IMU Inertial Measurement Unit
Model BST IMU-C six axes

Features
- Anodized Aluminium Housing
- DC Response
- Damping 0.7
- Very low power consumption
- Low Mass

Application
- Crash test
- Shock test

Description
The new model BST IMU-C is a multi-canal sensor with three accelerometers based on piezo resistive technology. With a four-active arm Wheatstone-Bridge (4 wire system) configuration and a damping ratio 0.7 and three Gyros which helps to connect the sensor on all data acquisition systems. The light weight and small size of the sensor makes it easy to mount it on difficult places at the car for a crash test or flat-ter test application. Due to the anodized aluminium housing the mounting is easy with two screws M3. The sensor has two 6m very high rugged, shielded and flexible 4-wire per axe PUR-cable.

As an option, we supply the sensor with Lemo-connectors, Dallas ID and a Shunt resistor in the connector if it possible.

A calibration for the sensor is standard.
## Specification Accelerometer

<table>
<thead>
<tr>
<th>Range (g)</th>
<th>250</th>
<th>500</th>
<th>1000</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity typ. (mV/g)</td>
<td>8.0</td>
<td>4.0</td>
<td>0.18</td>
<td>0.16</td>
</tr>
<tr>
<td>Frequency response (Hz)</td>
<td>1000</td>
<td>2000</td>
<td>2500</td>
<td>3000</td>
</tr>
</tbody>
</table>

## Specification Gyro

<table>
<thead>
<tr>
<th>Range (°/S)</th>
<th>900</th>
<th>1500</th>
<th>3000</th>
<th>5000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity (mV/°/S)</td>
<td>2.2</td>
<td>1.33</td>
<td>0.67</td>
<td>0.4</td>
</tr>
<tr>
<td>Frequency Response (Hz)</td>
<td>50</td>
<td>50</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

- **Supply voltage**: 5 to 10 VDC constant
- **Zero measurement output**: +/- 50 mV (Option +/- 25 mV) Accelerometer, +/- 150 mV Gyro
- **Thermal Shift Zero**: < +/- 0.04 % FSO (0° to 50° C)
- **Thermal Shift Span**: - 0.2 % /°C +/- 0.05 (0° to 50° C)
- **Power Consumption**: 10 mA / axis Gyro, 4 mA / axis Accelerometer
- **Non-Linearity**: < 1% of FSO
- **Transverse sensitivity**: 2% typ (3% max.)
- **Damping ratio**: 0.7 typ Accelerometer
- **Shock limit**: 3000 g
- **Operation Temperature**: -20° to 60° C
- **Material**: Aluminium, anodized
- **Dimensions**: 30.0 x 26.0 x 21.3 mm
- **Weight Housing**: 35 grams without cable
- **Weight Cable**: 30 grams per meter
- **Cable**: 2 x 6m, 12wire, shielded PUR, AWG 30

### Cable Code

#### x-axis
- red / violet = Excitation +
- black / violet = Excitation -
- green / violet = Signal +
- white / violet = Signal -

#### y-axis
- red / grey = Excitation +
- black / grey = Excitation -
- green / grey = Signal +
- white / grey = Signal -

#### z-axis
- red = Excitation +
- black = Excitation -
- green = Signal +
- white = Signal -

## Order information

BST IMU-C-1000/1500-6Z
- IMU-C = model name
- 1000 = Range 1000g Accelerometer
- 1500 = Range 1500°/S Gyro
- 6 = 6 m Cable
- Z = no connector