

SM-7m Miniature Geophone

- Small dimension, low weight geophones, retaining the ruggedness and high quality performance of standard elements
- 10-Hz vertical and horizontal to suit a variety of miniaturized 3-C applications
- 30-Hz, omni-tilt unit for borehole tools with a bandwidth of over 900 Hz
- 2-year limited warranty

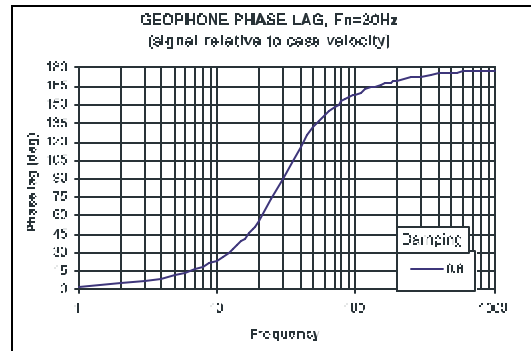
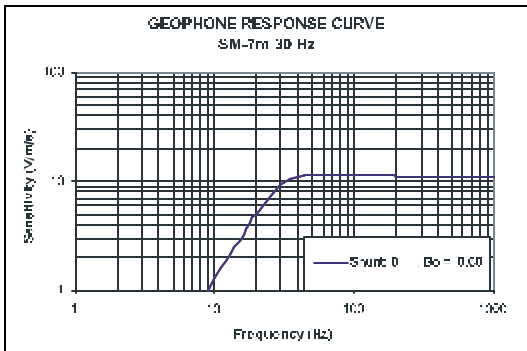
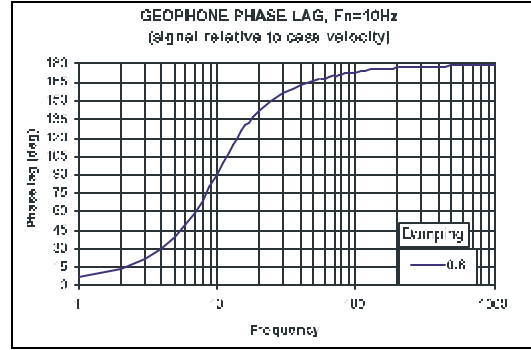
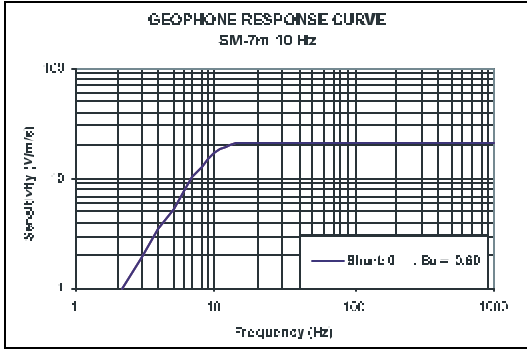


The SM-7m miniature geophone is optimized for size and performance where volume and weight are important. The 10-Hz vertical and horizontal versions are available for 3-component devices. The 30-Hz, omni-tilt unit (with a clean response from 30 Hz to over 900 Hz) is ideal for ultra high-resolution, borehole recording.

Specifications

INPUT/OUTPUT, INC.

	SM-7m/U-MT 10 Hz 350 W	SM-7m/U-LT 30 Hz 350 W
Frequency		
Natural frequency (f_n)	10 Hz	30 Hz
Tolerance	±5%	±5%
Maximum tilt angle for specified f_n	15°	180°
Typical spurious frequency	>300 Hz	>900 Hz
Distortion		
Distortion with 0.7 in/s p.p. coil-to-case velocity	<0.25%	<0.25%
Distortion measurement frequency	12 Hz	30 Hz
Maximum tilt angle for distortion specification	15°	180°
Damping		
Open-circuit damping	0.6	0.6
Open-circuit damping tolerance	±5%	±7%
Resistance		
Standard resistance	350 Ω	350 Ω
Tolerance	±5%	±5%
Sensitivity		
Open-circuit sensitivity	20.5 V/m/s (0.52 V/in/s)	11.0 V/m/s (0.28 V/in/s)
Tolerance	±7%	±7%
$R_f B_c f_n$	4,645 ΩHz	1,720 ΩHz
Moving mass	7.2 g (0.25 oz)	5.6 g (0.2 oz)
Maximum coil excursion p.p.	1.6 mm (0.06 in)	1.6 mm (0.06 in)
Physical Characteristics		
Diameter	22.2 mm (0.87 in)	22.2 mm (0.87 in)
Height	25.4 mm (1 in)	25.4 mm (1 in)
Weight	48 g (1.68 oz)	48 g (1.68 oz)
Operating temperature range	-40°C to +100°C (-40°F to +212°F)	-40°C to +100°C (-40°F to +212°F)
Limited Warranty Period*		
	2 years	2 years
	* 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 otherwise stated.	



Ordering Information

SM-7m 10 Hz
 SM-7m/U-MT 10 Hz 350 Ω (upright) P/N 1007065
 SM-7m/H-MT 10 Hz 350 Ω (horizontal) P/N 1007063

SM-7m 30 Hz
 SM-7m/U-LT 30 Hz 350 Ω (upright, omni-tilt element) P/N 1007067

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