

# Borehole Geophone

TRIAXIAL, BIAXIAL OR UNIAXIAL

## FEATURES

- 4.5Hz, 8Hz, 10Hz, 14Hz, 15Hz sensors available
- Large bandwidth
- Aluminium body or PVC housing
- High resistance to water ingress
- High pressure applications
- High temperature option available
- Low cost & excellent reliability

## APPLICATIONS

ES&S geophones are commonly used in mining applications often implemented in combination with accelerometers. Geophone configurations can be uniaxial, biaxial or triaxial. Various sensors offer different advantages namely frequency range, amplitude, temperature, reliability and price.

Beneficial features of our geophones are their long term stability, reliability, accuracy, large bandwidth and low cost. ES&S offers a wide range of frequencies 4.5Hz, 8Hz, 10Hz, 14Hz & 15Hz. ES&S can customize borehole geophones and our engineers are happy to discuss the most suitable configuration to suit your requirements.



## TECHNICAL SPECIFICATIONS

<b>Resonance Frequency:</b>	4.5 Hz
<b>Sensitivity:</b>	28 V/m/s tolerance $\pm 5\%$
<b>Distortion coil to case frequency:</b>	$<0.3\%$
<b>Open circuit dampening:</b>	$0.265 \pm 5\%$ tolerance
<b>Length:</b>	260mm not including grouting body
<b>Operating Temperature:</b>	$-40^{\circ} - 100^{\circ}\text{C}$
<b>Moving Mass:</b>	16.1g
<b>Distortion measurement frequency:</b>	1%
<b>Physical Diameter:</b>	56mm
<b>Housing Material:</b>	Aluminium or PVC cylinder

### OPERATING PRINCIPLE

ES&S geophones feature excellent reliability, high accuracy, low cost and rugged water proof housing. ES&S custom builds and assembles borehole geophones specific to your requirements. Our engineers welcome any opportunity to discuss the most suitable configuration for your application.

Borehole sensors can be either grouted or locked into place. The sensors are designed to fit into B or N size boreholes. Data cable is connected to the sensor and runs up the borehole where it is plugged into the data acquisition system.

