Geo Space LP
GEOPHONES

HS-1

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Geophone

- Geo Space has been manufacturing inertial sensors since 1957 and has high quality, low cost geophones for a variety of industrial uses. The HS-1 geophones have an unlimited shelf life and give years of trouble-free service in applications where accurate motion sensing is needed.

- The HS-1 is an integral component in the monitoring and analysis of machinery vibration. This rugged, self-generating velocity sensor converts mechanical motion into an electrical signal which is proportional to relative velocity. The HS-1 dual-coil construction minimizes interference from electromagnetic fields.

- The HS-1 has natural frequencies from 4.5 to 28 Hz., with sensitivities from 460 to 1150 mV/ips. The are sensitive to motion along their longitudinal axes. Models with resonant frequency of 10 Hz or less are designed to operate in one position, either horizontal or vertical. Models with resonant frequencies of 14 Hz or higher can be oriented over a wide range of positions.

HS-1 Specifications									
SPECIFICATION at 25°C, Geophone in designated operating position (Vertical or Horizontal)									
Natural Frequency (Fn)	**4.5 ± .75 Hz**			**7.5 ± .75 Hz**			**10 ± 1.0 Hz**		
DC Coil Resistance (DCR), ohms	225 ± 13	510 ± 27	1250 ± 62	225 ± 13	510 ± 27	1250 ± 62	225 ± 13	510 ± 27	1250 ± 62
Sensitivity (G), ± 10% V/in/s	.510	.718	1.15	.510	.718	1.15	.510	.718	1.15
Sensitivity (G), ± 10% V/cm/s	.201	.283	.453	.201	.283	.453	.201	.283	.453
Open Circuit Damping (Bo), ± 20%	.27	.28	.28	.62	.67	.67	.46	.50	.50

Damping Constant (CD)	246	505	1295	334	718	1843	251	539	1382
Coil Mass (M), grams ± 5%	29	28	28	12.8	11.8	11.8	12.8	11.8	11.8
Maximum Tilt Angle	Vertical Models Horizontal Models		15° ± 2°	Vertical Models Horizontal Models		20° ± 3.5°	Vertical Models Horizontal Models		30° ± 7.5°
Coil/Case Displacement in operating position, peak to peak	——Minimum .05 in (.13 cm), Maximum .10 in (.25 cm) ——								
Natural Frequency (Fn)	**15 ± 1.0 Hz**			**20 ± 1.0 Hz**			**28 ± 1.4 Hz**		
DC Coil Resistance (DCR), ohms	225 ± 13	510 ± 27	1250 ± 62	225 ± 13	510 ± 27	1250 ± 62	225 ± 13	510 ± 27	1250 ± 62
Sensitivity (G), ± 10% V/in/s	.510	.718	1.15	.510	.718	1.15	.510	.718	1.15
Sensitivity (G), ± 10% V/cm/s	.201	.283	.453	.201	.283	.453	.201	.283	.453
Open Circuit Damping (Bo), ± 20%	.31	.33	.33	.23	.25	.25	.16	.18	.18
Damping Constant (CD)	167	359	922	125	269	691	89.5	192	494
Coil Mass (M), grams ± 5%	12.8	11.8	11.8	12.8	11.8	11.8	12.8	11.8	11.8
Maximum Tilt Angle	Vertical Models Horizontal Models		60° ± 30°	All Models		90° ± 3.5°	All Models		90° ± 3.5°
Coil/Case Displacement in operating position, peak to peak	——Minimum .07 in (.18 cm), Maximum .10 in (.25 cm) ——								

Click HERE to load chart for Seismic Detector Response Curve Output VS. Frequency.
(Warning: 115 KBytes)

Weight: 8.7 oz.
Temperature (Operating and Storage): -45° C to 100°C
To order, specify Fn, DCR and (vertical or horizontal) operating position, HS-1.

Specifications are subject to change without notice.

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