Capacitive Accelerometer
BST 54K1 Uniaxial

Features

- Anodized Aluminium Housing
- Option: Stainless Steel
- DC Response
- Voltage Output
- Calibration

Description

The new 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. Due to the mounting with two screws, the sensor has 6m very high rugged and flexible cable which makes it easy to connect the sensor on data acquisition systems. It operates between 8 and 30 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 obligatory.

Application

- Truck and Busses
- Train
- Motion
- Automotive
- Comfort

Dimensions
**Specifications**

- **Range**: from 2 g to 200 g
- **Sensitivity**: 20 mV/g up to 2000 mV/g
- **Supply voltage**: 8 to 30 VDC unregulated
- **Power Consumption**: max. 8 mA
- **Zero measurement output**:
  - +/- 80 mV typ in Differential Mode (≥ 10 g)
  - +/- 150 mV typ in Differential Mode (2 and 5 g)
  - 2500 mV DC +/- 150 mV in Single Ended Mode
- **Frequency 5% typ**: 0 Hz to 850 Hz
- **Shock limit**: 2000 g (2 g and 5 g); 4000 g (>10 g)
- **Operation Temperature**: -25° to 100° C
- **Dimensions**: 25.1 x 20.3 x 8.0 mm (l x w x h)
- **Weight**: 20 grams
- **Case material**: anodized Aluminium
  - Option: Stainless Steel

**Individual Data**

<table>
<thead>
<tr>
<th>Range g</th>
<th>Frequency Hz</th>
<th>Sensitivity mV/g</th>
<th>Noise μg/root Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>0-90</td>
<td>2000</td>
<td>7</td>
</tr>
<tr>
<td>5</td>
<td>0-150</td>
<td>800</td>
<td>12</td>
</tr>
<tr>
<td>10</td>
<td>0-250</td>
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<td>25</td>
<td>0-400</td>
<td>160</td>
<td>25</td>
</tr>
<tr>
<td>50</td>
<td>0-650</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>100</td>
<td>0-700</td>
<td>40</td>
<td>100</td>
</tr>
<tr>
<td>200</td>
<td>0-850</td>
<td>20</td>
<td>200</td>
</tr>
</tbody>
</table>

**Cable Code Differential**

- **Red** = Excitation +
- **Black** = Excitation -
- **Green** = Signal +
- **White** = Signal -

**Cable Code Single ended**

- **Red** = Excitation +
- **Black** = Excitation -
- **Green** = Signal

**Order information**

- **BST 54K1A-050-6Z**
- **54K1 = Model Name**
- **A = Aluminium**
- **E = Stainless Steel**
- **050 = Range 50 g**
- **6 = 6 m shielded cable**
- **Z = no connector**