DUETTO engineering

bay SensorTec

IMU Inertial Measurement Unit

BST IMU-M Six axes

FEATURES

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

APPLICATION

- Automotive
- Truck
- Wind Energy
- Geology
- Marin

DESCRIPTION

The model BST IMU-M is a multi-canal sensor with three accelerometers based on capacitive technology 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 for many test applications. Due to the anodized aluminium housing the mounting is easy with two screws M3. The sensor has 2 m very high rugged, shielded and flexible PUR-cable.

As an option, we supply the sensor with connectors, TEDS and IP-67.

A calibration for the sensor is standard.

DIMENSIONS
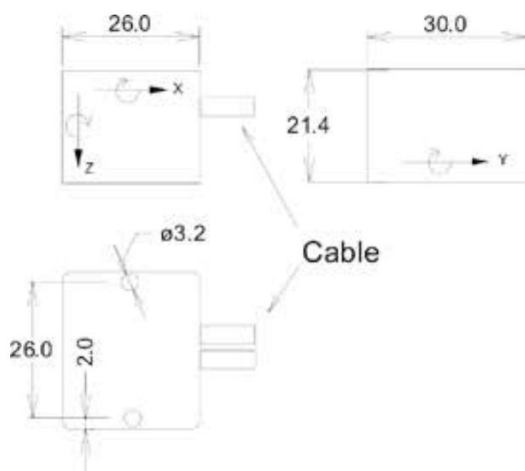
SPECIFICATION ACCELEROMETER

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

Range (g)	2	5	10	25
Sensitivity typ. (mV/g)	1,000	400	200	80
Frequency response (Hz)	100	100	250	400

SPECIFICATION GYRO

Range (°/S)	75	150	300	600
Sensitivity (mV/°/S)	13.5	6.7	3.3	1.65
Frequency response (Hz)	50	50	100	100

BASIC SPECIFICATION

Supply voltage	5 to 28 VDC unregulated
Zero measurement output	2500 mV +/- 100 mV Accelerometer 1650 mV +/- 80 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	5 mA / axis Gyro 7 mA / axis Accelerometer
Non-Linearity	<1 % of FSO
Transverse sensitivity	2 % typ (3 % max.)
Damping	gas damping
Shock limit	1,000 g
Isolation	sensing element isolated from housing
Operation Temperature	- 20 °C to + 80 °C
Storage Temperature	- 50 °C to + 120 °C
Protection Class	IP64
Material	Aluminium, anodized
Dimensions	30.0 x 26.0 x 21.3 mm (l x w x h)
Weight Housing	35 grams without cable, Option: IP67
Weight Cable	30 grams per meter
Cable	2 m, 10 wires, shielded PUR, AWG 30

CABLE CODE

Accelerometer	white = Signal X
red = Supply +	yellow = Signal Y
black = Supply −	green = Signal Z

Gyro	white/grey = Signal X
red / grey = Supply +	yellow/grey = Signal Y
black / grey = Supply −	green/grey = Signal Z

ORDER INFORMATION

BST IMU-M-005-300-2Z
IMU-M = model name
005 = Range 5 g Accelerometer
300 = Range 300 °/S Gyro
2 = 2 m Cable
Z = no connector

OPTIONAL

Additional Cable Length
Connector
Dallas ID
TEDS
Protection Class IP67
Shunt Resistor
Calibration DAkkS DIN EN ISO/IEC 17025:2018