

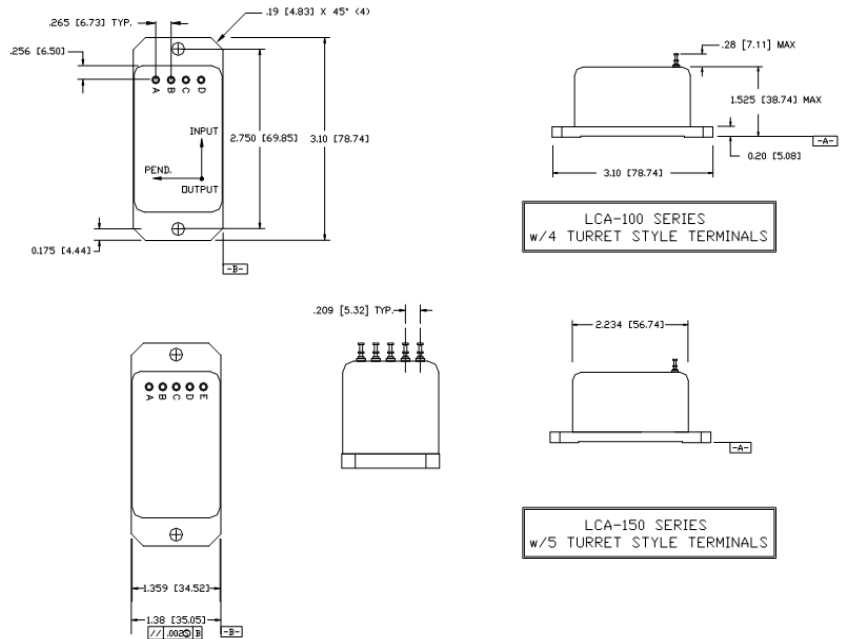
LCA-100 Series Accelerometer

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
- 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

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 |