MINIATURE RUGGEDIZED HIGH TEMPERATURE PRESSURE TRANSDUCER

XTEL-190 (M) SERIES

- Wide Temperature Capability -65°F To 525°F
- Easy Installation
- Patented Leadless Technology VIS®
- High Natural Frequency

The ruggedness of this sensor has not compromised its performance. It was designed for ease of installation and will operate properly in most conductive liquids and gases. Coupled with high temperature, its Patented Leadless Construction makes it possible for the sensing unit to be installed in such a way that will not compromise its high natural frequency. Its wide operating range (-65°F to +25°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 XTEL-190 transducer.

### Pressure Range

<table>
<thead>
<tr>
<th>Unit</th>
<th>0.7</th>
<th>1.0</th>
<th>1.7</th>
<th>3.5</th>
<th>7</th>
<th>17</th>
<th>35</th>
<th>70</th>
<th>140 BAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>15</td>
<td>25</td>
<td>50</td>
<td>100</td>
<td>250</td>
<td>500</td>
<td>1000</td>
<td>2000 PSI</td>
<td></td>
</tr>
</tbody>
</table>

### Operational Mode

- Absolute, Gage, Differential
- Absolute, Gage, Sealed Gage, Differential
- Absolute, Sealed Gage

### Over Pressure

2 Times Rated Pressure to a Maximum of 3000 PSI (210 BAR)

### Burst Pressure

3 Times Rated Pressure to a Maximum of 5000 PSI (350 BAR)

### Pressure Media

Most Conductive Liquids and Gases - Please Consult Factory (All Media May Not Be Suitable With O-Ring Supplied)

### Rated Electrical Excitation

10 VDC

### Maximum Electrical Excitation

12 VDC

### Input Impedance

1000 Ohms (Min.)

### 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 1400

### 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\(^{-5}\) 4.5x10\(^{-5}\) 2.0x10\(^{-5}\)

### Insulation Resistance

100 Megohm Min. @ 50 VDC

### Operating Temperature Range

-65°F to +525°F (-55°C to +273°C)

### Compensated Temperature Range

+80°F to +450°F (+25°C to +232°C)

### Thermal Zero Shift

± 1% FS/100°F (Typ.)

### Thermal Sensitivity Shift

± 1% /100°F (Typ.)

### Steady Acceleration

10,000g. (Max.)

### Linear Vibration

10,000 Hz Sine, 100g. (Max.)

### Electrical Connection

4 Conductor 30 AWG Shielded Cable 36" Long

### Weight

4 Grams (Nom.), Excluding Cable

### Pressure Sensing Principle

Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon Patented Leadless Technology

### Mounting Torque

15 Inch-Pounds (Max.) 1.7 Nm

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Note: Custom pressure ranges, accuracies and mechanical configurations available. Dimensions are in inches. Dimensions in parenthesis are in millimeters. All dimensions nominal. (L)

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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.