



# 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)



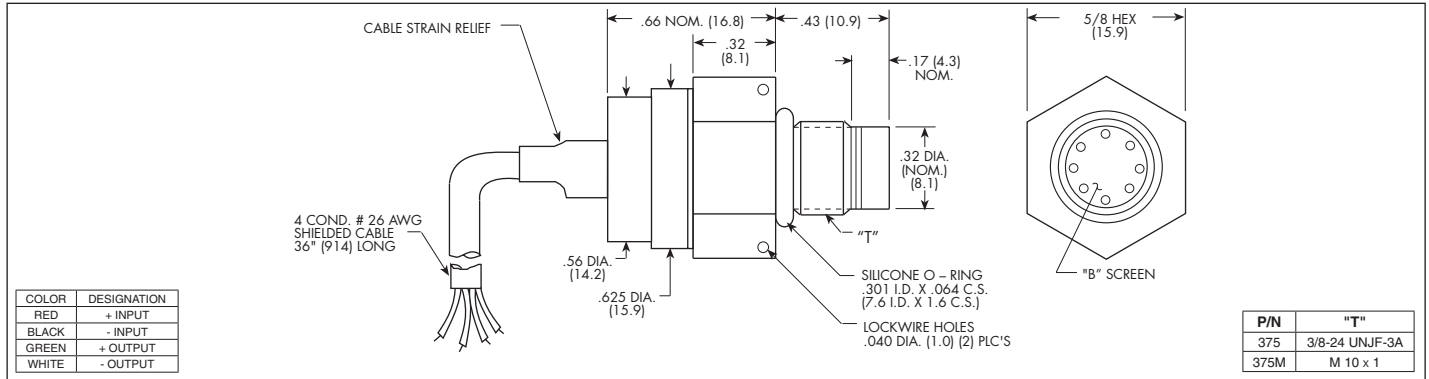
The HKM-375 is a miniature threaded pressure transducer. The hexagonal head and o-ring seal make it easy to mount and simple to apply.

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-2** signal conditioner to maximize the measurement capability of the HKM-375 transducer.



	17 250	35 500	70 1000	170 2500	350 5000	700 10000	1400 BAR 20000 PSI
<b>INPUT</b>							
Pressure Range	Absolute, Sealed Gage						
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 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 (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.)						
<b>OUTPUT</b>							
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	2.2x10 <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						
<b>ENVIRONMENTAL</b>							
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						
<b>PHYSICAL</b>							
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 range  
Continuous development and refi  
Kulite miniature pressure transducers are intended for use in  
designed to be used in production programs, please consult the factory.

All dimensions nominal. (M)  
All Rights Reserved.