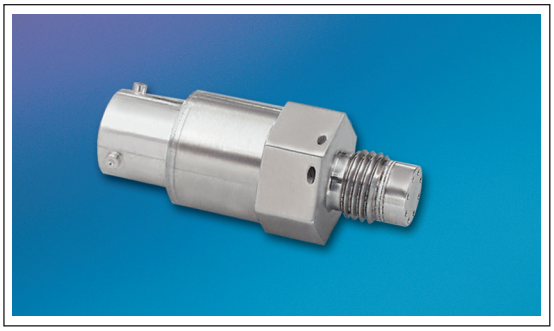
MINIATURE HIGH PRESSURE PRESSURE TRANSDUCER

HKM-375 (M) CO SERIES

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

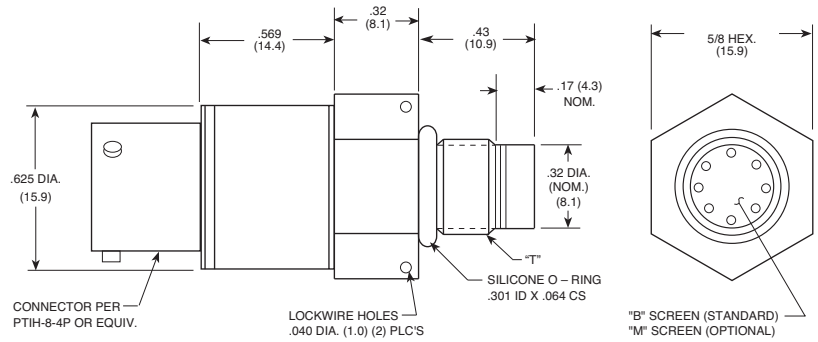


The HKM-375 is a miniature threaded pressure transducer. The hexagonal head and o-ring seal make it easy to mount and simple to apply.

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.



P/N	"T"
375	3/8-24 UNJF-3A
375M	M 10 x 1

PIN	DESIGNATION
A	+ INPUT
B	- INPUT
C	+ OUTPUT
D	- OUTPUT

INPUT	Pressure Range	17 250	35 500	70 1000	170 2500	350 5000	700 10000	1400 BAR 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 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 Stainlesss 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.)						
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	$2.2x10^{-4}$	$1.1x10^{-4}$	$6.2x10^{-5}$	$2.6x10^{-5}$	$1.5x10^{-5}$	$1.3x10^{-5}$	$8.0x10^{-6}$
	Insulation Resistance	100 Megohm Min. @ 50 VDC						
ENVIRONMENTAL	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.)						
	Humidity	100% Relative Humidity						
	Mechanical Shock	20g half Sine Wave 11 msec. Duration						
PHYSICAL	Electrical Connection	PTIH-8-4P Connector or Equivalent						
	Weight	17 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. (E)

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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.

KULITE SEMICONDUCTOR PRODUCTS, INC. • One Willow Tree Road • Leonia, New Jersey 07605 • Tel: 201 461-0900 • Fax: 201 461-0990 • http://www.kulite.com