Piezo resistive Accelerometer

BST 13C Uniaxial

CONTACT
+49 89 189 41 49-11
info@bay-sensortec.com

FEATURES

- Meets SAE-J211 spec.
- High Shock
- Small size
- Aluminium Housing, anodized
- DC Response
- Calibration

APPLICATION

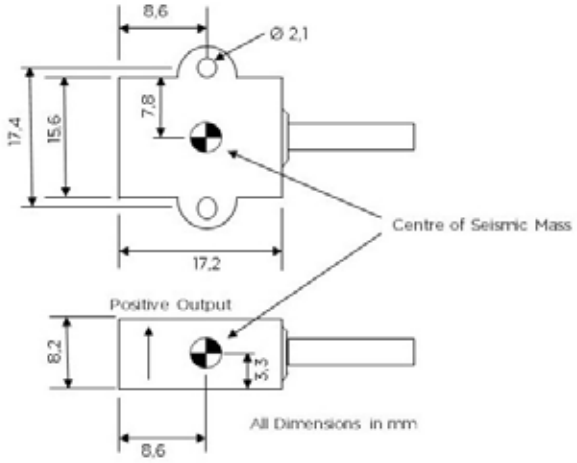
- Crash Test
- Shock Test

DESCRIPTION

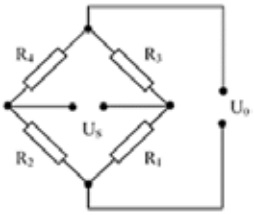
The model BST 13C is a uniaxial accelerometer based on piezo resistive technology. This accelerometer is designed for impact testing. The fully Wheatstone-Bridge (4 wire system) configuration helps to connect the sensor on all data acquisition systems. The very light weight and small size of the sensor 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 makes it 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)	0.04	0.018	0.016
Frequency response (Hz)	2,000	2,750	3,000
Resonance Frequency (kHz)	>13	>20	>23
Shock limit (g)	6,000	8,000	8,000

ELECTRICAL PERFORMANCES

Supply voltage	3 to 10 VDC constant
Zero measurement output	+/- 25 mV, max. +/- 50 mV
Input Bridge Resistance	1,600 to 2,000 Ω
Output Bridge Resistance	1,600 to 2,000 Ω

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	- 20 °C to 80 °C
Protection Class	IP64
Non-Linearity	< 1 %
Transverse sensitivity	2 % typ. (3 % max.)
Damping	Gas Damping
Damping ratio	0.7 typ.
Housing Material	Aluminium, anodized
Mounting	2 screws M2
Dimensions	23.4 x 17.2 x 8.2 mm (l x w x h)
Weight Housing	9 grams, without cable
Cable	integrated, 4 wire, shielded, AWG 30
Cable Length	6 m
Cable Material	PUR, black
Cable Weight	12 grams per meter, Ø 3.0 mm

CABLE CODE

red = Excitation +	green = Signal +
black = Excitation –	white = Signal –

ORDER INFORMATION

BST 13C-1000-6Z
13C = model name
1000 = Range 1000 g
6 = 6 m Cable
Z = no connector

OPTIONAL

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