## **EXAMPLE 1** HIGH TEMPERATURE IS® PRESSURE TRANSDUCER

## **XTEL-312 (M) SERIES**

- Small Pressure Sensitive Area
- Patented Leadless Technology VIS<sup>®</sup>
- High Natural Frequency
- No Internal Lead Flexing
- Extra Low G Sensitivity
- -65°F To 450°F Temperature Capability

The ruggedness of this sensor has not compromised its performance. It was designed for ease of installation and will operate properly in any medium compatible with 15-5 SS or SiO<sub>2</sub>. 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.



4 COND. # 30 AWG SHIEDED CABLE 30" (762) LONG <b>P/N</b> "T" 312 5/16-24 UNF-2A 312M M 8 x 1	.472 DIA. (12)	FILE	20 (17.78) → -390 (9.9) → (5.08)		.25 DIA. (6.35) 239 I.D. X. 064 C.S. (1.63 C.S.) YY FOR SPECS. C	"B" S "M"	CREEN CREEN OPTIONAL	COLOR RED BLACK GREEN WHITE	DESIGNATION + INPUT - INPUT - OUTPUT - OUTPUT	
INPUT	0.35	0.7	1.7	3.5	7	17	35	70	140 BAR	
Pressure Range	5	10	25	50	100	250	500	1000	2000 PSI	
Operational Mode		Absolute, Gag	ge, Sealed Gag	ge, Differential			Absolute, S	ealed 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 3000 PSI (210 BAR)									
Pressure Media	All Nonconductive, Noncorrosive Liquids or Gases (Most Conductive Liquids and Gases - Please Consult Factory)									
Rated Electrical Excitation	10 VDC/AC									
Maximum Electrical Excitation	15 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								
	450	175	240	300	380	550	700	1000	1400	
Natural Frequency (KHz) (Typ.)	150		210	000	300					
Acceleration Sensitivity % FS/g Perpendicular Transverse	1.5x10 <sup>-3</sup> 2.2x10 <sup>-4</sup>	1.0x10 <sup>-3</sup> 1.4x10 <sup>-4</sup>	5.0x10 <sup>-4</sup> 6.0x10 <sup>-5</sup>	3.0x10 <sup>-4</sup> 4.0x10 <sup>-5</sup>	1.5x10 <sup>-4</sup> 2.0x10 <sup>-5</sup>	1.0x10 <sup>-4</sup> 9.0x10 <sup>-6</sup>	6.0x10 <sup>-5</sup> 6.0x10 <sup>-6</sup>	4.5x10 <sup>-5</sup> 3.0x10 <sup>-6</sup>	2.0x10 <sup>-5</sup> 2.0x10 <sup>-6</sup>	
Acceleration Sensitivity % FS/g Perpendicular Transverse Insulation Resistance	1.5x10 <sup>-3</sup>		5.0x10 <sup>-4</sup>	3.0x10 <sup>-4</sup> 4.0x10 <sup>-5</sup>	1.5x10 <sup>-4</sup>	9.0x10 <sup>-6</sup>				
Acceleration Sensitivity % FS/g Perpendicular Transverse	1.5x10 <sup>-3</sup>		5.0x10 <sup>-4</sup>	3.0x10 <sup>-4</sup> 4.0x10 <sup>-5</sup> 100 Meg	1.5x10 <sup>-4</sup> 2.0x10 <sup>-5</sup>	9.0x10 <sup>-6</sup> 50 VDC				
Acceleration Sensitivity % FS/g Perpendicular Transverse Insulation Resistance ENVIRONMENTAL	1.5x10 <sup>-3</sup>		5.0x10 <sup>-4</sup>	3.0x10 <sup>-4</sup> 4.0x10 <sup>-5</sup> 100 Meg -65°F to +4	1.5x10 <sup>-4</sup> 2.0x10 <sup>-5</sup> gohm Min. @ 5	9.0x10 <sup>-6</sup> 50 VDC 50 +232°C)				
Acceleration Sensitivity % FS/g Perpendicular Transverse Insulation Resistance ENVIRONMENTAL Operating Temperature Range	1.5x10 <sup>-3</sup>		5.0x10 <sup>-4</sup>	3.0x10 <sup>-4</sup> 4.0x10 <sup>-5</sup> 100 Meg -65°F to +4 +80°F to +4	1.5x10 <sup>-4</sup> 2.0x10 <sup>-5</sup> gohm Min. @ \$ 950°F (-55°C te	9.0x10 <sup>-6</sup> 50 VDC 0 +232°C) 0 +232°C)				
Acceleration Sensitivity % FS/g Perpendicular Transverse Insulation Resistance ENVIRONMENTAL Operating Temperature Range Compensated Temperature Range	1.5x10 <sup>-3</sup>		5.0x10 <sup>-4</sup>	3.0x10 <sup>-4</sup> 4.0x10 <sup>-5</sup> 100 Meg -65°F to +4 +80°F to +4 ± 19	1.5x10 <sup>-4</sup> 2.0x10 <sup>-5</sup> gohm Min. @ 5 150°F (-55°C tr 150°F (+25°C t	9.0x10 <sup>-6</sup> 50 VDC 0 +232°C) 0 +232°C) yp.)				
