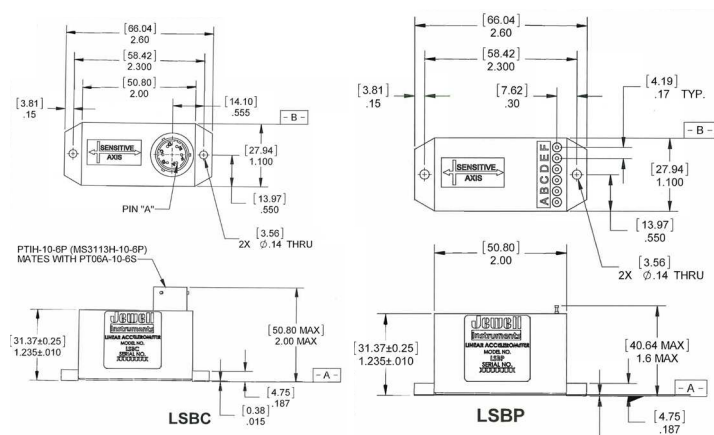


LSBC/LSBP Series Accelerometer

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:

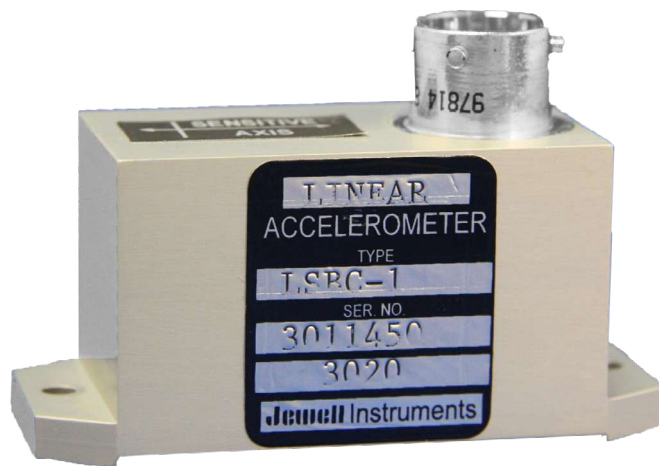
- $\pm 0.5g$ to $\pm 20.0g$ Full Range
- Bandwidth up to 200 Hz
- Satellite Application Reliability
- Better than 20 μg Res at 10g Full Scale
- Available with 1g Bias Options
- $-55^{\circ}C$ to $+95^{\circ}C$ Operating Temp Range
- Standard for Train Control for more than 30 years



Dimensions: in [mm]

NOTES:

1. DATUM -A- AND -B- ARE DEFINED AS REFERENCE SURFACES IN DRAWING.
2. CAUTION!: A 0.1 F, 200 VOLT CAPACITOR IS CONNECTED INTERNALLY FROM PIN B TO CASE. TAKE THIS INTO ACCOUNT IF DIELECTRIC TEST IS MADE FROM PIN TO CASE.
3. JUMP PINS B & E FOR VOLTAGE OUTPUT OPERATION.



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

PIN OUTS

PIN	FUNCTION
A	+VDC POWER
B	POWER COMMON
C	-VDC POWER
D	VOLTAGE OUTPUT (HIGH SIDE) & SELF TEST RETURN
E	VOLTAGE OUTPUT (LOW SIDE)
F	SELF TEST



PERFORMANCE SPECIFICATIONS

PERFORMANCE

INPUT RANGE (g)	±0.5	±1.0	±2.0	±5.0	±10.0	±20.0
FULL RANGE OUTPUT (FRO $V \pm 1.0\%$)	±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. SENSOR (ppm/°C, max)	200					
BIAS (g, max)	0.05	0.01	0.01	0.01	0.02	0.02
BIAS TEMPERATURE ($\mu\text{g}/^\circ\text{C}$)	50	50	50	100	100	100
NATURAL FREQUENCY (Hz, nom)	70	100	140	100	140	160
BANDWIDTH (-3db, Hz, nom)	70	100	140	100	140	160
INPUT-AXIS MISALIGNMENT ($^\circ$ max)	±1.0					
RESOLUTION & THRESHOLD (μg)	10					

ELECTRICAL

INPUT VOLTAGE RANGE (VDC nom)	±12 to ±18					
INPUT CURRENT (mA, nom)	20.0					
OUTPUT IMPEDANCE (Ohms, nom)	10K	5K	2.5K	2.5K	2.5K	2.5K
NOISE (mV, rms max)	0.005					

ENVIRONMENTAL

OPERATING TEMPERATURE RANGE	-55° to +95°C
SURVIVAL TEMPERATURE RANGE	-65° to +105°C
SHOCK	100 g - 0.011 sec, $\frac{1}{2}$ sine
SEAL	MIL-STD 202, Method 112

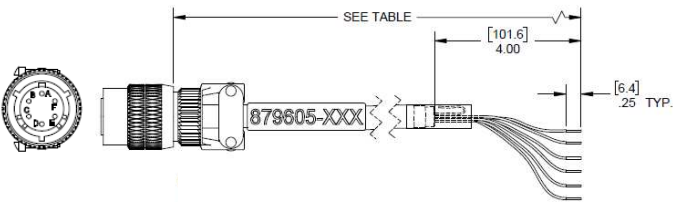
PIN OUT

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



MATING CONNECTOR AND CABLE ASSEMBLIES

CONNECTOR CABLE



PART #	MODEL #	LENGTH m (ft)
F62101011-001	6-Pin Mating Connector	-
879605-007	DSI-CBL-02M-1	2 (6.56)
879605-008	DSI-CBL-03M-1	3 (9.84)
Contact manufacturer for custom lengths		

ORDERING INFORMATION

HOW TO ORDER

	PIN OR CONNECTOR	MODEL #	PART #
±0.5	PIN	LSBP-0.5g	02550275-001
	CONNECTOR	LSBC-0.5g	02550275-006
±1.0	PIN	LSBP-1g	02550275-002
	CONNECTOR	LSBC-1g	02550275-007
±2.0	PIN	LSBP-2g	02550275-003
	CONNECTOR	LSBC-2g	02550275-008
±5.0	PIN	LSBP-5g	02550275-004
	CONNECTOR	LSBC-5g	02550275-009
±10.0	PIN	LSBP-10g	02550275-005
	CONNECTOR	LSBC-10g	02550275-010
±20.0	PIN	LSBP-20g	TBD
	CONNECTOR	LSBC-20g	02550112-000

850 Perimeter Road Manchester, NH 30103 USA

SENSORS: 800.227.5955 | METERS & AVIONICS: 800.638.3771
www.jewellinstruments.com | sensors@jewellinstruments.com

© Jewell Instruments 2024

