

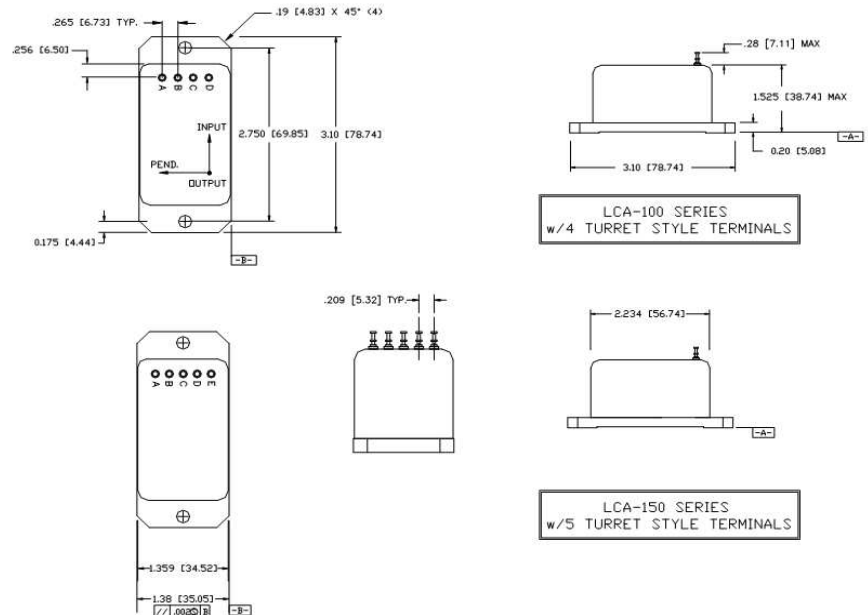
LCA-100 Series Accelerometer

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 $\pm 0.5g$ to $\pm 5g$ device designed for industrial, commercial and aerospace sensing requirements.

Outline Diagram



Features & Benefits

- Filtering Available
- 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

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)

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