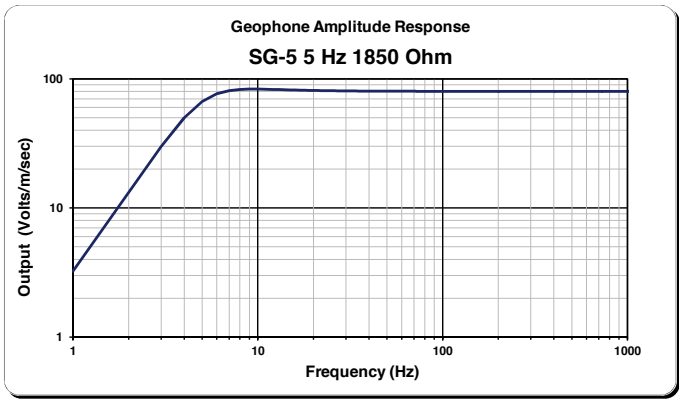
SPECIFICATIONS

Geophones

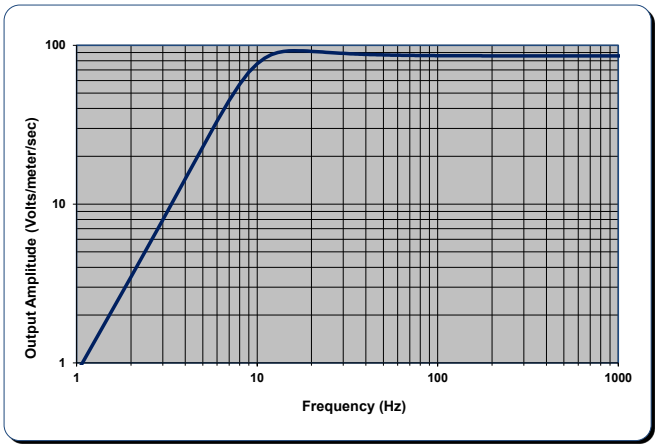
HIGH-SENSITIVITY GEOPHONES SENSORS	
SG-5	
Natural Frequency (± 7.5 %)	5 Hz
Coil Resistance (± 4 %)	1850 Ω
Pk-Pk Coil Travel	3 mm
Harmonic Distortion[1]	≤ 0.075%
Sensitivity (± 5 %)	80 V/m/s
Open Circuit Damping (± 7.5 %)	0.6
Moving Mass	22.7 g
Spurious Frequency	≥ 150 Hz
AC Impedance	5082 Ω (12 Hz)
Diameter	32 mm
Length	43 mm
Weight	170 g
Operating Temperature	-40° to 80 °C

Parameters are specified at 22 °C - 0 to 15 degree tilt



SG-10HS	
Natural Frequency (± 3.5 %)	10 Hz
Coil Resistance (± 3.5 %)	1800 Ω
Pk-Pk Coil Travel	2.6 mm
Harmonic Distortion[1]	≤ 0.1 %
Sensitivity (± 3.5 %)	85.8 V/m/s
Open Circuit Damping (± 3.5 %)	0.56
Moving Mass	19.5 g
Spurious Frequency	≥ 250 Hz
AC Impedance	6875 Ω (12 Hz)
Diameter	32 mm
Height	43 mm
Weight	170 g
Working Temperature	-40° to 80 °C
Storage Temperature	-40° to 80 °C

