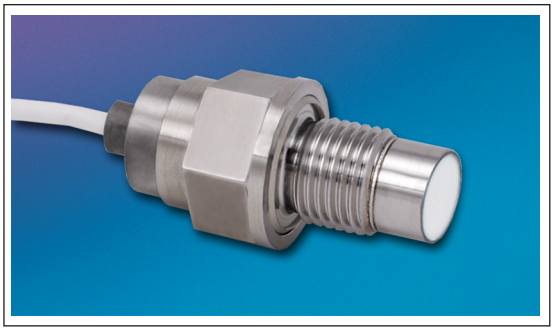
MINIATURE HIGH PRESSURE PRESSURE TRANSDUCER

HKM-15-500 (M) SERIES

- Excellent Stability
- All Welded Construction
- Robust Construction
- High Natural Frequency
- 1/2-20 UNF Thread
- Silicon on Silicon Integrated Sensor **VIS**®
- Intrinsically Safe Applications Available (i.e. IS-HKM-15-500)

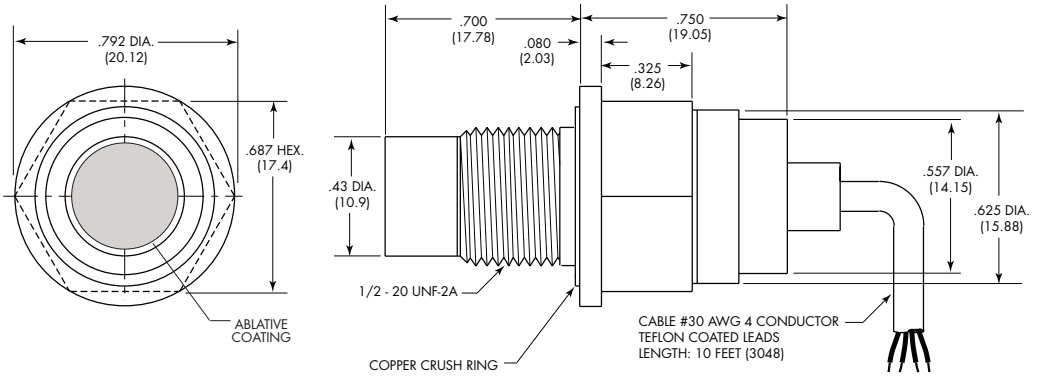


The HKM-15-500 is a miniature threaded pressure transducer. The hexagonal head and crush ring seal make it easy to mount and simple to apply.

The HKM-15-500 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 an ablative coating. Force transfer is accomplished via an intervening film of 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 microcircuitry: 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-15-500 transducer.



COLOR	DESIGNATION
RED	+ INPUT
BLACK	- INPUT
GREEN	+ OUTPUT
WHITE	- OUTPUT

INPUT	Pressure Range	4200 BAR 60000 PSI
	Operational Mode	Absolute, Sealed Gage
	Over Pressure	75000 PSI (Max.) (5250 BAR)
	Burst Pressure	75000 PSI (Max.) (5250 BAR)
	Pressure Media	Any Liquid or Gas Compatible With Inconel 625 and Silicone RTV (All Media May Not Be Suitable With Crush 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)	100 mV (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 Ablative Coating (Typ.)	10 MHz
	Acceleration Sensitivity % FS/g Perpendicular	$3.5x10^{-6}$
	Insulation Resistance	100 Megohm Min. @ 50 VDC
ENVIRONMENTAL	Operating Temperature Range	-65°F to +350°F (-55°C to +175°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% FS/100° F (Typ.)
	Linear Vibration	10-2,000 Hz Sine, 100g. (Max.)
	Mechanical Shock	20g half Sine Wave 11 msec. Duration
PHYSICAL	Electrical Connection	4 Conductor 30 AWG Shielded Cable 10 Feet Long
	Weight	25 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. All dimensions nominal. (I) Continuous development and refinement of our products may result in specification changes without notice.
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.

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