

# Capacitive Accelerometer

**BST 58K1** Uniaxial



**CONTACT**

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## FEATURES

- Aluminium Housing, Anodized
- Protection Class IP67
- Very Low Noise
- DC Response (0 Hz) to 2500 Hz
- High Voltage Output
- Calibration

## APPLICATION

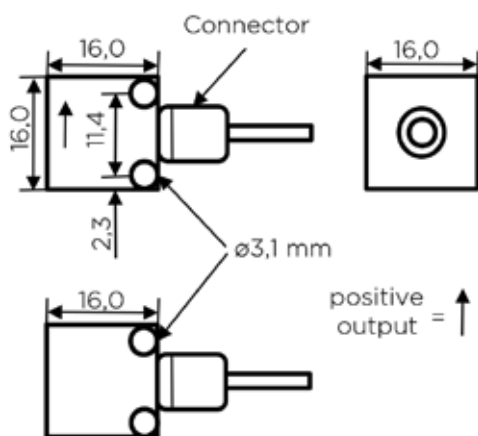
- Motion
- Automotive Truck and Buses
- Train
- Comfort



## DESCRIPTION

The model BST 58K1 is a uniaxial accelerometer based on variable capacitive technology with a good frequency response. 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 8 and 28 VDC unregulated. The sensor is available with a connector in the housing as well. This sensor has more possibilities for mounting. 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 (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. per axe
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
Mounting	2 Screws M3 x 25
Dimensions	16.0 x 16.0 x 16.0 mm (l x w x h)
Weight Housing	12 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 +  
black = Excitation -

green = Signal +  
white = Signal -

### CABLE CODE SINGLE ENDED

red = Excitation +  
black = Excitation -

green = Signal +

### ORDER INFORMATION

BST 58K1-050-6Z
58K1 = 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