



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. The HG-6HS geophone 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:

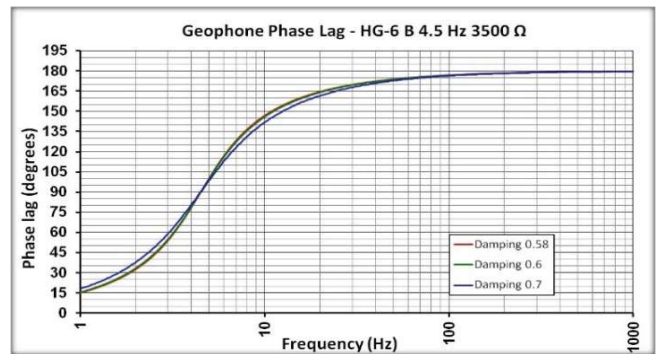
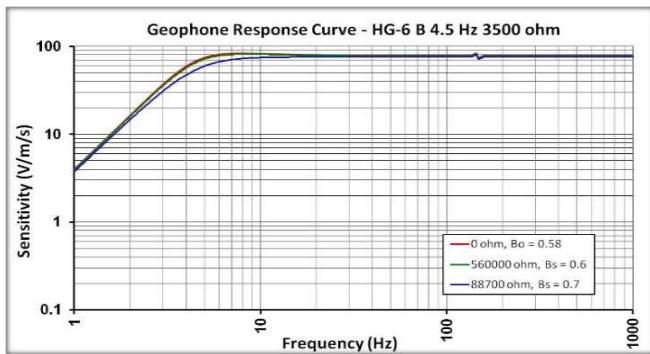
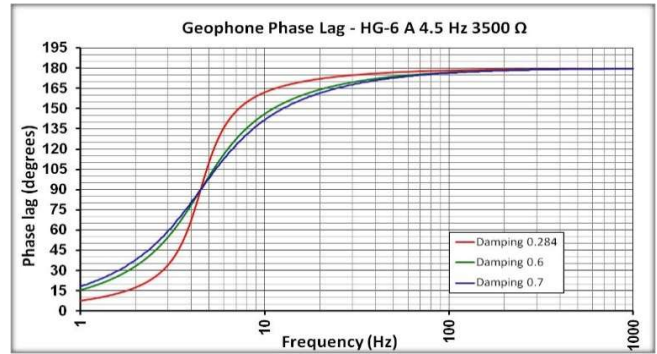
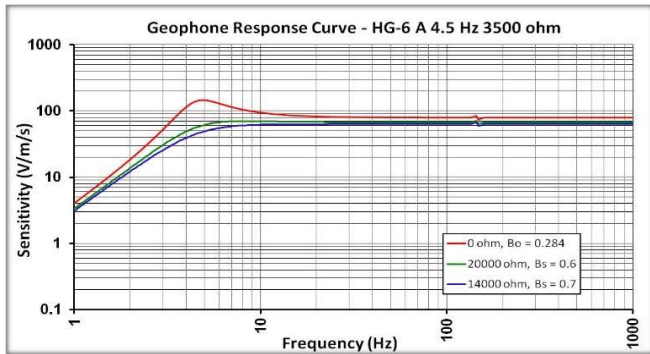
- Available in 4.5 Hz natural frequencies
- Vertical and horizontal versions available
- Rugged design with rotating-coil contacts
- High Sensitivity versions used in earthquake monitoring systems

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	0.580
Tolerance (open circuit)	±5%	±5%
Shunt for 0.6 damping	20000 Ω	560000 Ω
Shunt for 0.7 damping	14000 Ω	88700 Ω
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
Maximum coil excursion p.p .	4 mm	4 mm
Physical Characteristics		
Diameter	25.4 mm	25.4 mm
Height	36 mm	36 mm
Weight	86 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.

Geophone Response Curve and Phase Lag



Ordering information

Description	Part No.	Work direction
HG-6HS UA 4.5 Hz 3500 Ohm	SG000114	Upright
HG-6HS HA 4.5 Hz 3500 Ohm	SG000081	Horizontal
HG-6HS UB 4.5 Hz 3500 Ohm	SG000082	Upright
HG-6HS HB 4.5 Hz 3500 Ohm	SG000086	Horizontal
HG-6HS SB 4.5 Hz 3500 Ohm	SG000135	Vertical (pins down)

Version 1.3

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