

# LCF-3500 Series Accelerometer

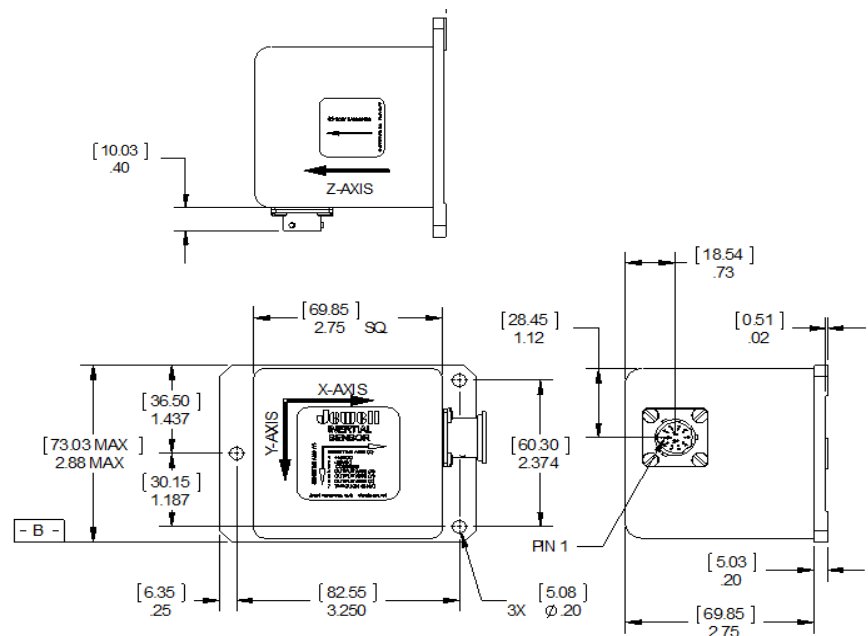
*Making Sense out of Motion...*

**Input From  $\pm 0.5g$  to  $\pm 5.0g$  Full Range. Exceptional Bias and Scale Factor. Specifically Designed for High Shock and Vibration Environments.**



The Jewell **LCF-3500 Series** Flexure Suspension Fluid Damped Tri-Axial Accelerometer is a  $\pm 0.5G$  to  $\pm 5G$  device designed for applications where high levels of shock and vibration are present. LCF units are characterized by excellent turn on repeatability and very low hysteresis.

## Outline Diagram



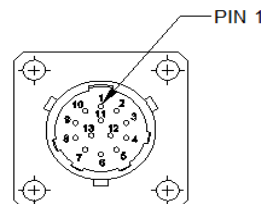
## Features & Benefits

- $\pm 0.5g$  to  $\pm 5.0g$  Full Range
- Filtering 5 to 100 Hz Bandwidth Available
- Exceptional Bias & Scale Factor
- High Level  $\pm 5$  Vdc Output
- 1,000g Shock Capability
- Tri-Axis

## Applications

- Geophysical Testing
- Railcar Acceleration Control
- Railcar Deceleration Control
- Ocean Buoy Acceleration Sensing
- Aircraft Stability Control
- Aircraft Flight Testing
- Vehicle Roadway Profiling
- Tri-Axis Acceleration Applications
- Aircraft Flight Data Recorder

## Pin Out



CONNECTOR: MS27476Y 10D35P  
MATE: MS27473T 10B35S

CONNECTOR INTERFACE	
PIN	FUNCTION
1	+15 VDC
2	-15 VDC
3	COMMON
4	X OUTPUT
5	Y OUTPUT
6	Z OUTPUT
7-13	N/C

## Performance Specifications

### STATIC/DYNAMIC

Input Range (g) (Note 1)	± 0.50	± 2.0	± 5.0
Full Range Output (FRO), volts ± 0.5%	± 5.0	± 5.0	± 5.0
Non Linearity (%FRO' Max.) (Note 2)	0.05	0.05	0.05
Scale Factor, volts/g (Nominal)	10.0	2.50	1.00
Scale Factor Temp. Sens., (PPM/°C, Max.)	100	100	100
Bias, g (Max.)	0.005	0.005	0.005
Bias Temp. Sens., micro g/° (Max.)	100	100	100
Natural Frequency, Hz min (Note 3)	30	30	30
Bandwidth (-3dB), Hz min	30	30	30
Input Axis Misalignment, ° (Max.)	1.0	1.0	1.0
Resolution and Threshold, micro g (Max.)	10	10	10

### ELECTRICAL

Input Voltage, VDC	±12 to ±18
Input Current (mA, Nominal):	±45
Output Impedance, ohms (Nominal)	100
Noise, Vrms (Max.)	0.002

### ENVIRONMENTAL

Operating Temp Range	-40 to +80°C
Survival Temp Range	-60 to +90°C
Vibration	20 grms
Shock	1000g, 1 msec, ½ sine
Seal	Epoxy

- Notes:
- 1 - Full range is defined as "from negative to positive full input acceleration."
  - 2 - Referenced to best-fit straight line independent of misalignment.
  - 3 - Output phase angle = -90°.

## Custom Capabilities

- Unit Power Connections can be easily adapted for operations from single-ended, floating power supplies of 24 to 36 Volts DC
- Internal Temperature Sensor
- 4-20 mA output

## How to Order

LCF-3500-.5g/.5g/.5g  
 LCF-3500-2.0g/2.0g/2.0g  
 LCF-3500-5.0g/5.0g/5.0g

Call for part number  
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