



## Model 320C15

**Product Type:** Vibration Sensor, Accelerometer

ESS mini (2 gm), quartz shear ICP® accel., 10 mV/g, 2 to 10k Hz, 5-44 side conn., 5-40 mtg stud, to +325°F/+163°C

View [photo](#) and [drawing](#) .

PERFORMANCE	ENGLISH	SI
Sensitivity(± 10 %)	10 mV/g	1.02 mV/(m/s <sup>2</sup> )
Measurement Range	± 500 g pk	± 4900 m/s <sup>2</sup> pk
Frequency Range(± 5 %)	1.0 to 10,000 Hz	1.0 to 10,000 Hz
Frequency Range(± 10 %)	0.7 to 18,000 Hz	0.7 to 18,000 Hz
Frequency Range(± 3 dB)	0.35 to 30,000 Hz	0.35 to 30,000 Hz
Resonant Frequency	≥ 60 kHz	≥ 60 kHz
Broadband Resolution(1 to 10,000 Hz)	0.005 g rms	0.05 m/s <sup>2</sup> rms [1]
Non-Linearity	≤ 1 %	≤ 1 % [2]
Transverse Sensitivity	≤ 5 %	≤ 5 % [3]
<b>ENVIRONMENTAL</b>		
Overload Limit(Shock)	± 10,000 g pk	± 98,100 m/s <sup>2</sup> pk
Temperature Range(Operating)	-100 to +325 °F	-73 to +163 °C
Temperature Response	See Graph	See Graph [1]
Base Strain Sensitivity	≤ 0.0005 g/με	≤ 0.005 (m/s <sup>2</sup> )/με [1]
<b>ELECTRICAL</b>		
Excitation Voltage	18 to 30 VDC	18 to 30 VDC
Constant Current Excitation	2 to 20 mA	2 to 20 mA
Output Impedance	≤ 100 ohm	≤ 100 ohm
Output Bias Voltage	8 to 12 VDC	8 to 12 VDC
Discharge Time Constant	0.25 to 2.0 sec	0.25 to 2.0 sec
Settling Time(within 10% of bias)	<5 sec	<5 sec
Spectral Noise(1 Hz)	2800 μg/√Hz	27,468 (μm/sec <sup>2</sup> )/√Hz [1]
Spectral Noise(10 Hz)	700 μg/√Hz	6867 (μm/sec <sup>2</sup> )/√Hz [1]
Spectral Noise(100 Hz)	180 μg/√Hz	1766 (μm/sec <sup>2</sup> )/√Hz [1]
Spectral Noise(1 kHz)	64 μg/√Hz	628 (μm/sec <sup>2</sup> )/√Hz [1]
<b>PHYSICAL</b>		
Sensing Element	Quartz	Quartz
Sensing Geometry	Shear	Shear
Housing Material	Titanium	Titanium
Sealing	Welded Hermetic	Welded Hermetic
Size (Hex x Height)	5/16 in x 0.43 in	5/16 in x 10.9 mm
Weight	0.07 oz	2.0 gm [1]
Electrical Connector	5-44 Coaxial	5-44 Coaxial
Electrical Connection Position	Side	Side
Mounting Thread	5-40 Male	5-40 Male
Mounting Torque	8 to 12 in-lb	90 to 135 N-cm
<b>SUPPLIED ACCESSORIES:</b>		
Model 080A109 Petro Wax (1)		
Model 080A15 Adhesive Mounting Base (1)		
Model ACS-1 NIST traceable frequency response (10 Hz to upper 5% point). (1)		
<b>OPTIONAL VERSIONS</b>		
<b>A-</b> Adhesive Mount		
Supplied Accessory : Model 080A90 Quick Bonding Gel (1)		
<b>J-</b> Ground Isolated		

Frequency Range(± 5 %)	1.0 to 8000 Hz	
Frequency Range(± 10 %)	0.7 to 12,000 Hz	
Frequency Range(± 3 dB)	0.35 to 25,000 Hz	
Resonant Frequency	≥ 50 kHz	≥ 50 kHz
Electrical Isolation(Base)	≥ 10 <sup>8</sup> ohm	
Size - Hex x Height	3/8 in x 0.38 in	3/8 in x 9.7 mm
Weight	0.11 oz	3.1 gm
<b>M</b> - Metric Mount		
Supplied Accessory : Model M080A15 Adhesive Mounting Base (1) replaces Model 080A15		
<b>W</b> - Water Resistant Cable		
Electrical Connector	Sealed Integral Cable	
Electrical Connection Position	Side	

***All specifications are at room temperature unless otherwise specified.***

**NOTES:**

- [1] Typical.
- [2] Zero-based, least-squares, straight line method.
- [3] Transverse sensitivity is typically ≤ 3%.
- [4] See PCB Declaration of Conformance PS023 for details.

