

Capacitive Accelerometer

BST 54K1 Uniaxial



CONTACT

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

FEATURES

- Aluminium Housing, Anodized
- Protections Class IP67
- Option: Stainless Steel Housing
- DC Response (0Hz) to 2500 Hz
- Very Low Noise
- High Voltage Output
- Calibration

APPLICATION

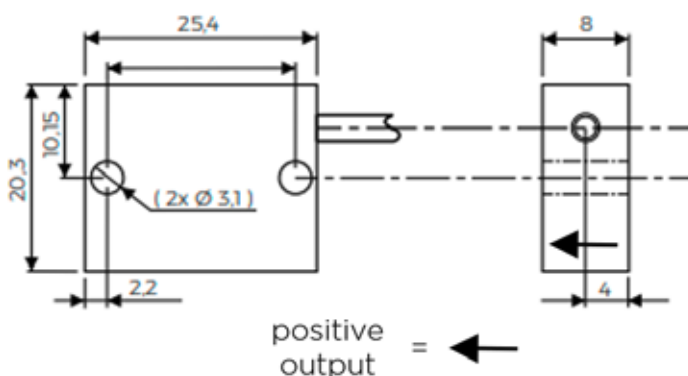
- Test Flight
- Truck and Buses
- Train
- Civil Engineering
- Automotive
- Comfort



DESCRIPTION

The model BST 54K1 is a uniaxial accelerometer based on variable capacitive technology with a very good Signal-to-Noise Ratio. The accelerometers are designed for relatively low amplitudes. It can be easily mounted with two screws. 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. The housing is available in Aluminium and Stainless Steel. As an option, we supply the sensor with connector, Dallas ID or TEDS module. A calibration for the sensor is in the scope of delivery as a standard.

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 (µg/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	4000 g (2 g and 5 g); 10000 g (>10 g)
Operation Temperature	- 50 °C to + 120 °C
Storage Temperature	- 55 °C to + 125 °C
Protection Class	IP67
Housing Material	Aluminium anodized, Option: Stainless Steel
Mounting	2 holes for screws M3
Dimensions	25.1 x 20.3 x 8.0 mm (l x w x h)
Weight Housing	20 grams, without cable
Cable	4-wire shielded PUR-Cable, AWG 30
Cable Length	6 m
Cable Material	PUR, black
Cable Weight	12 grams per meter, Ø 3.0 mm

CABLE CODE DIFFERENTIAL

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

CABLE CODE SINGLE ENDED

half signal

red = Excitation +	green = Signal +
black = Excitation -	

ORDER INFORMATION

BST 54K1-050-6Z

54K1 = Model Name

050 = Range 50 g

6 = 6 m Cable

Z = no connector

OPTIONAL

Additional Cable Length

Connector

TEDS

Dallas ID

Stainless Steel housing

Sensor housing with connector

Calibration DAkkS DIN EN ISO/IEC 17025:2018