Model Number 3501B1260KG

# PIEZORESISTIVE ACCELEROMETER

Revision: B ECN #: 46956

Performance	ENGLISH	<u>SI</u>	
Sensitivity(± 50 %)(at 10 VDC excitation)	0.003 mV/g	0.0003 mV/(m/s²)	[1]
Sensitivity	0.0003 mV/V/g	0.00003 mV/V/(m/s²)	[7]
Measurement Range	± 60 kg	± 588,400 m/s <sup>2</sup> pk	
Frequency Range(± 1 dB)	0 to 20,000 Hz	0 to 20,000 Hz	
Resonant Frequency	>120 kHz	>120 kHz	
Damping Ratio	2 % Critical	2 % Critical	[5]
Non-Linearity(per 10,000 g (98,100 m/s²))	≤ 1 %	≤ 1 %	
Transverse Sensitivity	≤ 3 %	≤ 3 %	
Environmental			
Overload Limit(Shock)	± 100,000 g pk	± 980,665 m/s <sup>2</sup> pk	[4]
Overload Limit(Mechanical Stops)	≥ 80 kg	≥ 782,534 m/s² pk	
Temperature Range(Storage)	-65 to 250 °F	-54 to 121 °C	
Temperature Range(Operating)	-65 to 250 °F	-54 to 121 °C	
Temperature Coefficient of Sensitivity	-0.11 %/°F	-0.20 %/°C	[5]
Zero g Offset Temperature Shift	± 10 mV	± 10 mV	[6]
Base Strain Sensitivity	0.3 g/με	2.94 (m/s²)/με	[5]
Electrical			
Excitation Voltage(Maximum)	15.0 VDC	15.0 VDC	
Current Consumption	<3 mA	<3 mA	
Input Resistance(± 2000 Ohm)	6000 Ohm	6000 Ohm	[1]
Output Resistance(± 2000 Ohm)	6000 Ohm	6000 Ohm	[1]
Offset Voltage	-40 to +40 mVDC	-40 to +40 mVDC	[1]
Settling Time	0.01 sec	0.01 sec	[2]
Electrical Isolation(Case)	≥ 10 <sup>7</sup> Ohm	≥ 10 <sup>7</sup> Ohm	[3]
Physical			
Sensing Element	Piezoresistive MEMS	Piezoresistive MEMS	
Sensing Geometry	Full Active	Full Active	
Housing Material	Titanium	Titanium	
Sealing	Epoxy	Epoxy	
Size (Hex x Height)	3/8 in x .50 in	3/8 in x 12.7 mm	
Weight(without cable)	0.088 oz	2.5 gm	[5]
Electrical Connector	Integral Cable	Integral Cable	
Electrical Connection Position	Side	Side	
Cable Type	096 4-cond silicone jacket	096 4-cond silicone jacket	
Cable Termination	Pigtail Ends	Pigtail Ends	
Cable Length	10 ft	3.05 m	
Mounting	Integral Stud	Integral Stud	
Mounting Thread	1/4-28 Male	1/4-28 Male	
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#### **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.

## M - Metric Mount

Mounting Thread M6 x 0.75 Male M6 x 0.75 Male

## NOTES:

- [1] Verified with test data provided on supplied calibration certificate.
- [2] Settling Time is the maximum time after power-up for the Offset Voltage to be within +/-2% of Measurement Range output of the final offset value. Mounting surface must be at thermal equilibrium.
- [3] Individually tested to ensure compliance with specified value.
- [4] Half-sine pulse duration, ≥ 20 µsec.
- [5] Typical.
- [6] -65 to +250 °F, ref. 75 °F (-54 to +121 °C, ref. 24 °C)
- [7] Sensitivity is proportional to excitation voltage, and at other excitation values, sensitivity can be predicted from the 10VDC calibrated value with a small (<~.5%) increase in uncertainty.
- [8] See PCB Declaration of Conformance PS151 for details.

## SUPPLIED ACCESSORIES:

Model ACS-62 Shock Calibration of Piezoresistive High Amplitude Accelerometers

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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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