Capacitive Accelerometer
BST 53K1 Uniaxial

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

Description
The new model BST 53K1 is a uniaxial accelerometer based on variable capacitive technology with a very good Signal-to-Noise Ratio. The accelerometer is designed for relatively low amplitudes. Due to the mounting with two screws, the sensor has 6 m very high rugged and flexible PUR-cable this 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 included.

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

Dimensions

![Accelerometer Dimensions Diagram]
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 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    24.2 x 17.2 x 8.3 mm (l x w x h)
Weight     10 grams (Al) without cable
Case material    anodized Aluminium
                      Option: Stainless Steel

Individual Data

<table>
<thead>
<tr>
<th>Range g</th>
<th>2</th>
<th>5</th>
<th>10</th>
<th>25</th>
<th>50</th>
<th>100</th>
<th>200</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Hz</td>
<td>0-90</td>
<td>0-90</td>
<td>0-250</td>
<td>0-400</td>
<td>0-650</td>
<td>0-700</td>
<td>0-850</td>
</tr>
<tr>
<td>Sensitivity mV/g</td>
<td>2000</td>
<td>800</td>
<td>400</td>
<td>160</td>
<td>80</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>Noise μg/root Hz</td>
<td>7</td>
<td>12</td>
<td>18</td>
<td>25</td>
<td>50</td>
<td>100</td>
<td>200</td>
</tr>
</tbody>
</table>

Cable Code Differential

Red = Excitation +  Green = Signal +
Black = Excitation –  White = Signal –

Cable Code Single ended (Half of the Differential Signal)

Red = Excitation +  Black = Excitation –  Green = Signal

Order information

BST 53K1(E)-050-6Z
53K1 = Model Name
A = Aluminium
E = Stainless Steel
050 = Range 50 g
6 = 6 m shielded cable
Z = no connector