

## Universal Testing Type Accelerometer

### DETAILS

BXXB01 series uniaxial acceleration sensor, using piezoelectric ceramic shear structure, with a wide band frequency response, high-quality piezoelectric ceramic with long-term stability can ensure years of accurate measurement. Internal with low impedance circuit, low noise, better sensitivity temperature response and other characteristics. The housing is laser welded stainless steel with high sealing grade and strength, and is equipped with M5 mounting threads at the bottom.

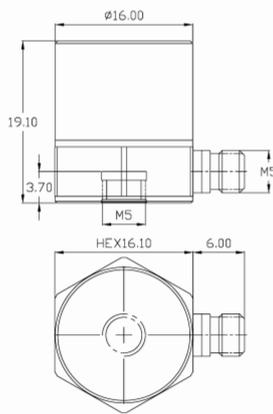
### FEATURES

- IEPE Universal Acceleration Sensor
- Standard series with multiple range options
- Shear structure
- Broadband response

### TYPICAL APPLICATIONS

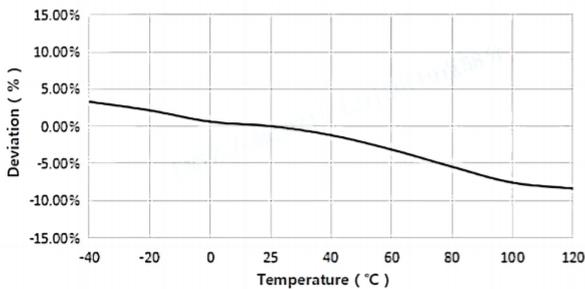
- Modal analysis
- Vibration control
- General vibration monitoring

**Fig\_1** Dimensions of BXXB01

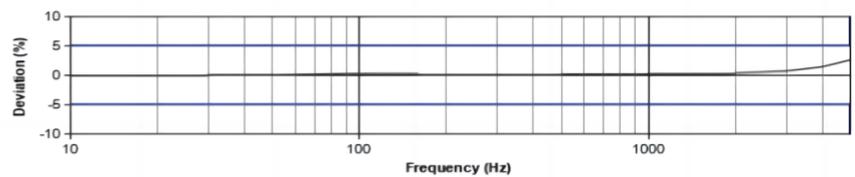


BXXB01

**Fig\_2** Typical Temperature Response



**Fig\_3** Typical Frequency Response



## Specifications-BXXB01

| MODEL NUMBER                            |      | UNIT                   | B08B01                 | B09B01  |
|---|------|------------------------|------------------------|---------|
| <b>PERFORMANCE</b>                      |      |                        |                        |         |
| Sensitivity(±10%) <sup>1</sup>          |      | mV/g                   | 300                    | 500     |
|   |      | mV/(m/s <sup>2</sup> ) | 30                     | 50      |
| Measurement Range                       |      | g                      | ±15                    | ±10     |
| Broadband Resolution <sup>2</sup>       |      | g rms                  | 0.00004                | 0.00002 |
| Non-Linearity <sup>3</sup>              |      | %                      | 1                      |         |
| Frequency Range                         | ± 5% | Hz                     | 1-4k                   | 1-5k    |
|   | ±10% |                        | 0.5-6k                 | 0.5-6k  |
| Resonance Frequency <sup>2</sup>        |      | Hz                     | ≥18k                   | ≥17k    |
| Discharge Time Constant <sup>2</sup>    |      | s                      | ≤1                     |         |
| Transverse Sensitivity                  |      | %                      | ≤5                     |         |
| <b>ELECTRICAL</b>                       |      |                        |                        |         |
| Excitation Voltage                      |      | VDC                    | 20-30                  |         |
| Constant Current Excitation             |      | mA                     | 2-20                   |         |
| Output Impedance                        |      | Ω                      | ≤100                   |         |
| Output Bias Voltage                     |      | V                      | 8-12                   |         |
| Electrical Isolation                    |      | Ω                      | -                      |         |
| Spectral Noise <sup>2</sup>             |      | μg/√Hz                 | 2                      | 1.2     |
|   |      |                        | 0.8                    | 0.48    |
|   |      |                        | 0.53                   | 0.32    |
| <b>ENVIRONMENTAL</b>                    |      |                        |                        |         |
| Sinusoidal Vibration Limit <sup>4</sup> |      | g                      | 180                    | 80      |
| Shock Limit <sup>4</sup>                |      | g                      | 350                    | 200     |
| Temperature Range                       |      | °C                     | -40~120                |         |
|   |      | °F                     | -40~248                |         |
| Temperature Response <sup>2</sup>       |      | %/°C                   | -0.1                   |         |
| <b>PHYSICAL</b>                         |      |                        |                        |         |
| Sealing                                 |      | -                      | Laser welding IP68     |         |
| Sensing Element                         |      | -                      | Piezoelectric ceramics |         |
| Housing Material                        |      | -                      | Stainless steel        |         |
| Size                                    |      | mm                     | HEX 16.1×19.1          |         |
|   |      | in                     | HEX 0.634×0.752        |         |
| Electrical Connector                    |      | -                      | M5 Side (Opt. 10-32)   |         |
| Mounting Thread                         |      | -                      | M5 (Opt. 10-32)        |         |
| Weight <sup>2</sup>                     |      | g                      | 25                     | 30      |
|   |      | oz                     | 0.882                  | 1.058   |
| TEDS Optional <sup>5</sup>              |      | -                      | Yes                    |         |

## Additional Information

### Note:

- @ 160Hz, 24VDC, 4mA conditions
- Typical values
- JBT 6822-2018 7.12.1 Vibration Testing Method
- References the mechanical structure of the sensor not being damaged in a non powered state, rather than in a working state
- Some products may have changes in size after adding TEDS

### BXXB01

Supplied Accessories:

- Product Verification Report
- Install Screws

### OPTIONAL VERSIONS

- A: 10-32 Output Connector
- E: 10-32 Mounting Threads

### COMPLIANCE WITH STANDARDS



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