LCA-100 Series Accelerometer

Making Sense out of Motion

The LCA-100 Series is a single axis accelerometer that is ±12 to ±18 Vdc and is also DO-160 approved for aerospace applications

The Jewell **LCA-100 Series** Accelerometer is a general-purpose ±0.5g to ±5g device designed for industrial, commercial and aerospace sensing requirements.

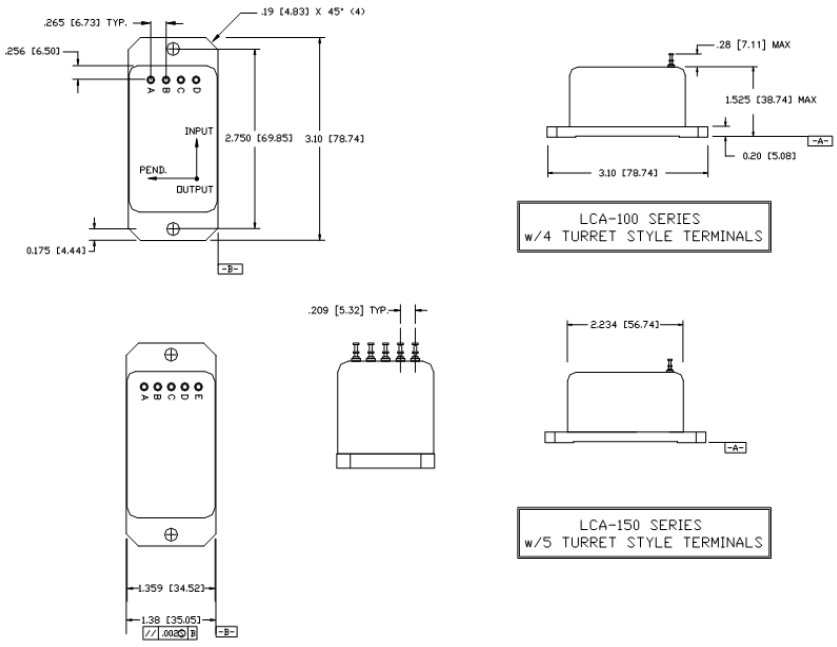
Features & Benefits

- Filtering Available
- FAA DO-160 Qualified Versions
- Available in 28V Aircraft Input
- Connector or Pin Configuration
- 0.20% 10-year Scale Factor Stability
- Wide Bandwidths for Higher Range Applications

Applications

- Aircraft Flight Controls
- Aircraft Fatigue Monitoring
- Train Performance Testing
- Aircraft Autopilot System Input
- Aircraft Winds-shear Detection
- Double Integrated Railcar Position
- Rail Automated Train Controls

Outline Diagram



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

Pin A	+12 to +18 VDC
Pin B	-12 to -18 VDC
Pin C	Power/Signal Common
Pin D	Eo (Volts/g)

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Performance Specifications

STATIC/DYNAMIC

Input Range, g:	**±0.5**	**±1.0**	**±2.0**	**±5.0**
Full Range Output (FRO -Note 1) VDC ±0.5%:	**±5.0**	**±5.0**	**±5.0**	**±5.0**
Scale Factor, Volts/g, nominal:	**10.0**	**5.0**	**2.5**	**1.0**
Scale Factor Temp. Sensitivity (SFTS), PPM /°C maximum:	**180**	**180**	**180**	**180**
Natural Frequency, Hz nominal (Note 3):	**60.00**	**60.00**	**60.00**	**60.00**
Bandwidth (-3 dB), Hz nominal:	**60.0**	**60.0**	**60.0**	**60.0**
Output Axis Misalignment, ° maximum:	**0.71**	**0.71**	**0.71**	**0.71**
Pendulous Axis Misalignment, ° maximum:	**0.71**	**0.71**	**0.71**	**0.71**
Bias, g range:	**±0.01**	**±0.01**	**±0.01**	**±0.01**
Bias Temperature Sensitivity, µg /°C maximum:	**100**	**100**	**100**	**100**
Resolution and Threshold, µg maximum:	**10**	**10**	**10**	**10**

ELECTRICAL

Number of Axes:	**1**
Input Voltage Range, (VDC):	**±12 to ±18**
Input Current, mA, max:	**25**
Output Impedance, Ohms, nom:	**100**
Noise, Vrms, maximum:	**0.005**

ENCLOSURE

Seal:	**MIL-STD-202, Mtd. 112**

ENVIRONMENTAL

Operating Temp Range:	**-55°C to +85°C**
Storage Temp Range:	**-60°C to +90°C**
Vibration grms:	**0**
Shock:	**100g, 0.011 sec, ½ sine**

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°.

How to Order

LCA-100-0.5g	**451040-006**
LCA-100-1g	**451040-004**
LCA-100-2g	**451040-001**
LCA-100-5g	**451040-002**

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