



# MINIATURE HIGH PRESSURE PRESSURE TRANSDUCER

## HKM-375 (M) SERIES

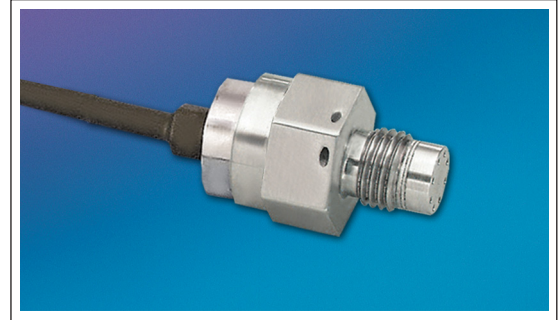
- Excellent Stability
- All Welded Construction
- Silicon on Silicon Integrated Sensor **VIS**<sup>®</sup>
- Robust Construction
- High Natural Frequencies
- 3/8-24 UNJF or M10 X 1 Thread
- Intrinsically Safe Applications Available (i.e. IS-HKM-375)



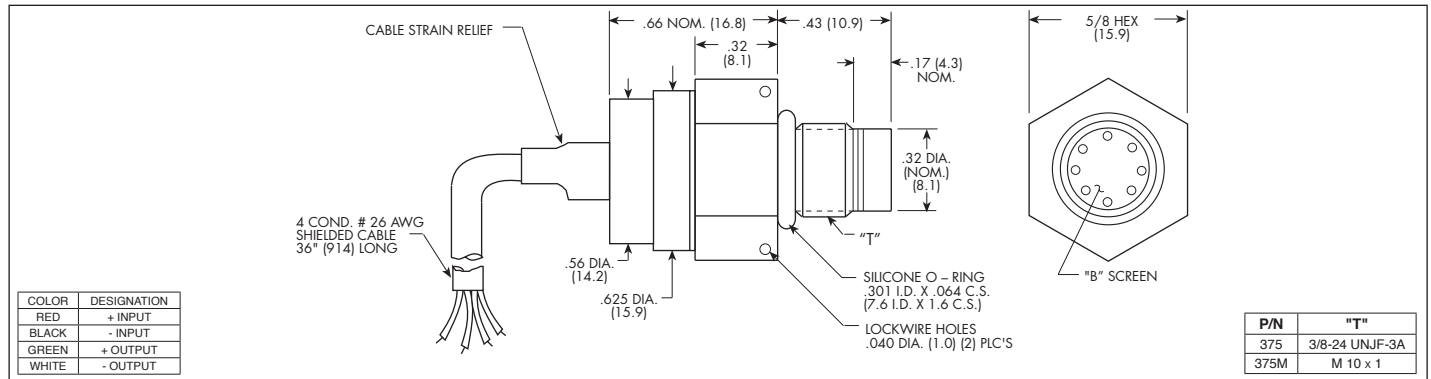
The HKM-375 is a miniature threaded pressure transducer. The hexagonal head and o-ring seal make it easy to mount and simple to apply.

The HKM-375 utilizes a flush metal diaphragm as a force collector. A solid state piezoresistive sensing element is located immediately behind this metal diaphragm which is protected by a metal screen. Force transfer is accomplished via non-compressible silicone oil. This sensing sub assembly is welded to a stainless steel body.

This advanced construction results in a highly stable, reliable and rugged instrument with all the advantages of significant miniaturization, excellent repeatability, low power consumption, etc. The miniaturization process also yields a marked increase in the natural frequencies of the transducers, making them suitable for use even in shock pressure measurements.



Kulite recommends the **KSC Series** of signal conditioners to maximize the measurement capability of the HKM-375 transducer.



	7	17	35	70	170	350	700	1400 BAR
Pressure Range	100	250	500	1000	2500	5000	10000	20000 PSI
Operational Mode	Absolute, Sealed Gage							
Over Pressure	2 Times Rated Pressure to 1000 PSI (70 BAR) 1.5 Times Rated Pressure Above 1000 PSI to a Max. of 25000 PSI (1724 BAR)							
Burst Pressure	3 Times Rated Pressure to a Max. of 25000 PSI (1724 BAR)							
Pressure Media	Any Liquid or Gas Compatible with 15-5 PH and 316 Stainless Steel or Inconel 625 (All Media May Not Be Suitable with O-Ring Supplied)							
Rated Electrical Excitation	10 VDC/AC							
Maximum Electrical Excitation	12 VDC/AC							
Input Impedance	1000 Ohms (Min.)							
Output Impedance	1000 Ohms (Nom.)							
Full Scale Output (FSO)	100mV (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 of Sensor Without Screen (KHz) (Typ.)	Greater Than 400 KHz							
Acceleration Sensitivity % FS/g Perpendicular	2.0x10 <sup>-4</sup>	2.2x10 <sup>-4</sup>	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>
Insulation Resistance	100 Megohm Min. @ 50 VDC							
Operating Temperature Range	-65°F to +250°F (-55°C to +120°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	± 1% FS/100° F (Typ.)							
Thermal Sensitivity Shift	± 1% /100° F (Typ.)							
Linear Vibration	10-2,000 Hz Sine, 100g. (Max.)							
Mechanical Shock	20g half Sine Wave 11 msec. Duration							
Electrical Connection	4 Conductor 26 AWG Shielded Cable 36" Long							
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.) 9 Nm							

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.