



SENSOR Nederland bv

SM-24 Horizontal Geophone Element

- Tight specification, low-distortion geophone
- Horizontal element for shear-wave and 3-C recording
- Extended spurious over 240 Hz, allowing full bandwidth at 2-ms sampling
- Backward compatible with SM-4 and SM-4 Superphone™ range
- 3-year limited warranty



The SM-24 Horizontal geophone element is designed to offer the highest performance in seismic exploration, using field-proven I/O Sensor technology. Low distortion, combined with tight specifications, provide high-fidelity data in shear-wave and 3-C surveys. The extended bandwidth allows the full potential of 2-ms/24-bit recording systems to be realized.

Applications: Shear-wave and 3-C seismic exploration with bandwidth from 10 Hz up to 240 Hz.

Implementations: Can be installed in a variety of I/O Sensor geophone cases.

Specifications

INPUT/OUTPUT, INC.

SM-24/H-B 10 Hz 375 Ω

Frequency

Natural frequency (f_n) 10 Hz
 Tolerance ±2.5%
 Typical spurious frequency >240 Hz

Distortion

Distortion with 0.7 in/s p.p. coil-to-case velocity <0.15%
 Distortion measurement frequency 12 Hz

Damping

Typical open-circuit damping 0.25
 Damping calibration-shunt resistance 1,339 Ω
 Damping with calibration-shunt 0.6
 Tolerance with calibration-shunt +5%, -0%

Coil Resistance

Standard 375 Ω
 Tolerance ±2.5%

Sensitivity

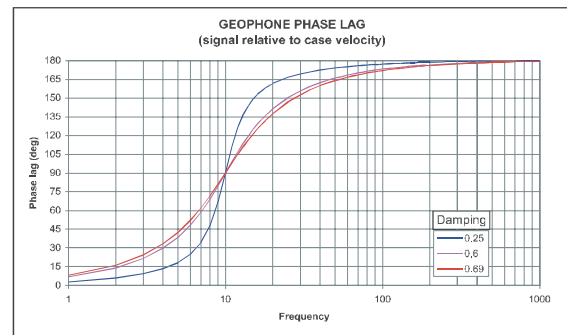
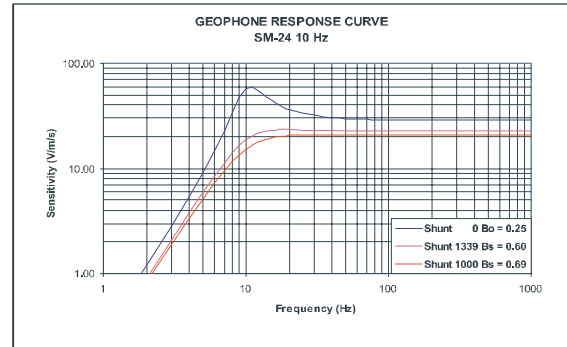
Sensitivity 28.8 V/m/s (0.73 V/in/s)
 Tolerance ±2.5%
 R/B_{cf_n} 6,000 ΩHz
 Moving mass 11 g (0.38 oz)
 Maximum coil excursion p.p. 2 mm (0.08 in)

Physical Characteristics

Diameter 25.4 mm (1 in)
 Height 32 mm (1.26 in)
 Weight 74 g (2.6 oz)
 Operating temperature -40°C to +100°C (-40°F to +212°F)

Limited Warranty Period*

3 years
 * Warranty excludes damage caused by high-voltage or physical damage to the element case.
 All parameters are specified at +20°C in the horizontal position.



Ordering Information

INPUT/OUTPUT, INC.

SM-24

SM-24/H-B 10 Hz 375 Ω (horizontal basic unit with insulating disc)

P/N 1004135

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