



BEST OF CLASS

If space is a concern, the JEWELL LSM Series is the accelerometer solution for you. The LSM offers equivalent features to the LCA in a smaller package — approximately 1" cube. Its wide input range and bandwidth features meet the demanding needs of variety of aerospace applications.

LSM Accelerometer Specifications

Performance

Input Range ¹ , g:	±0.5	±1.0	±2.0	±5.0	±10.0	±20.0
Full Range Output (FRO), volts ±1%:	±5.0	±5.0	±5.0	±5.0	±5.0	±5.0
Nonlinearity, % FRO ² , maximum:	0.05	0.05	0.05	0.10	0.10	0.25
Scale Factor, volts/g, nominal:	10.0	5.0	2.5	1.0	0.5	0.25
Scale Factor Temp Sensitivity, PPM/°C, maximum:	200	200	200	200	200	200
Bias, g, maximum:	0.050	0.010	0.010	0.010	0.020	0.050
Bias Temperature Sensitivity µg/°C:	50	50	50	100	100	200
Natural Frequency, Hz, nominal ³ :	70	100	140	100	140	160
Bandwidth(-3db), Hz, nominal:	70	100	140	100	140	160
Input-Axis Misalignment, ° maximum:	±1	±1	±1	±1	±1	±1
Resolution and Threshold, µg:	10	10	10	10	20	50

Electrical

Input Voltage, VDC, nominal ⁴ :	±12 to ±18					
Input Current, mA, nominal:	10.0					
Output Impedance, ohms, nominal:	10.0	5.0	2.5	5.0	2.5	2.5
Noise, mV rms maximum:	5.0					

Environmental

Operating Temp Range:	-55° C to +95° C					
Survival Temp Range:	-65° C to +105° C					
Shock:	100g - 11 msec, 1/2 sine					
Seal:	MIL-STD 202, Method 112					
Weight:	2.0 oz.					

¹ Full Range is defined "from negative full input acceleration to positive full input acceleration."

² Nonlinearity is specified as deviation of output referenced to a best fit straight line, independent of misalignment.

³ Output Phase angle = -90°.

⁴ Unit Power connections can be easily adapted for operations from single-ended, floating power supplies of 24 to 36 Volts DC.

Applications

- ▶ Satellite Nutation Sensing
- ▶ Radar Leveling
- ▶ Fire Control
- ▶ Attitude Heading and Reference Systems
- ▶ Train Braking & Banking
- ▶ Missile Orientation
- ▶ Autopilot

Supplied in partnership with  Jewell Instruments

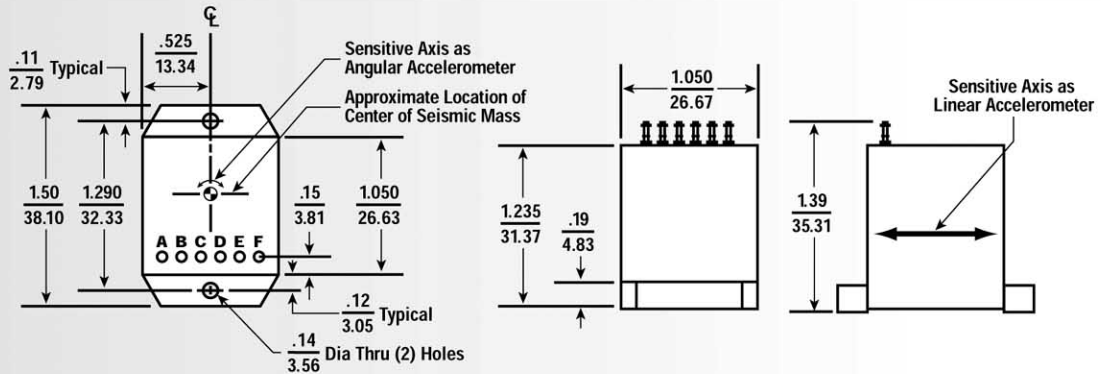
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Dimensional Drawing for the LSM Accelerometer (inch/mm)



Block Diagram for the LSM Inertial Sensor

