



HGS (INDIA) LIMITED



HG-6 Omni-directional 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-6 geophone which is a long coil travel geophone based on the HG-4 design. The HG-6 Omni-directional geophone has been specially designed for non-gimballed 3C applications, in particular Ocean Bottom node and Down-hole 4D/4C applications where high repeatability and reliability are key performance characteristics

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

Features:

- Design adapted from popular omni-directional geophone used extensively in industrial applications
- Coil travel 4mm peak to peak
- High sensitivity version available (80V/m/s)
- Rugged construction with precious-metal contacts
- Design based on proven Sensor® rotating coil family of geophones

Specifications: HG-6 14Hz Omni-tilt Geophone

Frequency

	Value	Value
Natural frequency	14 Hz	14 Hz
Tolerance	±7%	±7%
Maximum tilt angle for specified fn	360°	360°

Distortion

Distortion with 17.78 mm/s p.p. coil-to-case velocity	<0.7%	<0.7%
Distortion measurement frequency	14 Hz	14 Hz

Damping

Open circuit	0.180	0.185
Tolerance (O.C.)	+10 / -5%	+10 / -5%
Shunt for 0.6 damping	634 Ω	5100 Ω
Shunt for 0.7 damping	442 Ω	3400 Ω

Resistance

Standard coil resistance	375 Ω	3500 Ω
Tolerance	±5%	±5%

Sensitivity

Open - circuit Sensitivity	28.8 V/m/s	80.0 V/m/s
Tolerance	+5 / -10%	+5 / -10%
$R_t B_c f_n$	5950 ΩHz	49931 ΩHz
Typical spurious frequency	190 Hz	190 Hz
Moving mass	11.1 g	10.2 g
Max coil excursion p.p .	0.5 mm	0.5 mm

Physical Characteristics

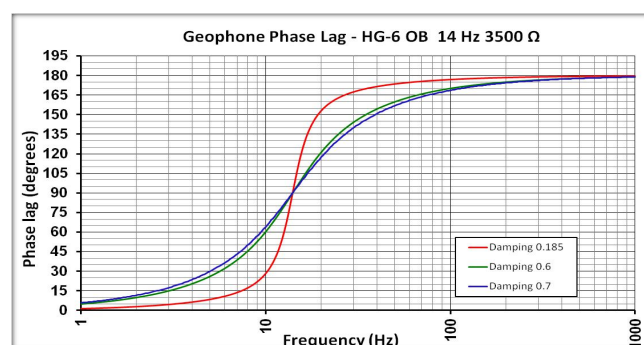
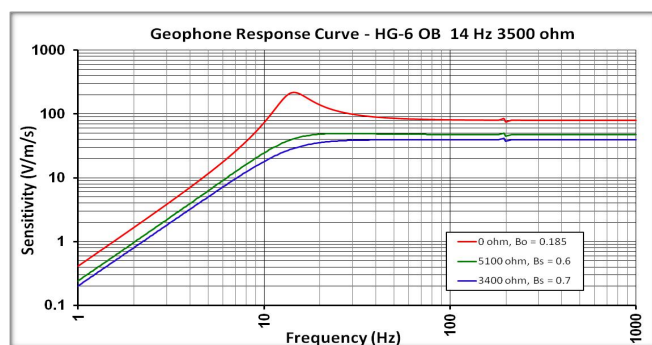
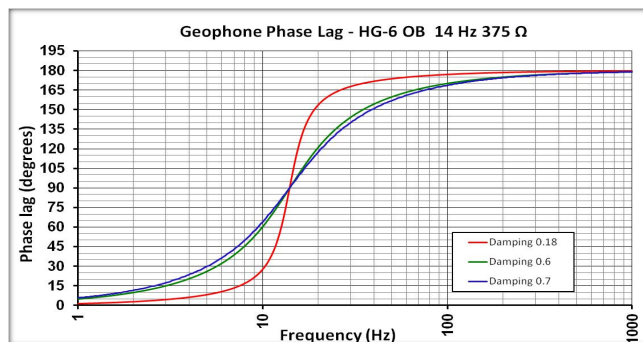
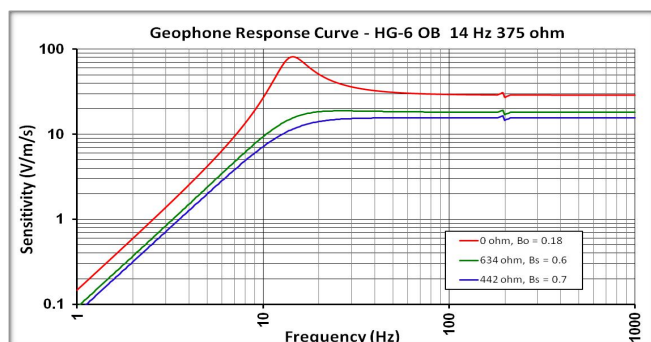
Diameter	25.4 mm	25.4 mm
Height	36 mm	36 mm
Weight	81 g	81 g
Operating temperature range	-40°C to 100°C	-40°C to 100°C

Working position	Omni-tilt
Polarity	Positive indicated by raised dot adjacent to positive terminal

Warranty Period*	2 years	2 years
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* 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-6 OB 14 Hz 375 Ω	SG000079	Upright
HG-6 OB 14 Hz 3500 Ω	SG000104	Upright

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