

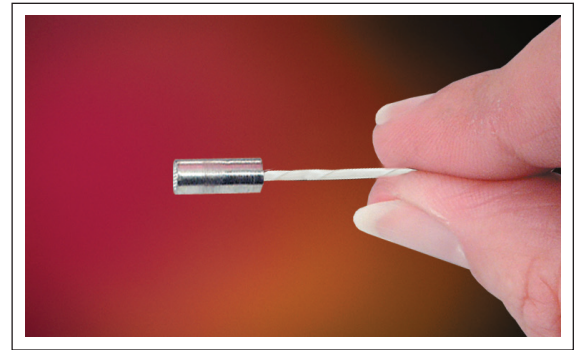


HIGH TEMPERATURE SHORT LENGTH PRESSURE TRANSDUCER

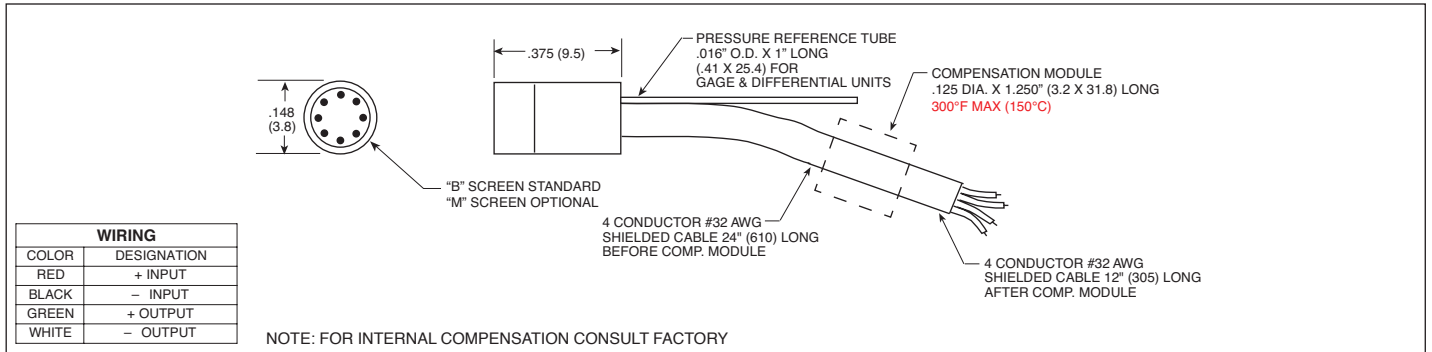
XCEL-152 SERIES

- Wide Temperature Capability -65°F To 525°F
- Designed For Harsh Environments
- Ideal For Turbine Engine Probes and Wind Tunnel Applications
- Patented Leadless Technology **VIS**[®]
- Designed For Both Static and Dynamic Response
- Suitable For Use in Most Conductive Liquids and Gases

The XCEL-152 design features Kulite's patented leadless technology. This allows for a very rugged package suited for probes, pressure rakes and other similar test set ups. This transducer is well suited for both dynamic and static pressure measurements in benign or harsh environments. Its wide operating temperature range (-65°F to +525°F) makes it ideal for numerous applications in Aerospace and other areas of Industry.



Kulite recommends the [KSC Series](#) of signal conditioners to maximize the measurement capability of the XCEL-152 transducer.



| | | | | | | | | | | | |
|----------------------------|---|---|--|----------------------|---|----------------------|----------------------|-----------------------|----------------------|--|--|
| INPUT | Pressure Range | 0.7 10 | 1.0 15 | 1.7 25 | 3.5 50 | 7 100 | 17 250 | 35 500 | 70 BAR 1000 PSI | | |
| | Operational Mode | Absolute, Gage, Differential | | | Absolute, Gage, Sealed Gage, Differential | | | Absolute, Sealed Gage | | | |
| | Over Pressure | 2 Times Rated Pressure | | | | | | | | | |
| | Burst Pressure | 3 Times Rated Pressure | | | | | | | | | |
| | Pressure Media | Most Conductive Liquids and Gases - Please Consult Factory | | | | | | | | | |
| | 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) | 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 Screen (KHz) (Typ.) | 175 | 200 | 240 | 300 | 380 | 550 | 700 | 1000 | | |
| ENVIRONMENTAL | Acceleration Sensitivity % FS/g Perpendicular | 1.0x10 ⁻³ | 6.5x10 ⁻⁴ | 5.0x10 ⁻⁴ | 3.0x10 ⁻⁴ | 1.5x10 ⁻⁴ | 1.0x10 ⁻⁴ | 6.0x10 ⁻⁵ | 4.0x10 ⁻⁵ | | |
| | Insulation Resistance | 100 Megohm Min. @ 50 VDC | | | | | | | | | |
| | Operating Temperature Range | -65°F to +525°F (-55°C to +273°C) <i>Sensor Only</i> | | | | | | | | | |
| | Compensated Temperature Range | 80°F to +450°F (25°C to +235°C) <i>Sensor Only</i> | | | | | | | | | |
| | Thermal Zero Shift | ± 1% FS/100°F (Typ.) | | | | | | | | | |
| | Thermal Sensitivity Shift | ± 1% /100°F (Typ.) | | | | | | | | | |
| | Steady Acceleration | 10,000g. (Max.) | | | | | | | | | |
| | Linear Vibration | 10-2,000 Hz Sine, 100g. (Max.) | | | | | | | | | |
| | PHYSICAL | Electrical Connection | 4 Conductor 32 AWG Shielded Cable 36" Long | | | | | | | | |
| | | Weight | .3 Gram (Nom.) Excluding Module and Leads | | | | | | | | |
| Pressure Sensing Principle | | Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon Patented Leadless Technology | | | | | | | | | |

Note: Custom pressure ranges, accuracies and mechanical configurations available. Dimensions are in inches. Dimensions in parenthesis are in millimeters. All dimensions nominal. (H) Continuous development and refinement of our products may result in specification changes without notice. Copyright © 2014 Kulite Semiconductor Products, Inc. All Rights Reserved. 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.