

Datasheet

Black Oak Engineering precision electronic instruments

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XShock-500g Shock & Vibration Sensor

Part number BE-XSH5
Version 1.0



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Description. The XShock-500 is a simple, rugged, compact, analog shock and vibration sensor that measures up to ± 500 g. It is small enough to fit into tight spaces, where it can be firmly secured.

Basic specifications

- Measures shock and vibration to ± 500 g.
- Highly directional annular shear piezo transducer, 1-axis.
- Axial sensitivity (vertical direction in figure), z-axis upward as shown.
- Includes wall mount power supply. (US standard. Contact BOE for alternatives.)
- Standard BNC plug signal cable, 25 cm cable.
- Sensitivity transfer function if $6.0 \text{ V} \pm 10 \text{ mV/g}$, @100 Hz, $\pm 10\%$.
- Frequency response 0.5 to 25 kHz.
- Noise figure $8 \text{ } \mu\text{g}/\sqrt{\text{Hz}}$ @ 1 kHz.
- Linear $\pm 0.5\%$.
- Low power 60 μA .
- Temperature range -55 to $+120$ °C (-65 to $+245$ °F).
- Approximate -5% sensitivity NTC over entire range.
- Compact size: $29.5 \text{ } \varnothing \times 13.8 \text{ H mm}$ ($1.16 \text{ } \varnothing \times 0.543 \text{ H inch}$).
- Stainless steel Type 304 housing.
- Fully submersible to 2 m.
- May be attached to test surface with adhesive, wax, or clamp.
- Warning, accelerations greater than 500 g will damage the unit.
- EAN-13 0729043992782

BOE is here to support you. If you need a modification, contact us. Our Engineering team can often make adjustments to the standard design.

BOE is continuously improving. We also strive to keep one step ahead of procurement shortfalls. We will deliver to you the latest hardware version possible. In some cases specifications will change.

Approvals & Compliance

- RoHS. REACH.
- California Prop 65. There are no listed toxic materials in the PCBA.
- CE. The system is designed and tested to meet or exceed CE requirements for laboratory, non-safety-critical electronic devices.



Piping plover (*Charadrius melodus*) One of our favorite local shore birds. Groups are often seen hugging the shoreline just away from the crashing waves as they search for bugs, crabs, and worms.

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Warranty Policy. Any instrument ordered from BOE may be returned for full refund, less shipping costs, within 30 days of delivery, provided that the instrument has not, in the opinion of BOE been damaged or misused. An RMA number is required in all cases. See our *Standard Terms & Conditions - Instruments* for more details.

BOE reserves the right to make changes to these specifications as it deems necessary. All technical information contained herein is as accurate as possible; however BOE shall not be held responsible for any errors or for product use, nor for any infringements upon the rights of others which may result from its use. BOE products are not to be used in life support or safety critical applications.

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