

## IMU Inertial Measurement Unit

BST IMU-CC Six axes

### FEATURES

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

### APPLICATION

- Crash Tests
- Shock Tests



### DESCRIPTION

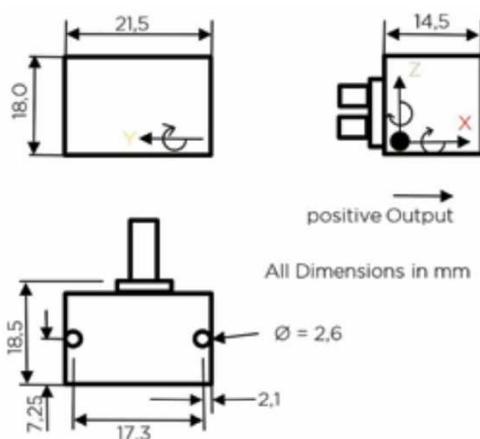
The model BST IMU-CC is a multi-canal sensor with three accelerometers based on piezo resistive technology. With a four-active arm Wheatstone-Bridge (4 wire system) configuration and a damping ratio 0.7 and three Gyros which helps to connect the sensor on all data acquisition systems. The light weight and small size of the sensor makes it easy to mount it on difficult places at the car for a crash test or flatter test application. Due to the

anodized aluminium housing the mounting is easy with two screws M2.5. The sensor has two 6 m very high rugged, shielded and flexible PUR-cable 4-wire per axe.

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

A calibration for the sensor is standard.

### DIMENSIONS



### SPECIFICATION ACCELEROMETER

All data are typical at 23 °C AND 10 VDC SUPPLY.

Range (g)	500	1,000	2,000
Sensitivity typ. (mV/g)	0.4	0.18	0.16
Frequency response (Hz)	2,000	3,000	4,000

### SPECIFICATION GYRO

Range (°/S)	900	1,500	2,900	5,000	10,000	20,000
Sensitivity (mV/°/S)	2.5	1.3	0.75	0.4	0.2	0.1
Frequency response (Hz)	200	200	200	2,000	2,000	2,000

### BASIC SPECIFICATION

Supply voltage	5 to 10 VDC
Zero measurement output	+/- 50 mV Accelerometer +/- 100 mV Gyro
Thermal Shift Zero	< +/- 0.04 % FSO (0 °C to 50 °C)
Thermal Shift Span	-0.2 % / °C +/- 0.05 (0 °C to 50 °C)
Power Consumption	9 mA / axis Gyro 6 mA / axis Accelerometer
Non-Linearity	<1 % of FSO
Transverse sensitivity	2 % typ (3 % max.)
Damping	gas damping
Shock limit	3,000 g
Isolation	sensing element isolated from housing
Operation Temperature	-25 °C to 80 °C
Storage Temperature	-50 °C to 120 °C
Protection Class	IP64
Material	Aluminium, anodized
Dimensions	21.5 x 14.5 x 18.0 mm
Weight Housing	25 grams without cable
Weight Cable	15 grams per meter
Cable	2 x 6 m, 12 wire, shielded PUR, Ø=3.0 mm, AWG 32

### CABLE CODE

<b>x-axis</b> orange = Excitation + purple = Excitation -	blue = Signal + pink = Signal -
<b>y-axis</b> yellow = Excitation + brown = Excitation -	light green = Signal + grey = Signal -
<b>z-axis</b> red = Excitation + black = Excitation -	green = Signal + white = Signal -

### ORDER INFORMATION

BST IMU-CC-5-29-6Z
IMU-CC = model name
5 = Range 500 g for Accelerometer
29 = Range 2900 °/S for Gyro
6 = 6 m Cable
Z = no connector

### OPTIONAL

Additional Cable Length
Connector
Dallas ID
Shunt Resistor
Calibration DAKKS DIN EN ISO/IEC 17025:2018