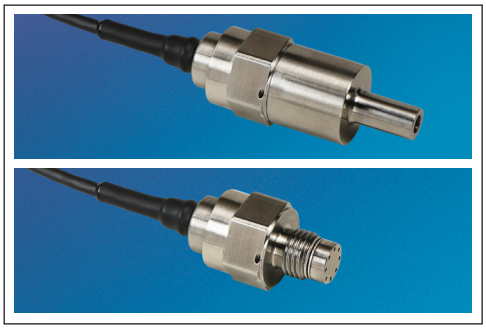
MINIATURE AEROSPACE/SPACE PRESSURE TRANSDUCER

HKM-523-375 (M) SERIES

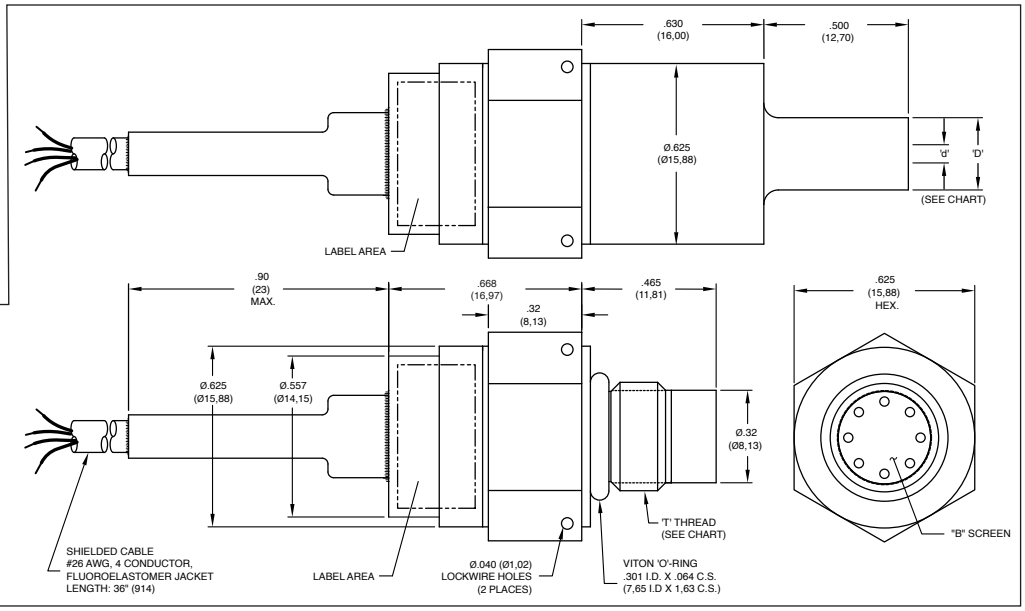
- Excellent Stability
- All Welded Construction
- All CP Titanium Grade 2 Wetted Materials
- Compatible with ASCENT Fluid
- Silicon on Silicon Integrated Sensor **VIS**®
- 3/8-24 UNJF or M10 X 1 Thread
- Optional Weldable Tube Stub
- Intrinsically Safe Applications Available (i.e.IS-HKM-523-375)



The HKM-523-375 (M) is a compact and lightweight pressure transducer which Is available with a variety of pressure port options. These include a standard O-ring seal which allows for a simple installation or a weldable tube stub, which enables seamless integration into custom systems. This provides secure, leak-free connections even in extreme conditions.

The HKM-523-375 (M) 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 noncompressible inert Krytox™ oil. This sensing sub assembly is welded to a titanium body.

The HKM-523-375 (M) is constructed with CP Titanium Grade 2 for all wetted materials, offering exceptional corrosion resistance and compatibility with a wide variety of pressure media and advanced propellants like ASCENT. This makes the transducer ideal for spacecraft propulsion systems where maintaining material integrity is crucial.



P/N	'D'	'd'
HKM-523-375-XXXX-1	Ø.125(Ø3,18)	Ø.052(Ø1,32)
HKM-523-375-XXXX-2	Ø.250(Ø6,35)	Ø.063(Ø1,60)
HKM-523-375(M)-XXXX-3	N/A	N/A

P/N	"T"
HKM-523-375-XXXX-3	3/8-24 UNJF-3A
HKM-523-375M-XXXX-3	M10 X 1-6g

WIRING	
COLOR	FUNCTION
RED	+ INPUT
BLACK	- INPUT
GREEN	+ OUTPUT
WHITE	- OUTPUT

INPUT	Pressure Range	35 500	70 1000	140 2000	210 BAR 3000 PSI
	Operational Mode	Absolute, Sealed Gage			
	Over Pressure	2 Times Rated Pressure to a Max. of 6000 PSI (413 BAR)			
	Burst Pressure	3 Times Rated Pressure to a Max. of 9000 PSI (620 BAR)			
	Pressure Media	Any Liquid or Gas Compatible with CP Titanium Grade 2 (All Pressure Media May Not Be Suitable with O-Ring Supplied -3 Only)			
	Rated Electrical Excitation	10 VDC			
	Maximum Electrical Excitation	12 VDC			
	Input Impedance	1000 Ohms (Min.)			
OUTPUT	Output Impedance	3000 Ohms (Max.)			
	Full Scale Output	100 mV			
	Residual Unbalance	0 mV			
	Resolution	Infinitesimal			
	Insulation Resistance	100 Megohm Min. @ 50 VDC			
ENVIRONMENTAL	Operating Temperature Range	-65°F to +300°F (-55°C to +150°C)			
	Compensated Temperature Range	-65°F to +300°F (-55°C to +150°C)			
	Total Error Band	± 2% FSO +32°F to 180°F (0°C to +85°C) Increasing to ± 3% At All Other Temperatures Within The Compensated Range			
	Linear Vibration	20g Peak, Sine 10 to 2000 Hz			
	Altitude	Unaffected			
	Humidity	100% Relative Humidity			
	Mechanical Shock	20g Half Sine Wave 11 msec. Duration			
	Radiation	Radiation Tolerant Up To 100 kRad TID			
PHYSICAL	Electrical Connection	4 Conductor 26 AWG Shielded, Fluoroelastomer Jacketed Cable, 36" (914)			
	Weight	-1 Configuration 0.057 lbs (25.9g) / -2 Configuration 0.060 lbs (27.2g) Max. / -3 Configuration 0.035 lbs (15.9g) (Excluding Cable)			
	Pressure Sensing Principle	Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon			
	Mounting Torque	80 Inch-Pounds (Max.) (-3 Configuration Only)			

Note: Custom pressure ranges, and accuracies available. Dimensions are in inches. Dimensions in parenthesis are in millimeters. All dimensions nominal.

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