



BEST ^{IN} CLASS

ACCELEROMETERS

The JEWELL LCM accelerometer is a general-purpose acceleration sensor for industrial, commercial and aerospace applications. Engineered with micromachined components the LCM offers an attractive price/performance ratio. This 0.5G to 4G device meets the demanding needs of applications requiring 500G shock resistance and up to 500Hz bandwidth.

LCM 100 Accelerometer Specifications

Performance

Input Range, g:	±0.5	±2.0	±4.0
Full Range Output (FRO), volts ±2% ¹ :	±5.0	±5.0	±5.0
Nonlinearity, % FRO ² :	0.20	0.20	0.20
Scale Factor, volts/g, nominal:	10.0	2.5	1.25
Scale Factor Temp Sensitivity, nominal:	0.50% of reading over the temperature range		
Bias, g, maximum:	0.05	0.10	0.10
Bias Temperature Sensitivity, G/°C, nominal:	0.003	0.003	0.003
Natural Frequency, Hz, nominal ³ :	100	100	100
Input-Axis Misalignment, °, maximum:	3.0	3.0	3.0
Resolution and Threshold, g:	0.005	0.005	0.005

Electrical

Input Voltage, VDC, ⁴ :	±12 to ±18		
Input Current, mA, nominal:	15		
Output Impedance, ohms, nominal:	100		
Noise, mV rms, maximum:	0.020	0.010	0.005

Environmental

Operating Temp Range:	-40° C to +85° C		
Survival Temp Range:	-65° C to +85° C		
Shock:	500 G, 0.5 msec		
Vibration:	10 grms		
Seal:	MIL-STD 202, Method 112		
Weight:	4 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 theoretical best fit straight line, independent of misalignment.

³ Output Phase angle = -90°, 10 Hz or 500 Hz also available.

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

Applications

- ▶ Automotive Performance Testing
- ▶ Elevator Control
- ▶ Seismic Monitoring
- ▶ Machine Tool Control
- ▶ Flight Testing

Supplied in partnership with Jewell Instruments



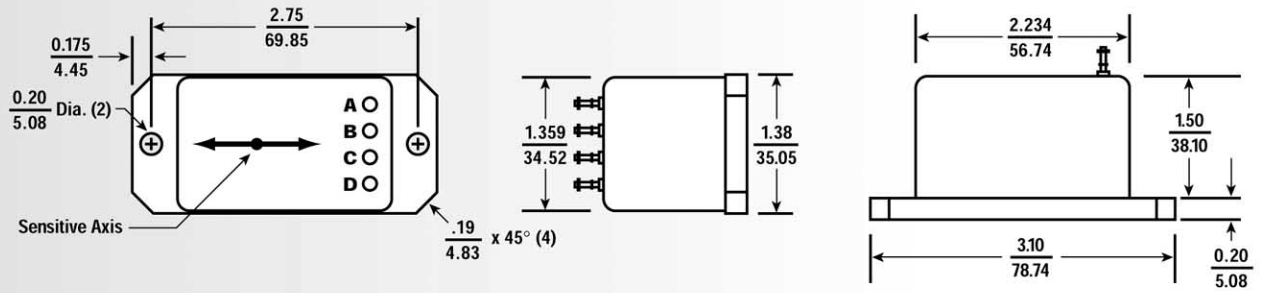
Polaron Components Limited

26 Greenhill Crescent, Watford Business Park, Watford, Herts, WD18 8XG. UK

Tel: +44 (0)1923 495401. Fax: +44 (0)1923 495416. E-mail: components@polaron.co.uk Web: www.polaron.co.uk

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Dimensional Drawing for the LCM Accelerometer (inch/mm)



Block Diagram for the LCM Inertial Sensor

