



SM-24 ST Upright Geophone Element

- Standard specification, low-distortion geophone
- Extended spurious over 240 Hz, allowing full bandwidth at 2-ms sampling
- Backward compatible with SM-4 and SM-4 LD Superphone™ range
- 3-year limited warranty



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

Applications: 2-D & 3-D seismic exploration with bandwidth from 10 Hz up to 240 Hz.

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

SM-24ST/U-B 10 Hz 375 Ω

Frequency

Natural frequency (f_n) 10 Hz
 Tolerance ±5%
 Max. tilt angle for specified f_n 10°
 Typical spurious frequency >240 Hz

Distortion

Distortion with 0.7 in/s p.p. coil-to-case velocity ≤0.1%
 Distortion measurement frequency 12 Hz
 Max. tilt angle for distortion specification 10°
 Typical distortion (string of 12 geophones in series, measured at 12 Hz) 0.03%

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%

Coil Resistance

Standard 375 Ω
 Tolerance ±5%

Sensitivity

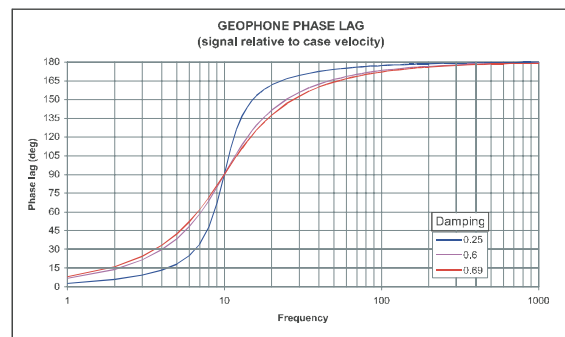
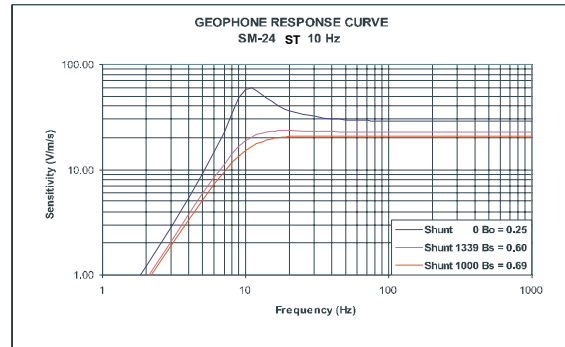
Sensitivity 28.8 V/m/s (0.73 V/in/s)
 Tolerance ±5%
 $R_t B_c f_n$ 6,000 ΩHz
 Moving mass 11 g (0.38 oz)
 Maximum coil excursion p.p. 2 mm (0.08 in)

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 vertical position unless otherwise stated.



Ordering Information

SM-24 ST

SM-24ST/U-B 10 Hz 375 Ω (upright basic unit with insulating disc)

P/N 1024020

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