Parameters are specified at 22 °C - 0 to 15 degree tilt



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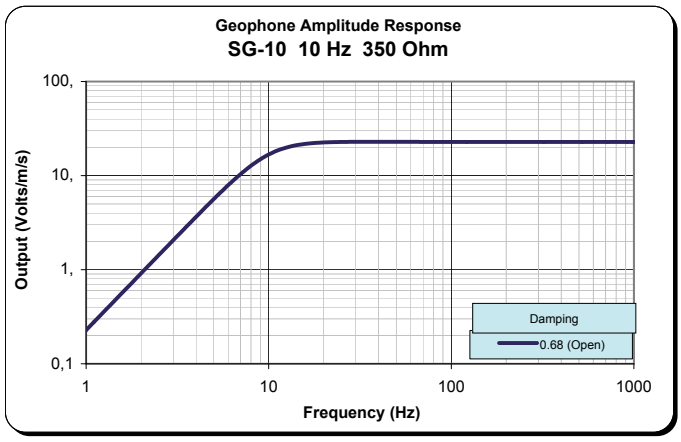
HIGH-PERFORMANCE GEOPHONES SENSORS	
SG-10	
Operating Position	Vertical
Natural Frequency (± 2.5 %)	10 Hz
Coil Resistance (± 3.5 %)	350 Ω
Pk-Pk Coil Travel	1.78 mm
Harmonic Distortion(1)	≤ 0.075 %
Sensitivity (± 2.5 %)	22.8 V/m/s
Open Circuit Damping (± 5 %)	0.68
Damping Constant ($R_T B_c f_n$)	4925 ΩHz
Moving Mass	8.4 g
Spurious Frequency	≥ 240 Hz
AC Impedance	1049 Ω (12 Hz)
Diameter	27.4 mm
Length	30.15 mm
Weight	78 g
Operating Temperature	-40° to 90 °C

Parameters are specified at 20 °C - 0 to 15 degree tilt

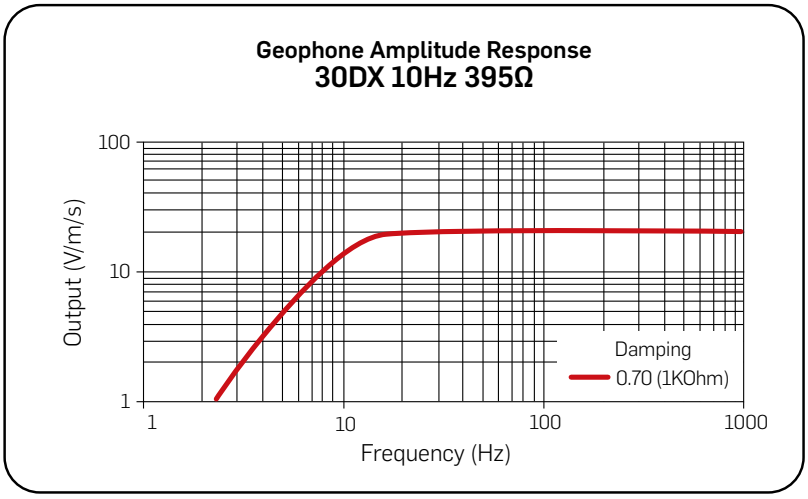


SGH-10	
Operating Position	Horizontal
Natural Frequency (± 2.5 %)	10 Hz
Coil Resistance (± 3.5 %)	350 Ω
Pk-Pk Coil Travel	1.78 mm
Harmonic Distortion(1)	≤ 0.075 %
Sensitivity (± 2.5 %)	22.8 V/m/s
Open Circuit Damping (± 5 %)	0.68
Moving Mass	8.4 g
Spurious Frequency	≥ 240 Hz
AC Impedance	1049 Ω (12 Hz)
Diameter	27.4 mm
Height	30.15 mm
Weight	78 g
Operating Temperature	-40° to 90 °C