Acceleration Sensitivity % FS/g Perpendicular Transverse Insulation Resistance ENVIRONMENTAL Operating Temperature Range Compensated Temperature Range Thermal Zero Shift	1.5x10 <sup>-3</sup>		5.0x10 <sup>-4</sup>	3.0x10 <sup>-4</sup> 4.0x10 <sup>-5</sup> 100 Meg -65°F to +4 +80°F to +4 ± 19 ± 1	1.5x10 <sup>-4</sup> 2.0x10 <sup>-5</sup> gohm Min. @ 5 150°F (-55°C to 150°F (+25°C to 6 FS/100°F (T)	9.0x10 <sup>-6</sup> 50 VDC 50 +232°C) 50 +232°C) 50 +232°C) 50 -232°C) 50 -232°C)				
Acceleration Sensitivity % FS/g Perpendicular Transverse Insulation Resistance ENVIRONMENTAL Operating Temperature Range Compensated Temperature Range Thermal Zero Shift Thermal Sensitivity Shift	1.5x10 <sup>-3</sup>		5.0x10 <sup>-4</sup>	3.0x10 <sup>-4</sup> 4.0x10 <sup>-5</sup> 100 Meg -65°F to +4 +80°F to +4 ± 19 ± 1 100g Pea	1.5x10 <sup>-4</sup> 2.0x10 <sup>-5</sup> gohm Min. @ 5 150°F (-55°C to 150°F (+25°C to 6 FS/100°F (Typ % /100°F (Typ	9.0x10 <sup>-6</sup> 50 VDC 0 +232°C) 0 +232°C) yp.) 0.) 5000 Hz				
Acceleration Sensitivity % FS/g Perpendicular Transverse Insulation Resistance ENVIRONMENTAL Operating Temperature Range Compensated Temperature Range Thermal Zero Shift Thermal Sensitivity Shift Linear Vibration	1.5x10 <sup>-3</sup>		5.0x10 <sup>-4</sup>	3.0x10 <sup>-4</sup> 4.0x10 <sup>-5</sup> 100 Meg -65°F to +4 +80°F to +4 ± 19 ± 1 100g Pea 100%	1.5x10 <sup>-4</sup> 2.0x10 <sup>-5</sup> gohm Min. @ 5 150°F (-55°C tr 150°F (+25°C tr 6 FS/100°F (Typ % /100°F (Typ ak, Sine up to	9.0x10 <sup>-6</sup> 50 VDC 50 +232°C) 50 +232°C)				
Acceleration Sensitivity % FS/g Perpendicular Transverse Insulation Resistance ENVIRONMENTAL Operating Temperature Range Compensated Temperature Range Thermal Zero Shift Thermal Sensitivity Shift Linear Vibration Humidity	1.5x10 <sup>-3</sup>	1.4x10 <sup>-4</sup>	5.0x10 <sup>-4</sup>	3.0x10 <sup>-4</sup> 4.0x10 <sup>-5</sup> 100 Meg -65°F to +4 +80°F to +4 ± 19 ± 1 100g Pea 100% 20,	1.5x10 <sup>-4</sup> 2.0x10 <sup>-5</sup> gohm Min. @ 5 450°F (-55°C tr 450°F (+25°C f 6 FS/100°F (Typ % /100°F (Typ ak, Sine up to 5 Relative Hum 000g, 100µ se	9.0x10 <sup>-6</sup> 50 VDC 50 +232°C) 50 +232°C)	6.0x10 <sup>-6</sup>	3.0x10 <sup>-6</sup>		
Acceleration Sensitivity % FS/g Perpendicular Transverse Insulation Resistance ENVIRONMENTAL Operating Temperature Range Compensated Temperature Range Thermal Zero Shift Thermal Sensitivity Shift Linear Vibration Humidity Mechanical Shock PHYSICAL	1.5x10 <sup>-3</sup>	1.4x10 <sup>-4</sup>	5.0x10 <sup>-4</sup> 6.0x10 <sup>-5</sup>	3.0x10 <sup>-4</sup> 4.0x10 <sup>-5</sup> 100 Meg -65°F to +4 ± 19 ± 1 100g Peg 100% 20, WG Shielded C	1.5x10 <sup>-4</sup> 2.0x10 <sup>-5</sup> gohm Min. @ 5 450°F (-55°C tr 450°F (+25°C f 6 FS/100°F (Typ % /100°F (Typ ak, Sine up to 5 Relative Hum 000g, 100µ se	9.0x10 <sup>-6</sup> 50 VDC 50 +232°C) 50 +232°C) yp.) 5000 Hz 5000 Hz hidity c. (Optional Co	6.0x10 <sup>-6</sup>	3.0x10 <sup>-6</sup>		
Acceleration Sensitivity % FS/g Perpendicular Transverse Insulation Resistance ENVIRONMENTAL Operating Temperature Range Compensated Temperature Range Thermal Zero Shift Thermal Sensitivity Shift Linear Vibration Humidity Mechanical Shock PHYSICAL Electrical Connection	1.5x10 <sup>-3</sup> 2.2x10 <sup>-4</sup>	1.4x10 <sup>-4</sup>	5.0x10 <sup>-4</sup> 6.0x10 <sup>-5</sup>	3.0x10 <sup>-4</sup> 4.0x10 <sup>-5</sup> 100 Meg -65°F to +4 +80°F to +4 ± 19 ± 1 100g Pea 100% 20, WG Shielded C 17 Grams	1.5x10 <sup>-4</sup> 2.0x10 <sup>-5</sup> gohm Min. @ 5 150°F (-55°C to 150°F (+25°C to 6 FS/100°F (Typ % /100°F (Typ ak, Sine up to 6 Relative Hum 000g, 100µ se Cable 30" Long (Max.) Exclud	9.0x10 <sup>-6</sup> 50 VDC 0 +232°C) 0 +232°C) yp.) 0.) 5000 Hz idity ac. 1 (Optional Co ing Cable	6.0x10 <sup>-6</sup>	3.0x10 <sup>-6</sup>	2.0x10 <sup>-6</sup>	

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)

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