



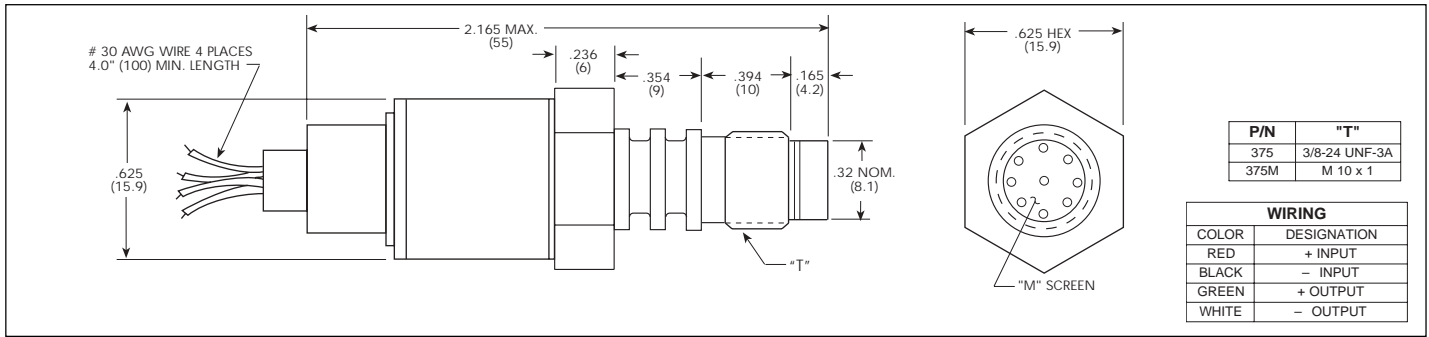
# DOWNHOLE MINIATURE PRESSURE TRANSDUCER

## HKM-189-375 SERIES HKM-189-375M SERIES (METRIC)

- Excellent Stability
- Robust All Welded Construction
- 3/8-24 UNJF or M10 X 1 Thread
- High Natural Frequencies
- High Pressure Capabilities



This miniature high pressure pressure transducer utilizes Kulite's state of the art, Silicon on Silicon Isolated Diaphragm Sensing Technology, to provide excellent long term stability and high accuracy at temperatures to 200°C (392°F). Its rugged, all welded stainless steel housing protects the internal circuitry from well pressure to 86 MPa (12,500 psi). An optional fifth wire will provide a temperature signal directly from the pressure sensing Wheatstone Bridge for the purpose of software correction of that bridge's thermal error.



INPUT	21 (3000)	42 (6000)	70 (10000)	105 MPa (15000) (PSI)
Rated Pressure Range (FSP)				
Operational Mode	Absolute			
Over Pressure	2 Times FSP to 6000 PSI (42 MPa); 1.5 Times FSP For Higher Pressure Ranges			
Burst Pressure	3 Times FSP to a Max. of 35000 PSI (240 MPa)			
Pressure Media	Any Liquid or Gas Compatible With 15-5PH or 316SS and Selected O-Ring			
Rated Electrical Excitation	5 VDC			
Maximum Electrical Excitation	7.5 VDC			
Input Impedance	650 Ohms (Min.)			
<b>OUTPUT</b>				
Output Impedance	1000 Ohms (Nom.)			
Full Scale Output (FSO)	70 mV			
Residual Unbalance	± 1% FSO			
Combined Non-Linearity, Hysteresis and Repeatability	± 0.1 FSO (Typ.)			
Hysteresis	± 0.1 FSO (Typ.)			
Repeatability	± 0.1 FSO (Typ.)			
Resolution	Infinitesimal			
Natural Frequency (KHz) (Typ.)	100			
Insulation Resistance	100 Megohm Min. @ 50 VDC			
<b>ENVIRONMENTAL</b>				
Operating Temperature Range	-55° C to +200° C (-65° F to +392° F)			
Compensated Temperature Range	+25° C to +200° C (+77° F to +392° F) (or uncompensated, with a temperature signal for software compensation)			
Thermal Zero Shift	± 1.0% FS /100° F (± 1.8% FS /100° C) (Max.)			
Thermal Sensitivity Shift	± 1.0% FS /100° F (± 1.8% FS /100° C) (Max.)			
Linear Vibration	100g Peak, Sine up to 5000 Hz			
Humidity	100% Relative Humidity			
Mechanical Shock	20,000g, 100µ sec.			
Hydrostatic Pressure	Case Sealed to 86 MPa (12,500 PSI) Hydrostatic			
<b>PHYSICAL</b>				
Electrical Connection	4 X 28 AWG Leads 100mm (4.0") Long			
Weight	35 Grams (Nom.)			
Sensing Principle	Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon			
Mounting Torque	80 Inch-Pounds (Max.)			

Long Term Stability: ≤ 0.1%/year typical. Common Mode Voltage: 2.5V ± 100 mV Note: Custom pressure ranges, accuracies and mechanical configurations available. Continuous development and refinement of our products may result in specification changes without notice - all dimensions nominal. (A)