Parameters are specified at 20 °C - 0 to 5 degree tilt

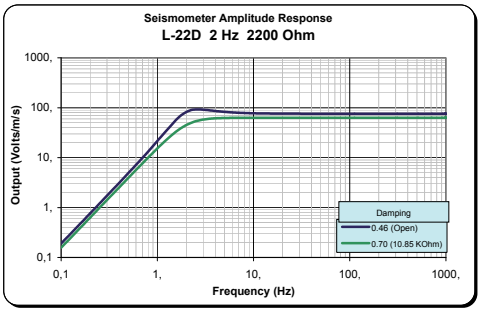
CONVENTIONAL GEOPHONE SENSORS	
JF-30DX	
Coil resistance	395 Ω ±2.5%
Open circuit sensitivity	28 V/m/s typical
Sensitivity with shunt resistor (1 K)	20.1 V/m/s ±2.5%
Natural frequency	10 Hz ±2.5%
Open circuit damping	0.3 typical
Damping with shunt resistor (1K)	0.707 ±2.5%
Harmonic Distortion	≤ 0.1%
Moving Mass	11 g
Spurious Frequency	≥ 250Hz
Coil travel (Peak-Peak)	1.52 mm
Resistance with shunt resistor (1K)	283 Ω ±2.5%
Operating Temperature	From -40° to +80° C

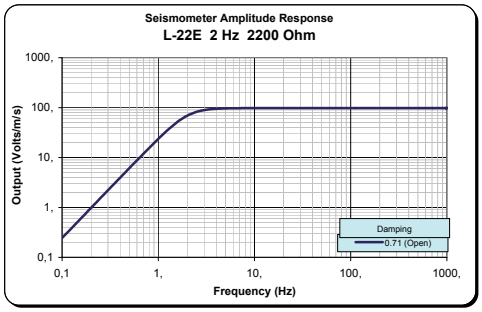
Except where otherwise noted all electromechanical specifications are valid at 22°C and from 0 to 10 degree tilt.



SEISMOMETERS						
	L-22D			L-22E		
Natural Frequency (± 0.2 Hz)	2 Hz					
Coil Resistance	510 Ω	2200 Ω	8540 Ω	510 Ω	2200 Ω	8540 Ω
Pk-Pk Coil Travel	3.81 mm					
Sensitivity	36.5 V/m/s	75.7 V/m/s	149.2 V/m/s	47.1 V/m/s	97.9 V/m/s	192.8 V/m/s
Open Circuit Damping	0.46			0.71		
Damping Constant ($R_TB_Cf_n$)	1453 ΩHz	6266 ΩHz	24323 ΩHz	2427 ΩHz	10470 ΩHz	40644 ΩHz
Shunt Resistor Value	2516	10854	42133	na	na	na
Damping with Resistor	0.70			na		
Moving Mass	72.8 g					
Diameter	60.3 mm					
Length	50.8 mm					
Weight	425 g					

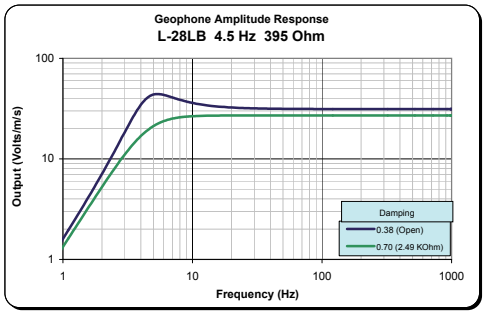
Parameters are specified at 20 °C - 0 degree tilt





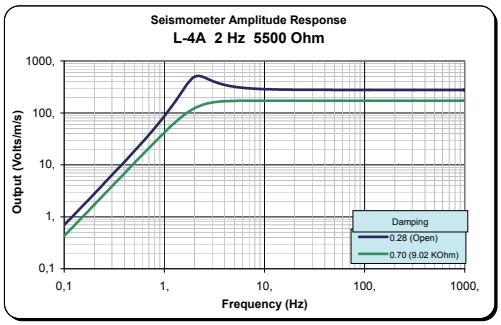
L-28LB		
Natural Frequency (± 0.5 Hz)	4.5 Hz	
Coil Resistance	395 Ω (± 6,5 %)	630 Ω (± 7,5 %)
Pk-Pk Coil Travel	4 mm	
Harmonic Distortion[1]	0.20 %	
Sensitivity	31.3 V/m/s	39.5 V/m/s
Open Circuit Damping	0.38	
Damping Constant ($R_TB_Cf_n$)	4103 ΩHz	6543.8 ΩHz
Moving Mass	19 g	
Diameter	31.8 mm	
Length	38.1 mm	
Weight	141.75 g	

