-312 (M) SERIES

- High Temperature
- High Natural Frequencies
- Robust Construction
- Silicon on Silicon Integrated Sensor **VIS®**
- Excellent Stability
- High Natural Frequencies
- 5/16-24 UNF-2A or M8 x 1 Thread



In terms of design the HEM-312 adopts the same approach to transducer construction as the HKM-312 model. Use of high temperature materials and assembly processes allows for use at temperatures up to 450°F (232°C). This transducer is an ideal choice for use in high temperature, high frequency measurement applications such as blast pressure wave studies.



<b>INPUT</b>	35	70	170	350	700	1400 BAR
Pressure Range	500	1000	2500	5000	10000	20000 PSI
Operational Mode	Absolute, Sealed Gage					
Over Pressure	2 Times Rated Pressure to a Max. of 30000 PSI (2100 BAR)					
Burst Pressure	3 Times Rated Pressure to a Max. of 35000 PSI (2400 BAR)					
Pressure Media	Any Liquid or Gas Compatible With 15-5 PH or 316 Stainless Steel					
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)	100mV					
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.)	Greater Than 400 KHz					
Acceleration Sensitivity % FS/g Perpendicular	1.1x10 <sup>-4</sup>	6.2x10 <sup>-5</sup>	2.6x10 <sup>-5</sup>	1.5x10 <sup>-5</sup>	1.3x10 <sup>-5</sup>	8.0x10 <sup>-6</sup>
Transverse	7.0x10 <sup>-6</sup>	4.3x10 <sup>-6</sup>	2.3x10 <sup>-6</sup>	1.5x10 <sup>-6</sup>	1.3x10 <sup>-6</sup>	1.0x10 <sup>-6</sup>
Insulation Resistance	100 Megohm Min. @ 50 VDC					
<b>ENVIRONMENTAL</b>						
Operating Temperature Range	-65°F to +450°F (-55°C to +232°C)					
Compensated Temperature Range	+80°F to +400°F (+25°C to +204°C)					
Thermal Zero Shift	± 1% FS/100° F (Typ.)					
Thermal Sensitivity Shift	± 1% /100° F (Typ.)					
Linear Vibration	100g Peak, Sine up to 5000 Hz					
Humidity	100% Relative Humidity					
Mechanical Shock	20,000g, 100µ sec.					
<b>PHYSICAL</b>						
Electrical Connection	4 Conductor 30 AWG Shielded Cable 30" Long (Optional Connector Available)					
Weight	17 Grams (Max.) Excluding Cable					
Pressure Sensing Principle	Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon					
Mounting Torque	80 Inch-Pounds (Max.)					

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. (D)