



HGS (INDIA) LIMITED



HG-6HS Geophone Element



Based on the technology transfer for manufacturing the SM[®] range of geophones from Sensor[®] Nederland BV, HGS (India) Limited (erstwhile Geosource India Limited) offers the HG-6HS (High Sensitivity) geophone which is a long coil travel geophone based on the HG-4 design. The long coil travel offers advantages for higher tilt requirements and where large amplitude signals may be encountered. HG-6HS can be supplied for vertical and horizontal orientation.

A variety of 1-C and 3-C waterproof land cases can accommodate the HG-6HS geophone.

Features:

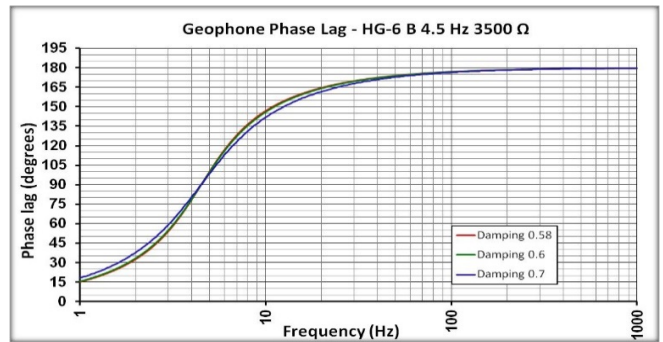
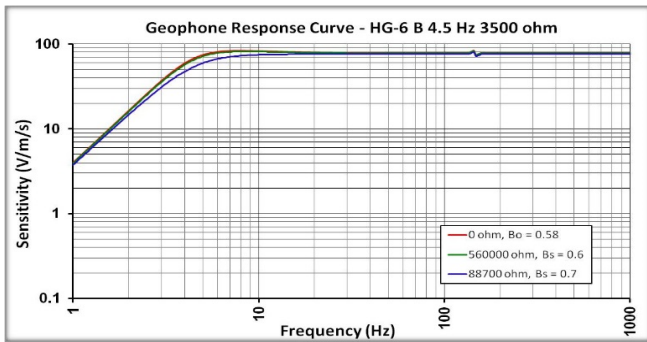
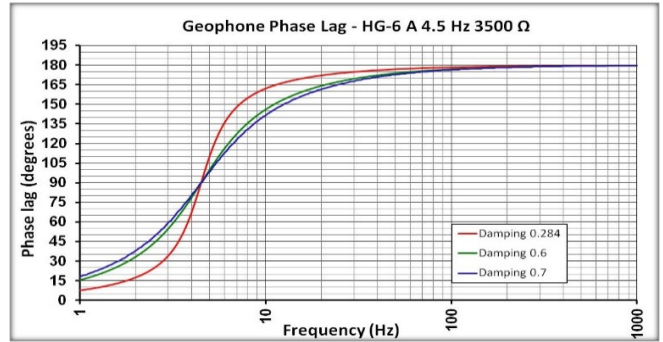
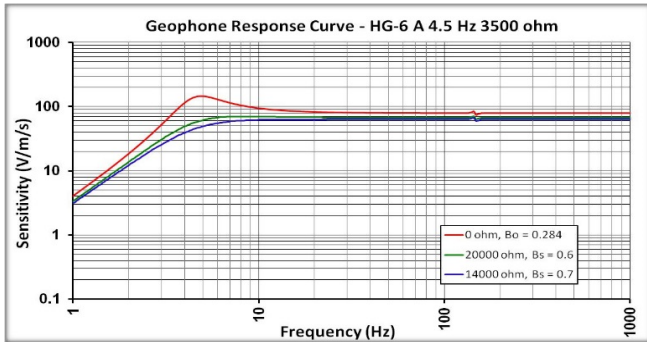
- Available in 4.5 Hz natural frequencies
- Vertical and horizontal versions available
- Rugged design with rotating-coil contacts
- High Sensitivity versions used in earthquake monitoring systems

Specifications - HG-6HS Low Frequency Geophone

| | A - Coil | B - Coil |
|---|-----------------|-----------------|
| Frequency | Value | Value |
| Natural frequency | 4.5 Hz | 4.5 Hz |
| Tolerance | ±0.5 Hz | ±0.5 Hz |
| Maximum tilt angle for specified Fn | 0° | 0° |
| Typical spurious frequency | 140 Hz | 140 Hz |
| Distortion | | |
| Distortion with 17.78 mm/s p.p. coil-to-case velocity | <0.5% | <0.3% |
| Distortion measurement frequency | 12 Hz | 12 Hz |
| Maximum tilt angle for distortion specification | 0° | 0° |
| Damping | | |
| Open circuit (typical) | 0.284 | 0.58 |
| Shunt for 0.6 damping | 20000 Ω | 560000 Ω |
| Shunt for 0.7 damping | 14000 Ω | 88700 Ω |
| Tolerance with calibration shunt | ±5% | ±5% |
| Resistance | | |
| Standard coil resistance | 3500 Ω | 3500 Ω |
| Tolerance | ±5% | ±5% |
| Sensitivity | | |
| Open - circuit Sensitivity | 78.9 V/m/s | 78.9 V/m/s |
| Tolerance | ±5% | ±5% |
| Moving mass | 15 g | 10 g |
| Max coil excursion p.p . | 4 mm | 4 mm |
| Physical Characteristics | | |
| Diameter | 25.4 mm | 25.4 mm |
| Height | 36 mm | 36 mm |
| Weight | 81 g | 81 g |
| Operating temperature range | -40°C to 100°C | -40°C to 100°C |
| Warranty Period* | 1 year | 1 year |

* Warranty excludes damage caused by high voltage and physical damage to the element case.
 All parameters are specified at +20°C in the vertical position unless stated otherwise.

Geophone Response Curve and Phase Lag



Ordering information

| Description | Part No. | Direction |
|-------------------------|----------|------------|
| HG-6HS 4.5 Hz | | |
| HG-6HS UA 4.5 Hz 3500 Ω | SG000114 | Upright |
| HG-6HS HA 4.5 Hz 3500 Ω | SG000081 | Horizontal |
| HG-6HS UB 4.5 Hz 3500 Ω | SG000082 | Upright |
| HG-6HS HB 4.5 Hz 3500 Ω | SG000086 | Horizontal |

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