

Model Number  
**393B31**

# SEISMIC ICP® ACCELEROMETER

Revision: F  
ECN #: 29724

**Performance**  
Sensitivity(± 5 %) 1.02 V/(m/s<sup>2</sup>) [2]  
Measurement Range 4.9 m/s<sup>2</sup> pk  
Frequency Range(± 5 %) 0.1 to 200 Hz  
Frequency Range(± 10 %) 0.07 to 300 Hz  
Resonant Frequency ≥ 700 Hz  
Broadband Resolution(1 to 10,000 Hz) 0.000001 g rms [1]  
Non-Linearity ≤ 1 % [3]  
Transverse Sensitivity ≤ 5 %

**Environmental**  
Overload Limit(Shock) ± 392 m/s<sup>2</sup> pk  
Temperature Range 0 to +150 °F  
Temperature Response See Graph  
Base Strain Sensitivity ≤ 0.0005 g/µε [1]

**Electrical**  
Excitation Voltage 24 to 28 VDC  
Constant Current Excitation 2 to 10 mA  
Output Impedance ≤ 500 ohm  
Output Bias Voltage 8 to 14 VDC  
Discharge Time Constant ≥ 5 sec  
Settling Time(within 10% of bias) 60 sec  
Spectral Noise(1 Hz) 0.6 (µm/sec<sup>2</sup>)/√Hz [1]  
Spectral Noise(10 Hz) 0.1 (µm/sec<sup>2</sup>)/√Hz [1]  
Spectral Noise(100 Hz) 0.04 (µm/sec<sup>2</sup>)/√Hz [1]  
Electrical Isolation(Case) ≥ 10<sup>8</sup> ohm

**ENGLISH**  
10.0 V/g  
0.5 g pk  
0.1 to 200 Hz  
0.07 to 300 Hz  
≥ 700 Hz  
0.000001 g rms  
≤ 1 %  
≤ 5 %  
± 40 g pk  
0 to +150 °F  
See Graph  
≤ 0.0005 g/µε  
24 to 28 VDC  
2 to 10 mA  
≤ 500 ohm  
8 to 14 VDC  
≥ 5 sec  
60 sec  
0.6 µg/√Hz  
0.01 µg/√Hz  
0.004 µg/√Hz  
≥ 10<sup>8</sup> ohm

**SI**  
1.02 V/(m/s<sup>2</sup>) [2]  
4.9 m/s<sup>2</sup> pk  
0.1 to 200 Hz  
0.07 to 300 Hz  
≥ 700 Hz  
0.000001 m/s<sup>2</sup> rms  
≤ 1 %  
≤ 5 %  
± 392 m/s<sup>2</sup> pk  
-18 to +65 °C  
See Graph  
≤ 0.0005 (m/s<sup>2</sup>)/µε [1]

24 to 28 VDC  
2 to 10 mA  
≤ 500 ohm  
8 to 14 VDC  
≥ 5 sec  
60 sec  
0.6 (µm/sec<sup>2</sup>)/√Hz [1]  
0.1 (µm/sec<sup>2</sup>)/√Hz [1]  
0.04 (µm/sec<sup>2</sup>)/√Hz [1]  
≥ 10<sup>8</sup> ohm

**Physical**  
Sensing Element Ceramic  
Sensing Geometry Flexural  
Housing Material Stainless Steel  
Sealing Hermetic  
Size (Diameter x Height) 57.2 mm x 71.1 mm  
Weight 635 gm  
Electrical Connector 2-Pin MIL-C-5015  
Electrical Connection Position Top  
Mounting Thread 1/4-28 Female  
Mounting Torque 2.7 to 6.8 N-m

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Sensing Element Ceramic  
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**NOTES:**  
[1] Typical.  
[2] Measured at 10 Hz, 0.1 grms  
[3] Zero-based, least-squares, straight line method.  
[4] See PCB Declaration of Conformance PS023 for details.

**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.

**SUPPLIED ACCESSORIES:**  
Model 081B20 Mounting Stud, with shoulder (1/4-28 to 1/4-28) (1)  
Model ACS-11 NIST traceable amplitude and phase response from 0.5 Hz to upper 5% frequency (1)  
Model M081B20 Mounting Stud 1/4-28 to M6 X 0.75

**Typical Sensitivity Deviation vs Temperature**

Entered: BLS Engineer BM Sales: RJL Approved: JJB  
Date: 11/24/08 Date: 11/20/08 Date: 11/20/08  
Spec Number: 2005

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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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