LCF-500-DC Series Accelerometer

Making Sense out of Motion…

Proven history of producing high precision accelerometers with the durability to serve many demanding conditions and requirements.

The Jewell **LCF-500-DC Series** accelerometers are configured specifically to yield a combination of high accuracy and ruggedness in numerous applications. The inertial sensor moving system is supported by a taut-band torsional suspension, which is floated in a silicon damping fluid.

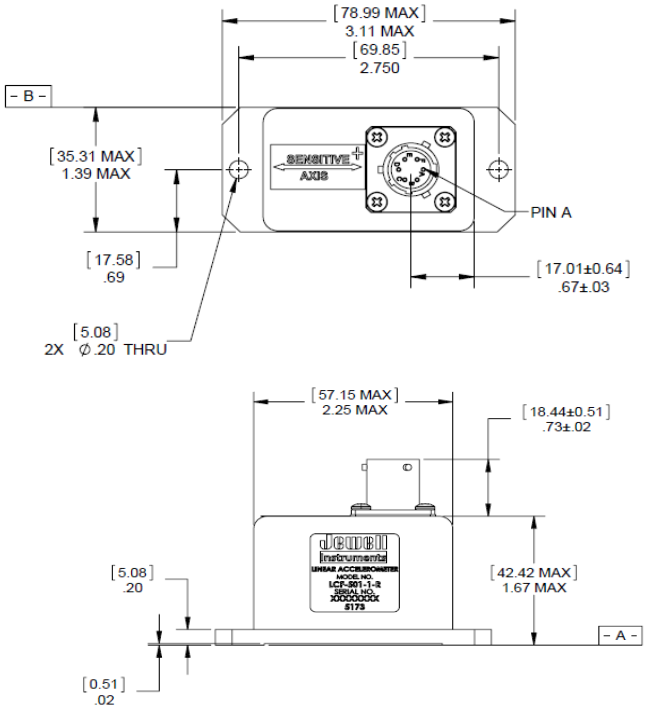
Features

- Ranges available in ±0.5g to ±5g
- Extremely rugged in long term low level vibration applications
- Can withstand high shock environments up 1500g
- Exceptional bias and scale factor

Applications

- Train performance testing
- Industrial automation
- Simulator inertial monitoring
- Platform orientation
- Geophysical & geotechnical structure monitoring
- Aircraft flight testing

Outline Diagram



Pin Out (Options: C-connector, P-Pin)

CONNECTOR PIN	FUNCTION
A	+ Power
B	PWR/SIG COM
C	-Power
D	Signal Out
E	N/C
F	Self-Test (Optional)

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Performance Specifications

STATIC/DYNAMIC

Input Range, g:	**±0.5**	**±1**	**±2**	**±5**
Full Range Output (FRO -Note 1) VDC ±0.5%:	**±5**	**±5**	**±5**	**±5**
Non-linearity (Note 2), % FRO max	**0.02**	**0.05**	**0.05**	**0.05**
Scale Factor, Volts/g, nominal:	**10**	**5**	**2.5**	**1**
Scale Factor Temp. Sensitivity (SFTS), PPM /°C maximum:	**100**	**100**	**100**	**100**
Natural Frequency, Hz nominal (Note 3):	**50**	**50**	**50**	**80**
Transverse Axis Misalignment, ° maximum:	**±0.5**	**±1**	**±1**	**±1**
Bias, g range	**±0.004**	**±0.004**	**±0.01**	**±0.02**
Bias Temperature Sensitivity, µg /°C maximum:	**50**	**50**	**50**	**50**
Resolution and Threshold, µg maximum:	**2**	**5**	**10**	**20**

ELECTRICAL

Number of Axes:	**1**
Input Voltage Range, (VDC):	**±12 to ±18**
Input Current, mA, max:	**15**
Output Impedance, Ohms, nom:	**100**
Noise, Vrms, maximum:	**0.005**

ENVIRONMENTAL

Operating Temp Range:	**-40°C to +80°C**
Storage Temp Range:	**-60°C to +90°C**
Shock:	**1500g. 0.5msec, ½ sine**

ENCLOSURE

Weight, grams:	**230**
Seal:	**IP66**

Notes:

Note 1: Full Range is defined "from negative full input acceleration to positive full input acceleration."

Note 2: Nonlinearity is specified as deviation of output referenced to theoretical sine function value, independent of misalignment.

Note 3: Output Phase angle = - 90°.

Contact Jewell for part number

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