Jewell Instruments

MAKING SENSE OUT OF MOTION

LCF-501-R

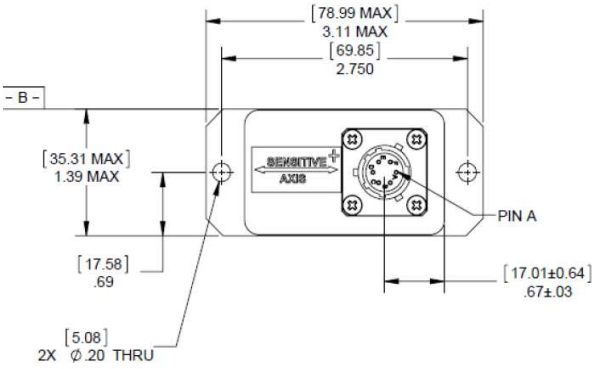
Accelerometer

Proven History of Successful Railway Applications with Thousands of Railway Train Control Systems! Meets CENELEC/AREMA Standards.

The Jewell LCF-501-R Series accelerometers are configured specifically to yield a combination of high accuracy and ruggedness in Outline Diagram railway applications. The inertial sensor moving system is supported by a taut-band torsional suspension, which is floated in a silicone damping fluid.

FEATURES:

- Extremely rugged in high vibration environments
- Extremely rugged in long term low level vibration applications
- Can withstand high shock environments small as 0.000006”/ft.
- Exceptional bias and scale factor.
- RoHS and REACH Compliant
- Meets CENELEC/Arema Standards



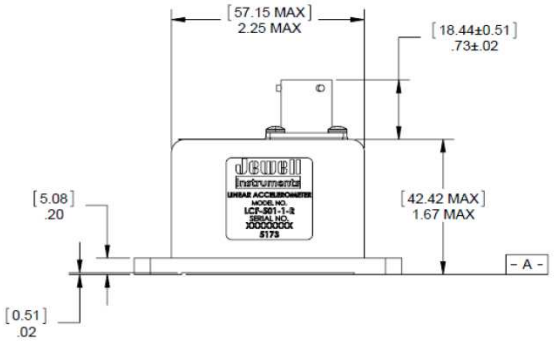
Dimensions: in [mm]

APPLICATIONS:

- Railcar Acceleration Control
- Mining
- Platform Orientation

PIN OUTS

A	+ POWER
B	POWER/SIGNAL COMMON
C	-POWER
D	SIGNAL OUT
E	N/C
F	SELF TEST (OPTIONAL



PERFORMANCE SPECIFICATIONS

STATIC/DYNAMIC

INPUT RANGE (g)	±0.5	±1
FULL RANGE OUTPUT (VDC) ±1%[1]	±5.00	
SCALE FACTOR (V/g) NOMINAL	5	
SCALE FACTOR TEMP. SENSITIVITY (PPM/°C MAX)	100	
NATURAL FREQUENCY, Hz NOMINAL (NOTE 3)	85.00	
OUTPUT AXIS MISALIGNMENT, ° MAX	1.00	
BIAS, g RANGE	±0.004	
BIAS TEMPERATURE SENSITIVITY, µg /°C MAX	50	
RESOLUTION & THRESHOLD (µg) MAX	1.0	

ENVIRONMENTAL & ENVIRONMENTAL

NUMBER OF AXES	1
INPUT VOLTAGE RANGE (VDC)	±12 to ±18
INPUT CURRENT (mA, max)	25
OUTPUT IMPEDANCE (Ohms) nominal	100
NOISE (Vrms, max)	0.005
OPERATING TEMP RANGE	-40°C TO +80°C
STORAGE TEMP RANGE	-60°C TO +90°C
SHOCK	100g, 11msec, ½ sine

ENCLOSURE

SEAL	MIL-STD-202, Method 112
WEIGHT	8 oz.

NOTES:
1. Full Range is defined “from negative full input acceleration to positive full input acceleration.”Nonlinearity is specified as deviation of output referenced to theoretical sine function value, independent of misalignment.
2. Nonlinearity is specified as deviation of output referenced to theoretical sine function value, independent of misalignment.
3. Output Phase angle = - 90°.

*Specifications subject to change without notice on account of continued product development

ORDERING INFORMATION

HOW TO ORDER

Model Numbers are comprised of the series, the connector option, and the input range.

SERIES - INPUT RANGE - R

- SERIES: LCF-501
- INPUT RANGE: ±0.25G, ±0.5G, ±1G, ±2G, ±5G

	MODEL #	PART #
±0.25	LCF-501-0.25G-R	02550430-001
±0.5	LCF-501-0.5G-R	02550430-002
±1	LCF-501-1G-R	02550430-003
±2	LCF-501-2G-R	02550430-004
±5	LCF-501-5G-R	02550430-005