



MINIATURE HIGH TEMPERATURE PRESSURE TRANSDUCER

HEM-375 (M) CO SERIES

- Wide Temperature Capability
-65°F To 380°F
- Excellent Stability
- All Welded Construction
- Robust Construction
- Silicon on Silicon Integrated Sensor **VIS®**
- High Natural Frequencies
- 3/8-24 UNJF or M10 X 1 Thread
- Intrinsically Safe Applications Available (i.e. IS-HEM-375-CO)

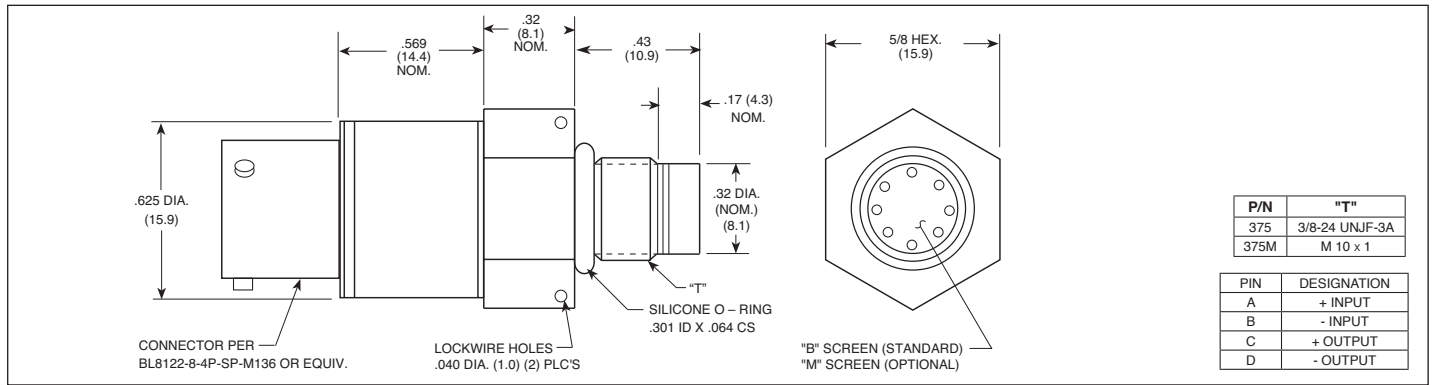


The HEM-375 is a miniature threaded pressure transducer. The hexagonal head and o-ring seal make it easy to mount and simple to apply.

The HEM-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. Use of high temperature materials allows for use at temperatures up to 380°F (193°C).

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 in shock pressure measurements and blast pressure wave studies.

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



	17 250	35 500	70 1000	170 2500	350 5000	700 BAR 10000 PSI
INPUT						
Pressure Range	17 250	35 500	70 1000	170 2500	350 5000	700 BAR 10000 PSI
Operational Mode	Absolute, Sealed Gage					
Over Pressure	2 Times Rated Pressure to 500 PSI (35 BAR), 1.5 Times Rated Pressure Above 500 PSI (35 BAR)					
Burst Pressure	3 Times Rated Pressure to a Max. of 25000 PSI (1700 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					
Maximum Electrical Excitation	12 VDC					
Input Impedance	1000 Ohms (Min.)					
OUTPUT						
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 ⁻⁴	1.1x10 ⁻⁴	6.2x10 ⁻⁵	2.6x10 ⁻⁵	1.5x10 ⁻⁵	1.3x10 ⁻⁵
Insulation Resistance	100 Megohm Min. @ 50 VDC					
ENVIRONMENTAL						
Operating Temperature Range	-65°F to +380°F (-55°C to +193°C)					
Compensated Temperature Range	+80°F to +380°F (+25°C to +193°C)					
Thermal Zero Shift	± 1% FS/100° F (Typ.)					
Thermal Sensitivity Shift	± 1% /100° F (Typ.)					
Linear Vibration	20g Peak, Sine 10 to 2000 Hz					
Mechanical Shock	20g Half Sine Wave 11 msec. Duration					
PHYSICAL						
Electrical Connection	BL8112-8-4P-SP-M136 Connector or Equiv. (Mating Connector Available Upon Request)					
Weight	22 Grams (Max.)					
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. (F) Continuous development and refinement of our products may result in specification changes without notice. Copyright © 2020 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.