



MINIATURE HIGH PRESSURE IS® PRESSURE TRANSDUCER

HKM-15-500 (M) SERIES

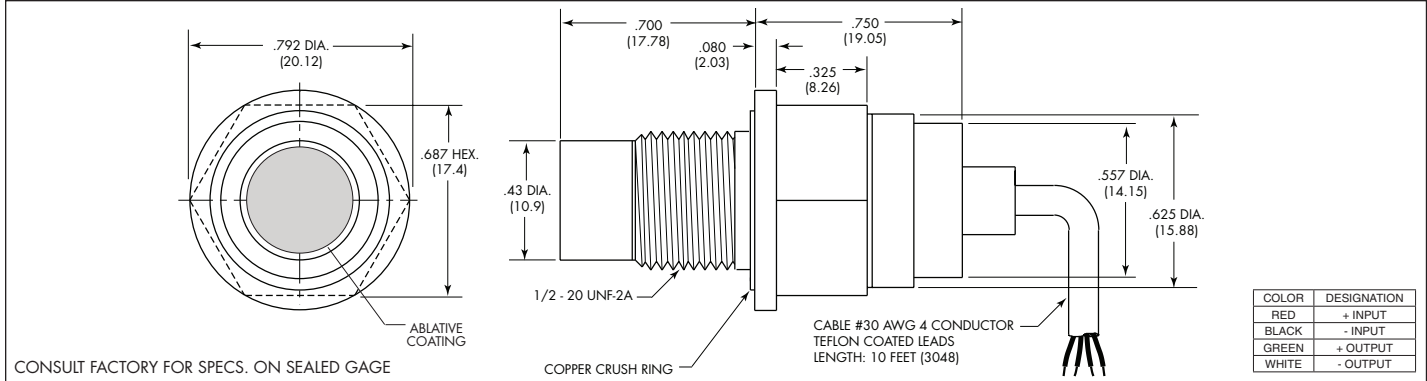
- Excellent Stability
- All Welded Construction
- Robust Construction
- High Natural Frequency
- 1/2-20 UNF Thread
- Silicon on Silicon Integrated Sensor VIS®
- Intrinsically Safe Applications Available (i.e. IS-HKM-15-500)



The HKM-15-500 is a miniature threaded pressure transducer. The hexagonal head and o-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 a metal screen. 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.



INPUT	4200 BAR
Pressure Range	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
Rated Electrical Excitation	10 VDC
Maximum Electrical Excitation	15 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 (Typ.)	10 MHz
Acceleration Sensitivity % FS/g Perpendicular Transverse	3.5x10 ⁻⁶ 5.0x10 ⁻⁷
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.) (± 2% FS/100° F For 25 PSI Range)
Thermal Sensitivity Shift	± 1% FS/100° F (Typ.) (± 2% FS/100° F For 25 PSI Range)
Linear Vibration	100g Peak, Sine up to 5000 Hz
Humidity	100% Relative Humidity
Mechanical Shock	20,000g, 100µ sec.
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. Continuous development and refinement of our products may result in specification changes without notice - all dimensions nominal. (D)