

Capacitive Accelerometer

BST SEA 57K420 Uniaxial



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FEATURES

- Stainless Steel Housing
- Protection Class IP68
- DC Response (0Hz) to 1000 Hz
- 4 to 20mA Output
- Very Low Noise
- Calibration

APPLICATION

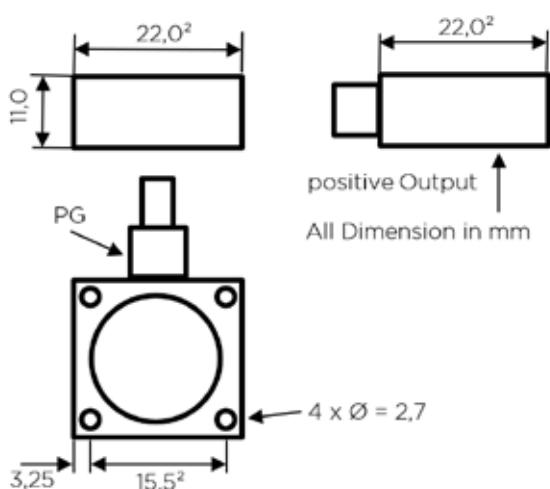
- Wind Energy
- Structural Analyses
- Bridge Monitoring
- Civil Engineering
- Rugged Applications



DESCRIPTION

The model BST SEA 57K420 is a uniaxial accelerometer based on damped variable capacitive technology with a very high Signal-to-Noise Ratio. The accelerometers are designed for relatively low amplitudes and high resolution. Due to the 4 screws the sensor is easy to mount. The sensor has 6m very high rugged and flexible cable. This makes it possible to connect the sensor on data acquisition systems. It operates between 15 and 24 VDC unregulated. The housing is very rugged and has an IP 68 Grade due to the Stainless Steel. As an option, we supply the sensor with connector, Dallas ID or TEDS module. A calibration for the sensor is obligatory.

DIMENSIONS



SPECIFICATION ACCELEROMETER

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

Range (g)	2	5	10	25
Frequency (Hz)	0–250	0–300	0–450	0–1,000
Sensitivity (mA/g)	4	1.6	0.8	0.32
Noise (µg/root Hz)	7	12	18	25
Shock limit (g)	4000	4000	6000	6000

Single Ended Mode (3-wire) is half of the Sensitivity from differential Signal.

ELECTRICAL PERFORMANCES

Supply voltage	15 to 24 VDC unregulated
Power Consumption	10 mA max.
Zero measurement output	12 mA
Signal Spann	4 to 20 mA
Isolation	sensing element isolated from housing
Non-Linearity	< 1 %
Transverse sensitivity	2 % typ. 3 % max.

ENVIRONMENTAL PERFORMANCES

Thermal Shift Zero	< ± 0.2 % FSO (-25 °C to +80 °C)
Thermal Shift Span	< ± 0.2 % FSO (-25 °C to +80 °C)
Operation Temperature	-50 °C to +120 °C
Storage Temperature	-55 °C to +125 °C
Protection Class	IP68
Housing Material	Stainless Steel, welded
Mounting	4 holes for screw M2.5
Dimensions	22.0 x 22.0 x 11.0 mm (l x w x h)
Weight Housing	36 grams, without cable
Cable	3-wire shielded Cable, AWG 30
Cable Length	6 m
Cable Material	PUR, black
Cable Weight	12 g per meter, wire cross-section 0,14 mm ² , Ø 3.0 mm

CABLE CODE

green = Excitation +
brown = Excitation -

white = Signal

ORDER INFORMATION

BST 57K420-050-6Z
57K420 = Model Name
050 = Range 50 g
6 = 6 m Cable
Z = no connector

OPTIONAL

Additional Cable Length
Connector
TEDS
Dallas ID
Calibration DAkkS DIN EN ISO/IEC 17025:2018