

Piezo resistive Accelerometer

BST 10L Uniaxial



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FEATURES

- Meets SEA J211 spec.
- DC MEMS PR Accelerometer
- High Shock
- $\pm 500g$ to $\pm 2000g$
- Very small size and rugged
- Aluminium Housing, anodized
- Calibration

APPLICATION

- Crash Tests
- Shock Tests

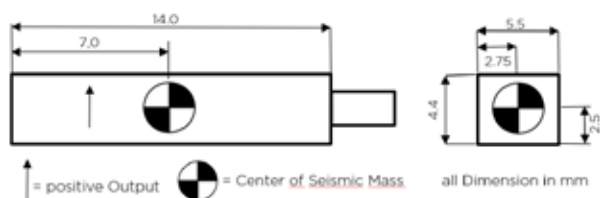


DESCRIPTION

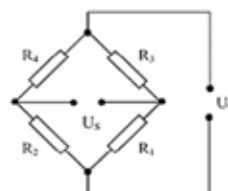
The model BST 10L is a uniaxial accelerometer based on piezo resistive technology. This accelerometer meets SAEJ211 specifications for instrumentation for impact testing. The fully Wheatstone-Bridge (4 wire system) configuration helps to connect the sensor on all data acquisition systems. The very light weight and small size of the sensor makes it easy to mount it on difficult positions at the car for a crash test or for shock test application.

Due to the anodized aluminium housing and the position of the seismic mass it is possible to use it for crash test. With a 6 m, very rugged, shielded and flexible 4-wire cable all common connectors are mountable. As an option, we supply the sensor with a Dallas ID and a Shunt resistor in the connector. A calibration for the sensor is obligatory.

DIMENSIONS



DIAGRAM



SPECIFICATION ACCELEROMETER

All data are typical at 23 °C AND 10 VDC SUPPLY.

Range (g)	500	1,000	2,000
Sensitivity typ. (mV/g)	0.035	0.018	0.016
Frequency response (Hz)	2,750	3,500	4,000
Resonance Frequency (kHz)	>13	>20	>23
Shock limit (g)	6,000	8,000	10,000

ELECTRICAL PERFORMANCES

Supply voltage	3 to 10 VDC constant
Zero measurement output	< ± 50 mV (Option <± 25 mV)
Input Bridge Resistance	1,600 to 2,000 Ω
Output Bridge Resistance	1,600 to 2,000 Ω
Isolation	sensing element isolated from housing

ENVIRONMENTAL PERFORMANCES

Thermal Shift Zero	< ± 0.05 % FSO (0 °C to 50 °C)
Thermal Shift Span	-0.2 % / °C ± 0.05 (0 °C to 50 °C)
Operation Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +100 °C
Protection Class	IP67
Damping	Gas Damping
Damping ratio	0.7 typ.
Non-Linearity	+/- 1 % of FSO
Transverse sensitivity	<2 % typ. (3 % max.)
Housing Material	Aluminium, anodized
Mounting	Glue
Dimensions	14.0 x 5.5 x 4.5 mm
Weight Housing	2.0 gram without cable
Cable	integrated, 4 wire, shielded, AWG 32
Cable Length	6 m
Cable Material	PUR, black
Cable Weight	6 grams/meter, Ø = 2.2 mm

CABLE CODE

red = Excitation +
black = Excitation -

green = Signal +
white = Signal -

ORDER INFORMATION

BST 10L-2000-6Z
10L = model name
2000 = Range 2000 g
6 = 6 m Cable
Z = no connector

OPTIONAL

Additional Cable Length
Connector
Dallas ID
Shunt Resistor
Calibration DAkS DIN EN ISO/IEC 17025:2018