

Model Number  
**320C14**

# ICP® ACCELEROMETER

Revision: D  
ECN #: 36906

	<u>ENGLISH</u>	<u>SI</u>	
<b>Performance</b>			
Sensitivity(± 10 %)	5 mV/g	0.51 mV/(m/s <sup>2</sup> )	
Measurement Range	± 1000 g pk	± 9810 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)	0.01 g rms	0.1 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	
Spectral Noise(1 Hz)	6400 µg/√Hz	62,784 (µm/sec <sup>2</sup> )/√Hz	
Spectral Noise(10 Hz)	1400 µg/√Hz	13,734 (µm/sec <sup>2</sup> )/√Hz	[1]
Spectral Noise(100 Hz)	360 µg/√Hz	3532 (µm/sec <sup>2</sup> )/√Hz	[1]
Spectral Noise(1 kHz)	128 µg/√Hz	1256 (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)	9/32 in x 0.74 in	9/32 in x 18.8 mm	
Weight	0.06 oz	1.7 gm	[1]
Electrical Connector	10-32 Coaxial Jack	10-32 Coaxial Jack	
Electrical Connection Position	Top	Top	
Mounting Thread	5-40 Male	5-40 Male	
Mounting Torque	8 to 12 in-lb	90 to 135 N-cm	

**OPTIONAL VERSIONS**  
Optional versions have identical specifications and accessories as listed for the standard model except where noted below. More than one option may be used.

<b>A - Adhesive Mount</b>		
Supplied Accessory : Model 080A90 Quick Bonding Gel (1)		
<b>J - Ground Isolated</b>		
Frequency Range(± 5 %)	1.0 to 8000 Hz	1.0 to 8000 Hz
Frequency Range(± 10 %)	0.7 to 12,000 Hz	0.7 to 12,000 Hz
Frequency Range(± 3 dB)	0.35 to 25,000 Hz	0.35 to 25,000 Hz
Resonant Frequency	≥ 50 kHz	≥ 50 kHz
Electrical Isolation(Base)	≥ 10 <sup>8</sup> ohm	≥ 10 <sup>8</sup> ohm
Size - Hex x Height	3/8 in x 0.86 in	3/8 in x 21.8 mm
Weight	0.10 oz	3.0 gm

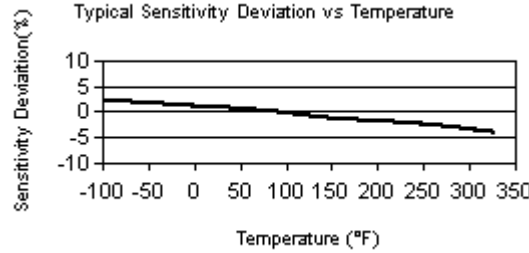
<b>M - Metric Mount</b>		
Mounting Thread	M3x0.50 Male	M3x0.50 Male
Supplied Accessory : Model M080A15 Adhesive Mounting Base (1) replaces Model 080A15		

<b>W - Water Resistant Cable</b>		
Electrical Connector	Sealed Integral Cable	Sealed Integral Cable

**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.

**SUPPLIED ACCESSORIES:**  
 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)

Entered: DMW	Engineer: SDS	Sales: WDC	Approved: BAM	Spec Number:
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All specifications are at room temperature unless otherwise specified.  
 In the interest of constant product improvement, we reserve the right to change specifications without notice.  
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