

Watertight Type Accelerometer

DETAILS

BXXA71 series watertight acceleration sensor built-in micro-small impedance converter, can be vibration process charge signal into voltage signal. One-piece waterproof polyurethane cable, unique waterproof technology multi-layer protection measures to withstand pressure up to 2MPa, the shell of stainless steel laser welding, can be achieved in small size and light weight and other characteristics.

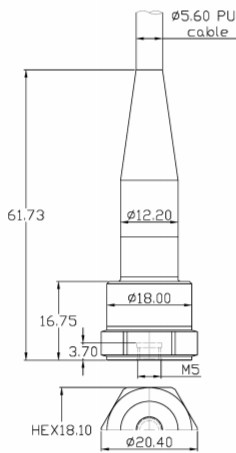
FEATURES

- Built-in micro integrated circuits
- Vulcanized for moisture and corrosion resistance
- Pressure resistance greater than 5MPa

TYPICAL APPLICATIONS

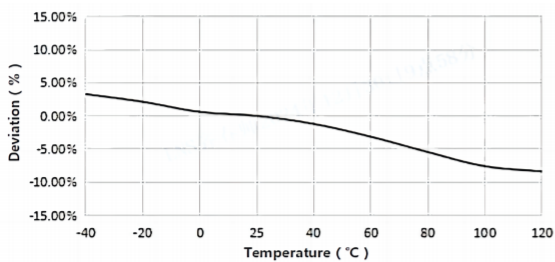
- Underwater Vibration Test

Fig_1 Dimensions of BXXA71

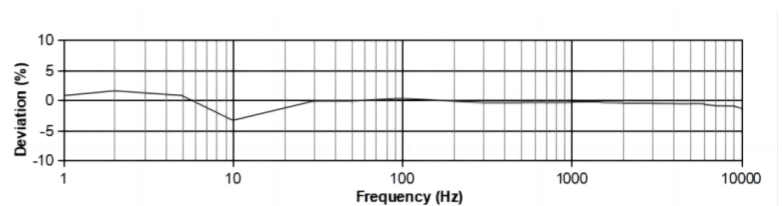


BXXA71

Fig_2 Typical Temperature Response



Fig_3 Typical Frequency Response



Specifications-BXXA71

| MODEL NUMBER | UNIT | B02A71 | B03A71 | B05A71 | B06A71 |
|---|------------------------|------------------------|---------|---------|--------|
| PERFORMANCE | | | | | |
| Sensitivity ¹ | mV/g | 10(±10%) | 20 | 50 | 100 |
| | mV/(m/s ²) | 1 | 2 | 5 | 10 |
| Measurement Range | g | ±500 | ±250 | ±100 | ±50 |
| Broadband Resolution ² | g rms | 0.001 | 0.0005 | 0.0002 | 0.0001 |
| Non-Linearity ³ | % | 1 | | | |
| Frequency Range | ± 5%(Hz) | 1-10k | 1-10k | 1-8k | 1-7k |
| | ±10%(Hz) | 0.5-11k | 0.5-11k | 0.5-10k | 0.5-8k |
| Resonance Frequency ² | Hz | ≥50k | ≥50k | ≥50k | ≥35k |
| Discharge Time Constant ² | s | ≤1 | | | |
| Transverse Sensitivity | % | ≤5 | | | |
| ELECTRICAL | | | | | |
| 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 ² | μg/√Hz | 60 | 30 | 12 | 6 |
| | | 24 | 12 | 4.8 | 2.4 |
| | | 16 | 8 | 3.2 | 1.6 |
| ENVIRONMENTAL | | | | | |
| Sinusoidal Vibration Limit ⁴ | g | 3000 | 2000 | 1000 | 400 |
| Shock Limit ⁴ | g | 8000 | 5000 | 4000 | 3000 |
| Temperature Range | °C | -50-120 | | | |
| | °F | -58-248 | | | |
| Temperature Response ² | %/°C | -0.07 | | | |
| PHYSICAL | | | | | |
| Sealing | - | Laser welding IP68 | | | |
| Sensing Element | - | Piezoelectric ceramics | | | |
| Housing Material | - | Titanium Alloy | | | |
| Size | mm | HEX 18.10×61.73 | | | |
| | in | HEX 0.713×2.430 | | | |
| Electrical Connector | - | Top Connected cable | | | |
| Mounting Thread | - | M5 (Opt. 10-32) | | | |
| Weight ² | g | 15 | 15 | 15 | 25 |
| | oz | 0.529 | 0.529 | 0.529 | 0.882 |
| TEDS Optional ⁵ | - | 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

BXXA71

Supplied Accessories:

- Product Verification Report
- Install Screws

OPTIONAL VERSIONS

-E: 10-32 Mounting Threads

COMPLIANCE WITH STANDARDS



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