

LSBC/LSBP Series Accelerometer

Input Ranges from $\pm 0.5g$ to $\pm 20g$ and options for either connector or pin configurations

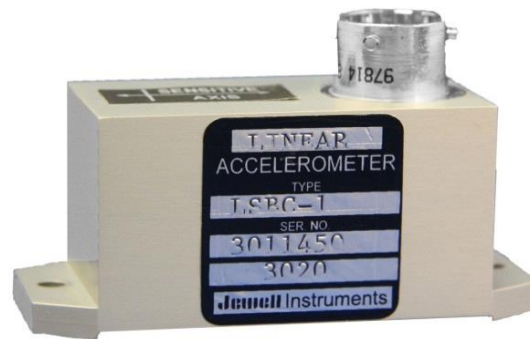
The Jewell **LSB Series** Accelerometer is a general purpose $\pm 0.5G$ to $\pm 20G$ device designed for rail, commercial, and aerospace sensing requirements.

Features & Benefits

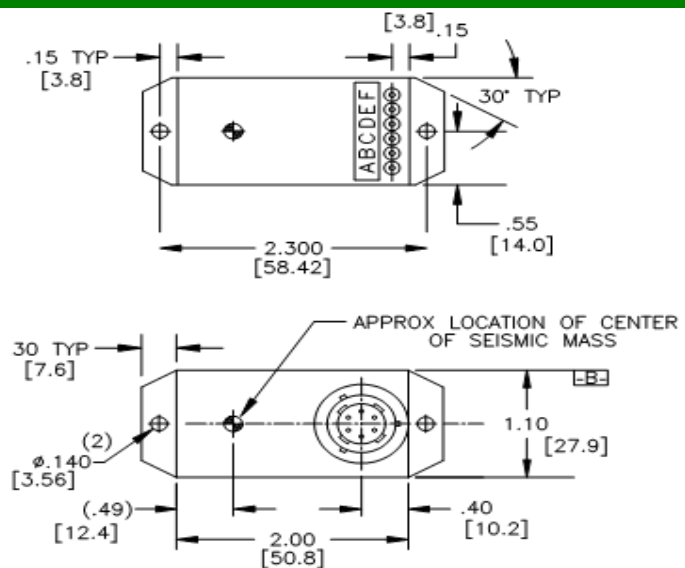
- $\pm 0.5g$ to $\pm 20.0g$ Full Range
- Bandwidth up to 200 Hz
- Satellite Application Reliability
- Better than 20 μg Res at 10g Full Scale
- Available with 1g Bias Options
- $-55^{\circ}C$ to $+95^{\circ}C$ Operating Temp Range
- Standard for Train Control for more than 30 years

Applications

- Train Braking & Banking
- Train Performance Testing
- Acceleration Control
- Automotive Performance Testing
- Active Damping
- Rail Car Monitoring
- Lateral Acceleration Sensing
- Tilt Train Controls
- Super-elevation Measurement
- Rail Car Vibration Testing
- Wind shear Detection
- Autopilot
- AHARS
- Wind Turbine Control



Outline Drawing: *Dimensional Drawing for the LSB Accelerometer*



Block Diagram: *LSB Accelerometer*

Pin A	+12 to +18 VDC
Pin B	Power/Sig Common
Pin C	-12 to -18 VDC
Pin D	Eo [Volts/g]
Pin E	Current Output
Pin F	Self-Test

LSB Accelerometer Specifications

PERFORMANCE

Input Range, g	± 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.)	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.)	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.)	±12 to ±18					
Input Current (mA, Nom.)	10.0					
Output Impedance (Ohms, Nom.)	10.0K	5.0K	2.5K	5.0K	2.5K	2.5K
Noise, mV rms (Max.)	0.005					

ENVIRONMENTAL

Operating Temp Range	-55°C to +95°C					
Survival Temp Range	-65°C to +105°C					
Shock	100g - 0.011 second, ½ sine					
Seal	MIL-STD 202, Method 112					

How to Order

LSBC Series (with Connector)

LSBC-0.5g	02550275-306
LSBC-1g	02550275-307
LSBC-2g	02550275-308
LSBC-5g	02550275-309
LSBC-10g	02550275-310
LSBC-20g	Call for part number

LSBP Series (with Pin)

LSBP-0.5g	02550275-001
LSBP-1g	02550275-002
LSBP-2g	02550275-003
LSBP-5g	02550275-004
LSBP-10g	02550275-005
LSBP-20g	Call for part number