Jewell Instruments

LCF-200 Series Flexure Suspension Servo Fluid Damped Accelerometer

BEST OF CLASS

The Jewell LCF Series Accelerometer is a ±0.5G to ±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.

LCF-200 Series Flexure Suspension Servo Fluid Damped Accelerometer Specifications

Performance			
Input Range, g (Note 1)	±0.50	±2.0	±5.0
Full Range Output (FRO), volts ±0.5%	±5.0	±5.0	±5.0
Nonlinearity, % 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/ºC max	100	100	100
Bias, g max	0.005	0.005	0.005
Bias Temperature Sens, micro g/ºC max	100	100	100
Natural Frequency, Hz min (Note 3)	30	30	30
Bandwidth (-3 dB), Hz min	30	30	30
Input Axis Misalignment, º 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	±15
Output Impedance, ohms nominal	100
Noise, Vrms max	0.002

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

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

Applications

- *Geophysical Testing*
- *Railcar Acceleration Control*
- *Platform Orientation*

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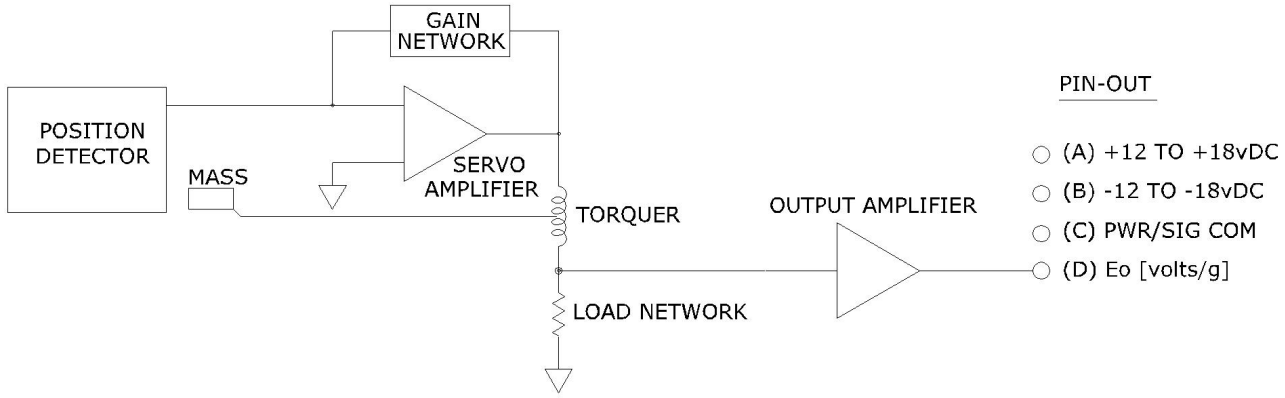
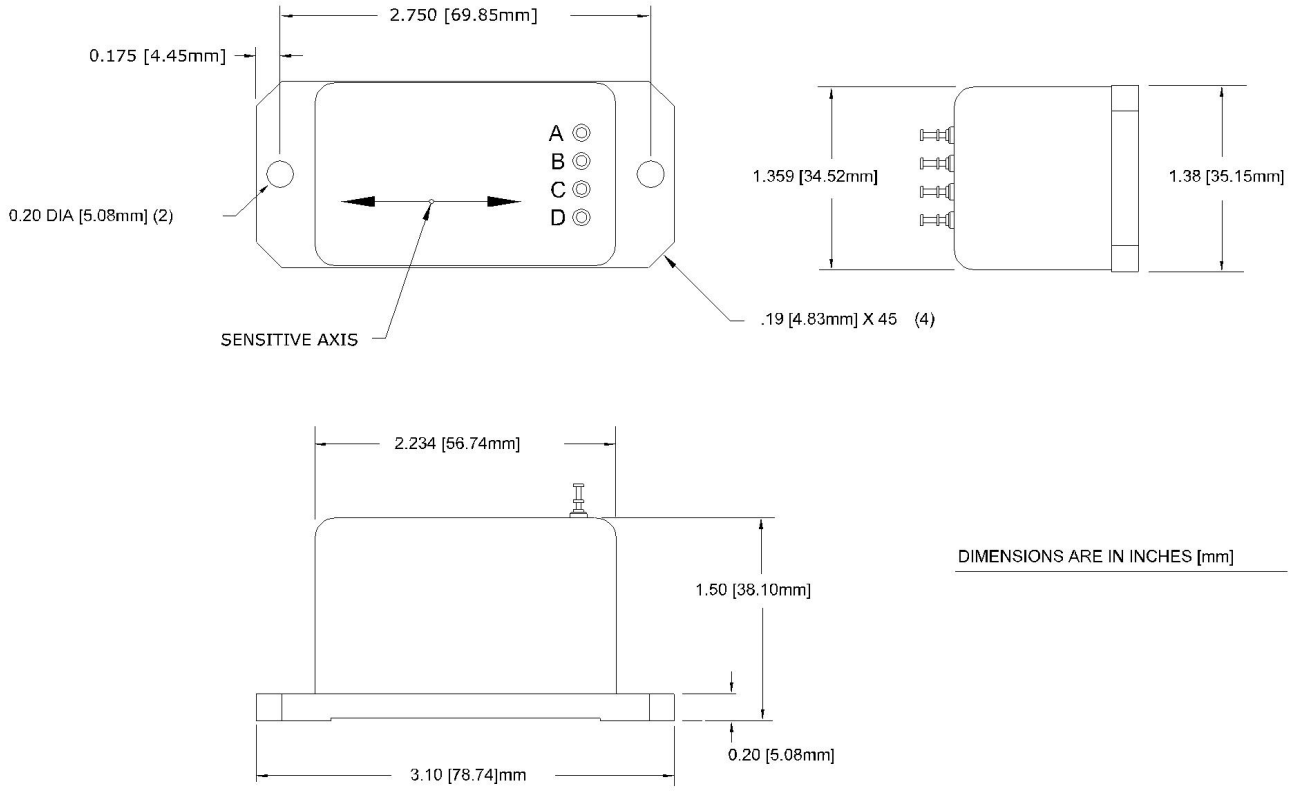
Block Diagram



Outline Diagram



DIMENSIONS ARE IN INCHES [mm]

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