



## **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.

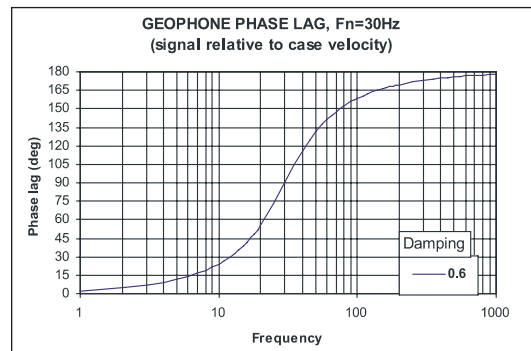
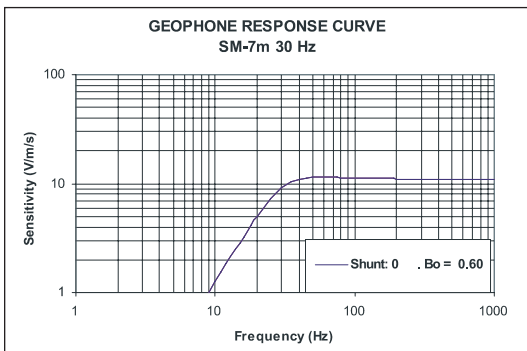
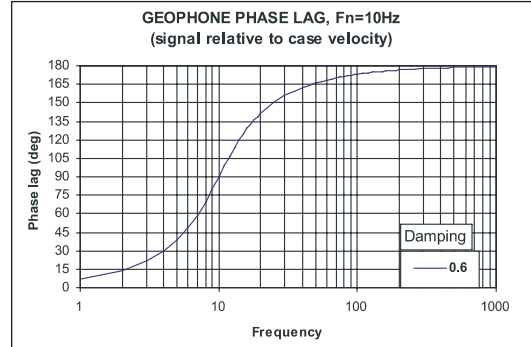
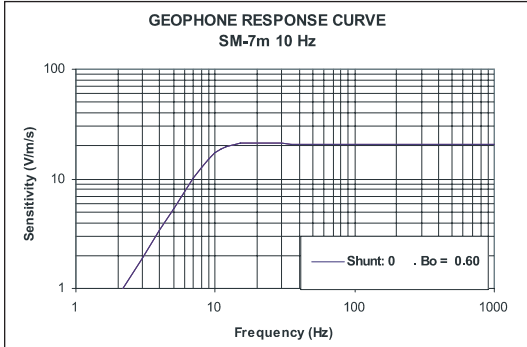
## Specifications

INPUT/OUTPUT, INC.

	SM-7m/U-MT 10 Hz 350 $\Omega$	SM-7m/U-LT 30 Hz 350 $\Omega$
<b>Frequency</b>		
Natural frequency ( $f_n$ )	10 Hz	30 Hz
Tolerance	$\pm 5\%$	$\pm 5\%$
Maximum tilt angle for specified $f_n$	15°	180°
Typical spurious frequency	>300 Hz	>900 Hz
<b>Distortion</b>		
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°
<b>Damping</b>		
Open-circuit damping	0.6	0.6
Open-circuit damping tolerance	$\pm 5\%$	$\pm 7\%$
<b>Resistance</b>		
Standard resistance	350 $\Omega$	350 $\Omega$
Tolerance	$\pm 5\%$	$\pm 5\%$
<b>Sensitivity</b>		
Open-circuit sensitivity	20.5 V/m/s (0.52 V/in/s)	11.0 V/m/s (0.28 V/in/s)
Tolerance	$\pm 7\%$	$\pm 7\%$
$R_i B_c f_n$	4,645 $\Omega$ Hz	1,720 $\Omega$ Hz
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)
<b>Physical Characteristics</b>		
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)
<b>Limited Warranty Period*</b>		
	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  $\Omega$  (upright) P/N 1007065

SM-7m/H-MT 10 Hz 350  $\Omega$  (horizontal) P/N 1007063

### SM-7m 30 Hz

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

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