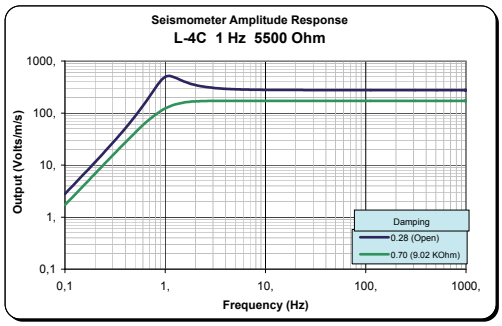
Parameters are specified at 20 °C and no tilt unless otherwise noted.



SEISMOMETERS						
	L-4A			L-4C		
Natural Frequency	2 Hz (± 0.25 Hz)			1 Hz (± 0.05 Hz)		
Coil Resistance	500 Ω	2000 Ω	5500 Ω	500 Ω	2000 Ω	5500 Ω
Pk-Pk Coil Travel	6.25 mm					
Sensitivity	83.5 V/m/s	166.9 V/m/s	276.8 V/m/s	83.5 V/m/s	166.9 V/m/s	276.8 V/m/s
Open Circuit Damping (vertical units only)	0.28					
Damping Constant ($R_T B_C f_n$)	554 ΩHz	2217 ΩHz	6097 ΩHz	1109 ΩHz	4434 ΩHz	12194 ΩHz
70% Damping Shunt Resistor	820	3279	9016	820	3279	9016
Moving Mass	500 g			1000 g		
Diameter	76 mm					
Length	130 mm					
Weight	1700 g			2150 g		
Operating Temperature	-30° to 60 °C					

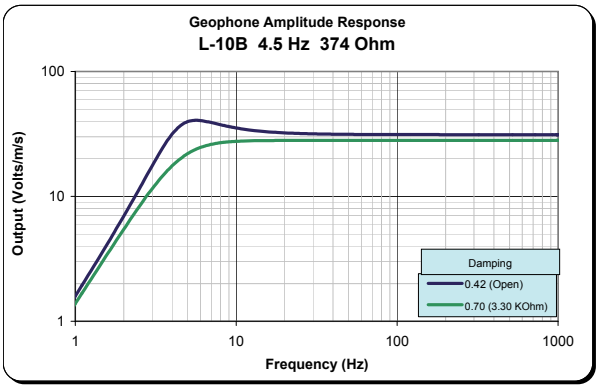
Parameters are specified at 20 °C - 0 degree tilt





	L-10B	
Natural Frequency (± 0.5 Hz)	4.5 Hz	
Coil Resistance (± 6.5 %)	374 Ω	3600 Ω
Pk-Pk Coil Travel	2 mm	
Harmonic Distortion [1]	0.20 %	
Sensitivity (± 10 %)	31.2 V/m/s	96.9 V/m/s
Open Circuit Damping (± 10 %)	0.42	
Damping Constant ($R_T B_C f_n$)	4561.5 ΩHz	43907.8 ΩHz
Moving Mass	17 g	
Spurious Frequency	na	
Diameter	31.75 mm	
Length	35.56 mm	
Weight	141.75 g	

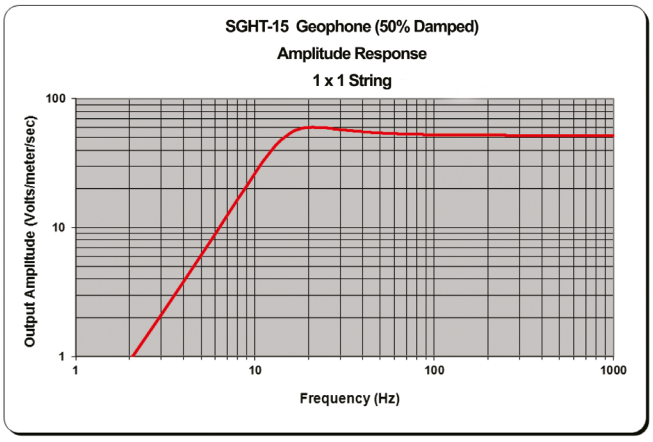
Parameters are specified at 20 °C - 0 degree tilt

