

Capacitive Accelerometer

BST 52K1 Uniaxial

FEATURES

- Anodized Aluminium Housing
- DC Response (0 Hz) to 2500 Hz
- Voltage Output
- Low Noise
- Calibration

APPLICATION

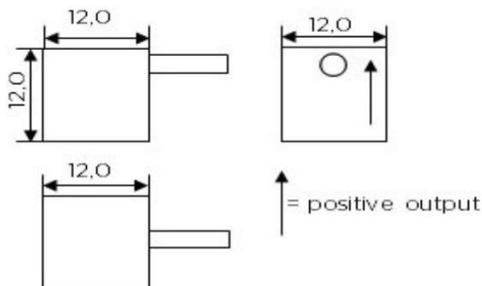
- Train
- Automotive
- Truck and Buses
- Comfort



DESCRIPTION

The model BST 52K1 is a uniaxial accelerometer based on variable capacitive technology with a good frequency response. The accelerometers are designed for relatively low amplitudes. The mounting is very easy with glue. The sensor has 6 m very high rugged and flexible cable. This makes it easy to connect the sensor on data acquisition systems. It operates between 5 and 28 VDC unregulated. As an option, we supply the sensor with connector, Dallas ID or TEDS module. A calibration for the sensor is obligatory.

DIMENSIONS



SPECIFICATION ACCELEROMETER

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

Range (g)	2	5	10	25	50	100	200
Frequency (Hz)	0-250	0-300	0-450	0-1,000	0-1,500	0-2,000	0-2,500
Sensitivity (mV/g) (Differential)	2000	800	400	160	80	40	20
Noise ($\mu\text{g}/\text{root Hz}$)	7	12	18	25	50	100	200

Single Ended Mode (3-wire) is half of the Sensitivity from differential Signal.

ELECTRICAL PERFORMANCES

Supply voltage	5 to 28 VDC unregulated
Power Consumption	10 mA max.
Zero measurement output	+/- 50 mV typ in Differential Mode (≥ 10 g) +/- 80 mV typ in Differential Mode (2 g and 5 g) 2500 mV DC +/- 100 mV in Single Ended Mode
Isolation	sensing element isolated from housing

ENVIRONMENTAL PERFORMANCES

Sensitivity	20 mV/g up to 2000 mV/g (Differential Mode)
Shock limit	5,000 g
Operation Temperature	- 20 °C to + 80 °C
Storage Temperature	- 55 °C to + 120 °C
Protection Class	IP67
Housing Material	Aluminium, anodized
Mounting	Glue
Dimensions	12.0 x 12.0 x 12.0 mm (l x w x h)
Weight Housing	4 grams
Cable	4-wire shielded PUR-Cable, AWG 30
Cable Length	6 m
Cable Material	PUR, black
Cable Weight	12 grams per meter, \varnothing 3.0 mm

CABLE CODE DIFFERENTIAL

half signal

red = Excitation +
black = Excitation -

green = Signal +
white = Signal -

CABLE CODE SINGLE ENDED

red = Excitation +
black = Excitation -

green = Signal +

ORDER INFORMATION

BST 52K1-050-6Z
52K1 = Model Name
050 = Range 50 g
6 = 6 m Cable
Z = no connector

OPTIONAL

Additional Cable Length
Connector
TEDS
Dallas ID
Calibration DAkKS DIN EN ISO/IEC 17025:2018