

SD7 Series Geophone

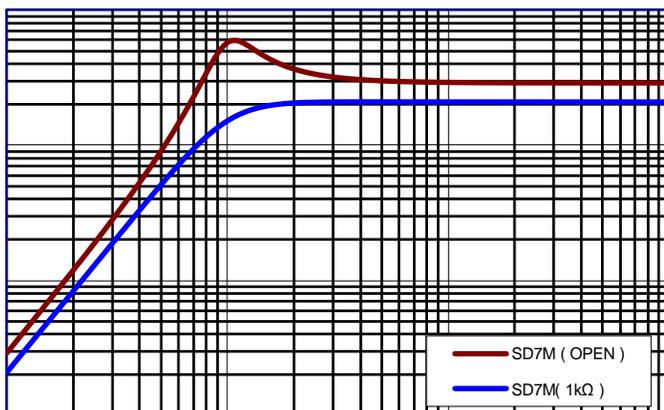
The SD7 series geophone is a high precision seismometer with a non-rotating coil structure. It has characteristics of high accuracy, wide bandwidth, low distortion and high reliability. It is suitable for high-resolution seismic acquisition.

Specifications

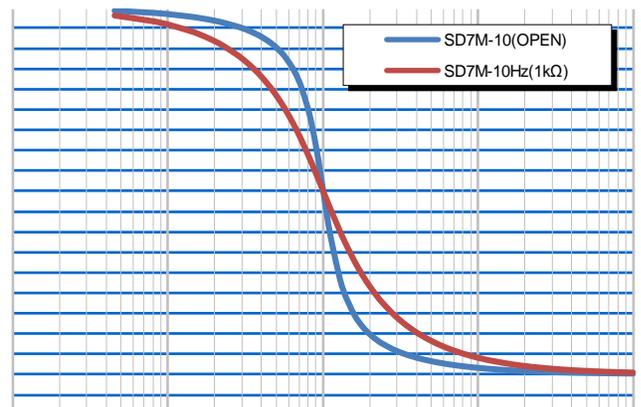
Type	SD7X-7	SD7X-10	SD7M-10	SD7T-10
Natural Frequency (Hz)	$7 \pm 5\%$		$10 \pm 2.5\%$	
Open Circuit Damping	$0.440 \pm 5\%$	$0.302 \pm 2.5\%$	$0.267 \ 0 \sim 5\%$	$0.318 \pm 2.5\%$
Damping with Shunt Resistance	$0.704 \pm 5\%$	$0.709 \pm 2.5\%$	$0.703 \ 0 \sim 5\%$	$0.705 \pm 2.5\%$
Open Circuit Sensitivity (V/m/s)	$27.7 \pm 2.5\%$	$28.0 \pm 2.5\%$	$28.8 \pm 2.5\%$	$27.5 \pm 2.5\%$
Sensitivity with Shunt Resistance (V/m/s)	$24.1 \pm 2.5\%$	$20.1 \pm 2.5\%$	$20.9 \pm 2.5\%$	$19.8 \pm 2.5\%$
Coil Resistance (Ω)	$395 \pm 2.5\%$	$392 \pm 2.5\%$	$375 \pm 2.5\%$	$387 \pm 2.5\%$
Coil Resistance with Shunt Resistance (Ω)	$343 \pm 2.5\%$	$282 \pm 2.5\%$	$273 \pm 2.5\%$	$279 \pm 2.5\%$
Shunt Resistance (Ω)	2610		1000	
Distortion	$<0.15\%$		$<0.1\%$	
Spurious Frequency (Hz)	≥ 200		≥ 250	
Moving Mass (g)		11		11.2
Maximum Coil Excursion P-P (mm)	1.5	1.5	2	1.5
Diameter (mm)		25.4		
Height (mm)	33.3	34.3	32	34.3
Operating Temperature ($^{\circ}\text{C}$)		$-40 \sim 80$		
Test temperature ($^{\circ}\text{C}$)	22	20	20	20
Element Warranty Period (year)		3		

Warranty excludes damage caused by high voltage and physical damage to the element case. Specifications are subject to change without prior notice.

SD7M-10 Geophone F-A Response Curve



SD7M-10 Geophone P-A Response Curve



SD7 Series Geophone

Applications

So far 1200000 units of the SD7M-10 geophones have been continuously used in 6 projects in Algeria which includes 4369km² of 3D seismic acquisition and 1700km of 2D seismic acquisition, for contracts such as TIDIKELT project, GUELTA project, EDJELEH&ZARZAITINE project etc. In Algeria, the lateral topographic undulation is acute, the climate and temperature changes greatly in the north and south, the temperature varies widely from day to night in the heart of the Sahara and field operations are highly difficult. The SD7M-10 geophone can reduce labor intensity, increase work efficiency and save production costs in the field. It has made important contributions to complete the seismic exploration projects successfully.



SD7M-10 assembly



SD7M-10 geophone string



SD7M-10 in the field



SD7M-10 in the field