SM-24HS Sensor High Sensitivity Geophone

The new Sensor SM-24HS (High Sensitivity) geophone, specifically designed for single unit recording, is based on the field proven, rugged and reliable Sensor SM-24.

With only 1.3 mm larger diameter than the standard SM-24, and weighing only 86 grams, it is the smallest and lightest high sensitivity geophone on the market. This smaller mass significantly prolongs life expectancy in the field. At the same time the SM-24HS provides identical sensitivity and damping specifications when connected to a recording system.

Sensitivity and Damping are affected by string configuration and recording system load. The geophone Distortion specification is the maximum value over the 10-degree tilt angle, geophones typically perform better within the given tilt specification range.

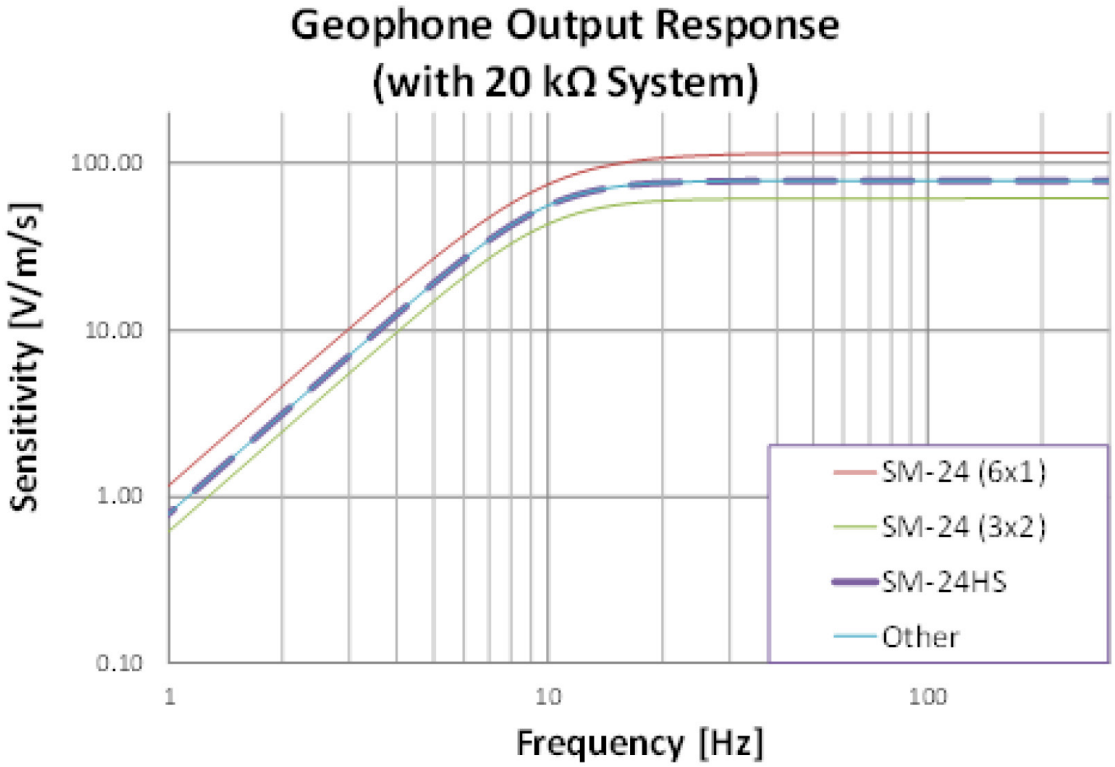
Comparing strings with single high sensitivity geophones
(SM-24HS and comparable high sensitivity geophones)

	Damping (open circuit)	**Sensitivity** (open circuit)	**Damping** (1kΩ resistor)	**Sensitivity** (1kΩ resistor)	**Damping** (system)	**Sensitivity** V/m/s(V/in/s)
1x1 (regular)	25%	28.8 (0.73)	**69%**	20.9 (0.53)	70%	20.7 (0.53)
3x2 (regular)	25%	86.4 (2.19)	**69%**	62.7 (1.59)	71%	61.6 (1.56)
6x1 (regular)	25%	172.8 (4.39)	**69%**	125.4 (3.19)	77%	116.2 (2.95)
1x1 SM-24HS	48%	85.8 (2.18)	**n.a.**	**n.a.**	70%	78.7 (2.00)
1x1 other	51%	85.8 (2.18)	**n.a.**	**n.a.**	70%	78.7 (2.00)

Note: Sensititvity in V/m/s (V/in/s), recording system input impedance 20 kΩ

SM-24HS ADVANATAGES:

- Sensitivity equates to approx. 4 regular geophones in series
- Optimal sensitivity / ruggedness ratio
- Tight Damping specification
- Reduced lay-out time / less manpower
- Significanly tower transportation costs
- Reduced maintenance time & cost
- Smallest and lightest High Sensitivity Geophone in the market
- Available in both land and marsh configurations



Specifications for: SM-24HS 10 Hz 1800 Ohm Geophone Element

Frequency		
Natural Frequency	10 Hz	
Tolerance	± 3.5 %	
Maximum tilt angle for specified Fn	10°	
Typical spurious frequency	>240Hz	
Distortion		
Distortion coil to case velocity with 17.78 mm/s (0.7 in/s) p.p.	<0.2%	
Maximum tilt angle for distortion	10°	
Typical distortion	0.05%	
Damping		
Open circuit (typical)	0.475	
Damping with 20 kΩ system input impedence	0.7	
Tolerance with 20 kΩ system input impedence	± 3.5 %	
Sensitivity		
Sensititvity	85.8 V/m/s	(2.08 V/in/s)
Tolernace	± 3.5 %	
Moving Mass	118 g	(0.42 oz)
Max. coil excursion p.p.	2 mm	(0.08 in)
Coil Resistance		
Standard	1800Ω	
Tolernace	± 3.5 %	
Physical Characteristics		
Diameter	26.7 mm	(1.05 in)
Height	32 mm	(1.26 in)
Weight	85.6 g	(3.02 oz)
Operational temperature range	-40 °C to +100 °C	-40 °F to +212 °F
Warranty		
Warranty period*	3 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-24		
SM-24HS/U-B 10 Hz 1800 Ohm (upright basic unit with insulating disc)		

About ION

ION has been a technology leader for over 50 years with a strong history of innovation. Leveraging innovative technologies, ION creates value through data capture, analysis and optimization to enhance companies' critical decision-making abilities and returns. Our offerings are focused on improving E&P decision-making, enhancing reservoir management and optimizing offshore operations.