LCA-165-R Series Accelerometer

Making Sense out of Motion…

Proven History of Successful Railway Applications and Highest Repeatability Sensor of its Class in the World.

Meets CENELEC/AREMA Standards

The Jewell **LCA-165-R Series** accelerometers are configured specifically to yield a combination of high accuracy and ruggedness in railway applications. The Jewell LCA-165-R Series is the highest repeatability sensor of its class in the world today and meets or exceeds CENELEC/AREMA standards.

Features

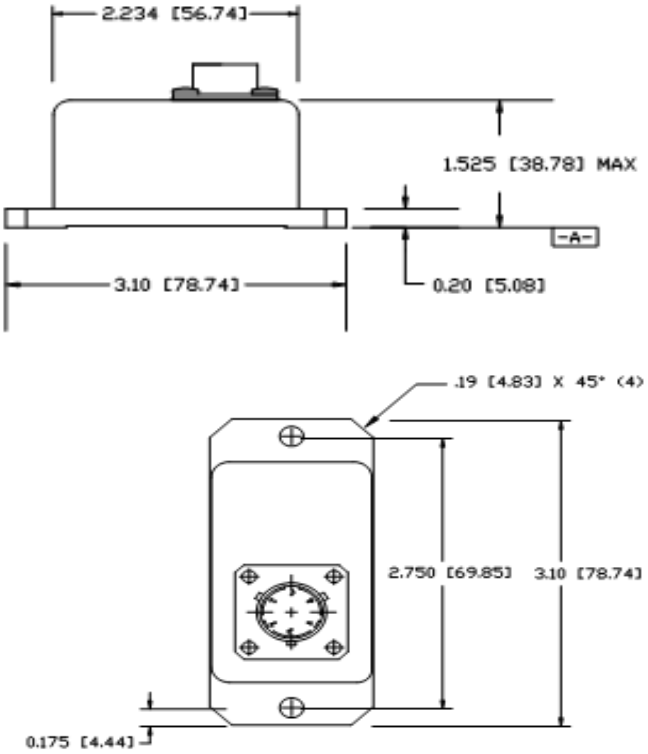
- ±0.5g to ±2.0g Full Range
- Filtering Available
- Exceptional Bias
- High Level ± Vdc Output
- 100g Shock Capability
- Meets CENELEC/AREMA Standards

See Spec Table on Page 2

Applications

- Rail Monitoring and Testing
- Automated Train Controls
- Acceleration/Deceleration Control

Outline Diagram



Pin Out (Options: C-connector, P-Pin)

CONNECTOR PIN	FUNCTION
A	+15 Vdc
B	P/S COM
C	-15 Vdc
D	Eo (volts/g)
E	N/C
F	N/C

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Performance Specifications

STATIC/DYNAMIC

Input Range, g:	±0.5	±1.0	±5.0
Full Range Output (FRO -Note 1) VDC ±0.5%:	±5.00	±5.00	±5.00
Scale Factor, Volts/g, nominal:	10	5	1
Scale Factor Temp. Sensitivity (SFTS), PPM /°C maximum:	180	180	180
Natural Frequency, Hz nominal (Note 3):	60.00	60.00	60.00
Output Axis Misalignment, ° maximum:	1.0	1.0	1.0
Pendulous Axis Misalignment, ° maximum:	1.00	1.00	1.00
Bias, g range:	±0.01	±0.01	±0.01
Bias Temperature Sensitivity, µg /°C maximum:	100	100	100
Resolution and Threshold, µg maximum:	10.0	10.0	10.0

ELECTRICAL

Number of Axes:	1
Input Voltage Range, (VDC):	±12 to ±18
Input Current, mA, max:	25
Output Impedance, Ohms, nom:	100
Noise, grms, maximum:	0.005

ENCLOSURE

Seal:	MIL-STD-202, Mtd. 112

ENVIRONMENTAL

Operating Temp Range:	-55°C to +85°C
Storage Temp Range:	-60°C to +90°C
Vibration grms:	0
Shock:	100 g, 0.011 sec, ½ sine

Notes:

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

Note 2: Nonlinearity is specified as deviation of output referenced to theoretical sine function value, independent of misalignment.

Note 3: Output Phase angle = - 90°.

Meets CENELEC/AREMA Standards

CENELEC EN 55022:2010
CENELEC EN 50155:2007
CENELEC EN 61000-4-8:2010
AREMA Part 11.5.1

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