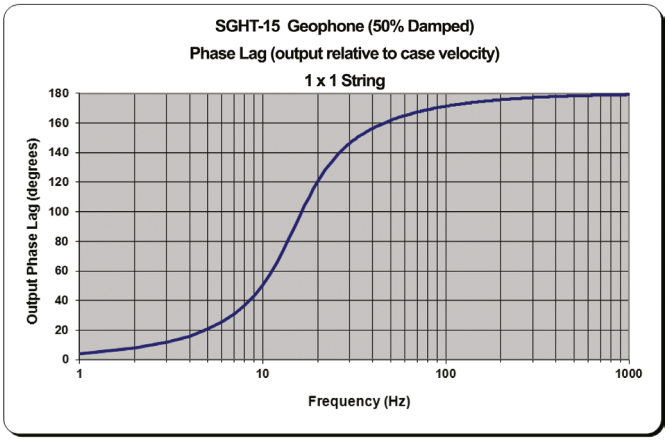


SGHT-15			
	NOMINAL	HORIZONTAL	0° to 180°
Natural Frequency	15 Hz	± 5 %	- 5 % to + 15 %
Coil Resistance	2350 Ω	± 5 %	± 5 %
Sensitivity	52.0 V/m/s	- 15 % to + 5 %	- 15 % to + 5 %
Open Circuit Damping (without damping resistance)	0.50	- 15 % to + 15 %	- 20 % to +1 5 %
Distortion[1]		≤ 0.2 %	≤ 0.9 %
Moving Mass	7.4 g		
Spurious Frequency		≥ 365 Hz	≥ 280 Hz
Coil Excursion Pk-Pk		<3.0 mm (<0.118 in)	<0.6 mm (<0.024 in)

PHYSICAL CHARACTERISTICS	
Length	27.5 mm (1.082 in)
Diameter	22.25 mm (0.874 in)
Weight	43 g (1.517 oz)
Storage Temperature	-40 °C to 100 °C
Operating Temperature	-40 °C to 210 °C
Polarity	Positive terminal indicated by « + » sign
Working Position	Omni-tilt

All electromechanical specifications are valid @ 20 °C





(1) measured at 17.8 mm/sec pk-pk velocity and the higher of either 12 Hz or the nominal natural frequency
All dimensions are for basic unit only (no land or marsh case)

Note: Sercel reserves the right to change its specifications without prior notice.

GEOPHONE TESTER : SGT-II		
PARAMETER	**RANGE**	**ACCURACY OF MEASUREMENT**
Natural Frequency	1 to 100 Hz	± 2 %
Coil Resistance	20 to 10000 Ω	± 1 %
Harmonic Distortion	0 to 20 %	± 10% of reading
Sensitivity	0 to 1000 V/m/s	± 2 %
Damping	0.1 to 1.2	± 1 %
Dynamic Impedance	20 to 24000 Ω	± 1 %
Leakage Test	0.1 to 10 MΩ	± 10 % (after proper zero)
Storage Capacity	AIU-II	20000 records minimum
	OIU – PC based	limited only by PC disk space approx. 7500 records/Mbyte)
Battery Run Times	AIU-II	14 hours typical @ 25 °C on internal batteries
Charger Power Requirements	AIU-II	10.5 – 16 Volts DC @ 1.5 Amps maximum
Operating Temperatures	AIU-II	-20° to 50 °C

NOTE: The following specifications assume a properly calibrated AIU.

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