LSM Series Accelerometer

Making Sense Out of Motion…

LSM Series Accelerometers have 100,000 hour MTBF reliability and up to 20g full scale sensing range

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

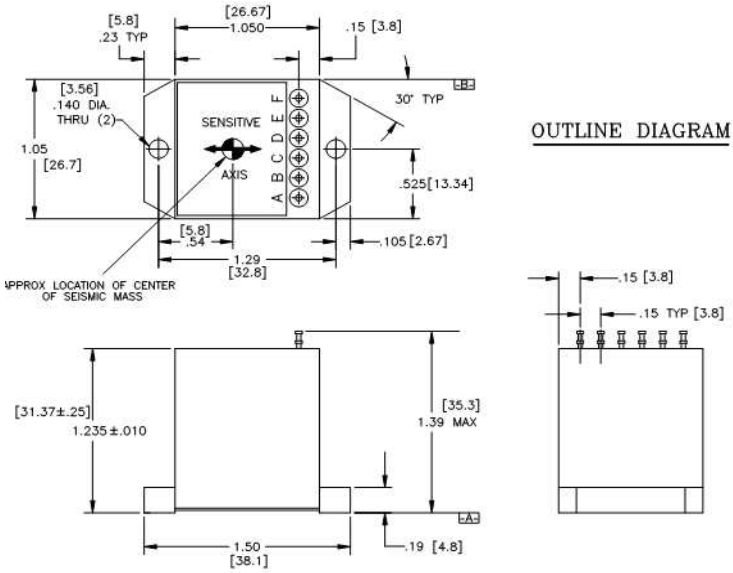
Features & Benefits

- ±0.5g to ±20.0g Full Range
- Filtering up to 200 Hz Bandwidth with 0.6 Damping
- Satellite Application Reliability
- Better than 20 µg Res at 10g Full Scale
- -55°C to +95°C Operating Temp Range

Applications

- Satellite Nutation Sensing
- Radar Leveling
- Train Braking and Banking
- Autopilot Systems
- Train Performance Testing
- Performance Testing
- Wind Shear Detection Systems
- Mars Rover
- Thermal Vacuum Chamber (product) Testing

Outline Drawing: ***Dimensional Drawing for the LSM Accelerometer (inch/mm)***



Block Diagram: ***LSM Accelerometer***

Pin F	Self-Test
Pin E	Current Output
Pin D	E_o (Volts/g)
Pin C	-VDC Power
Pin B	Power Common
Pin A	+VDC Power

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LSM Accelerometer Specifications

PERFORMANCE

Input Range, g (Note 1)	± 0.5	± 1.0	± 2.0	± 5.0	± 10.0	± 20.0
Full Range Output (FRO V± 1.0%)	± 5.0	± 5.0	± 5.0	± 5.0	± 5.0	± 5.0
Non Linearity (%FRO′ Max.) (Note 2)	0.05	0.05	0.05	0.10	0.10	0.25
Scale Factor (V/g, Nom.)	10.0	5.0	2.5	1.0	0.5	0.25
Scale Factor Temp Sens (PPM/°C, Max.)	200	200	200	200	200	200
Bias, g, (Max.)	0.050	0.010	0.010	0.010	0.020	0.050
Bias Temp. Sens., (µg/°C)	50	50	50	100	100	200
Natural Frequency, Hz, (Nom.) (Note 3)	70	100	140	100	140	160
Bandwidth (-3db), Hz, (Nom.)	70	100	140	100	140	160
Input-Axis Misalignment, °(Max.)	± 1.0	± 1.0	± 1.0	± 1.0	± 1.0	± 1.0
Resolution and Threshold, µg	10	10	10	10	20	50

ELECTRICAL

Input Voltage (Vdc Nom.) (Note 4)	±12 to ±18					
Input Current (mA, Nom.)	10.0					
Output Impedance (Ohms, Nom.)	10k	5k	2.5k	5k	2.5k	2.5k
Noise, mV rms (Max.)	5.0					

ENVIRONMENTAL

Operating Temp Range:	-55°C to +95°C
Survival Temp Range	-65°C to +105°C
Shock	100g - 11 msec, ½ sine
Seal	MIL-STD 202, Method 112
Weight	2.0 oz.

Notes:
1 - Full range is defined as "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.

How to Order

Model #	Part #
LSMP-0.5g	02550277-001
LSMP-1g	02550277-002
LSMP-2g	02550277-003
LSMP-5g	02550277-004
LSMP-10g	02550277-005
LSMP-20g	02550120-000

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