

LF-24 Low Frequency Geophone

When Performance Counts

Features

- Economic low frequency geophone designed for vibration– monitoring
- Small dimensions compared to conventional 1Hz geophones
- Vertical and horizontal versions available
- Low power electronic circuit, providing reverse-filter function below geophone's natural frequency
- Extended bandwidth down to 1 Hz @ 100% damping
- Rugged design allowing high shock peaks
- Electronics fully-potted in epoxy resin
- 5-pin, watertight connector C091-M (IP-65)
- Low output impedance
- Electrical load does not affect damping characteristics
- Customized designs possible



The LF-24 Low Frequency Geophone is optimized for size and performance where weight and cost are important factors in vibration-monitoring and low-frequency seismic measurement. The device uses a low power electronic circuit to provide a reverse-filter function below the geophone natural frequency, extending the recording bandwidth downwards to 1Hz. The compensation circuit permits the use of a higher-natural-frequency geophone, allowing for high-shock peaks that could seriously damage conventional low frequency geophones. The electronics are fully potted in epoxy resin for reliability. The 5-pin connector is provided for signal output and power supply. The low-impedance output matches many recording devices and electrical load will not affect the damping characteristics.



Specifications: LF – 24 Low Frequency Geophone

Frequency

Natural frequency 1 Hz
Tolerance $\pm 15\%$

Maximum tilt angle for specified F_n
Vertical 10°
Horizontal 5°

Distortion

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

Damping

Open circuit (typical) 100 %

Sensitivity

Sensitivity 15 V/m/s
Tolerance $\pm 10\%$

Spurious frequency 240 Hz

Equivalent input noise 300nm/s. sqrt(Hz) above 10Hz

Power supply voltage ± 5 to $\pm 15V$ DC Symmetrical
Supply current $\pm 1mA$ at rest

Physical Characteristics

Diameter 34 mm
Height 65 mm
Weight 170 g

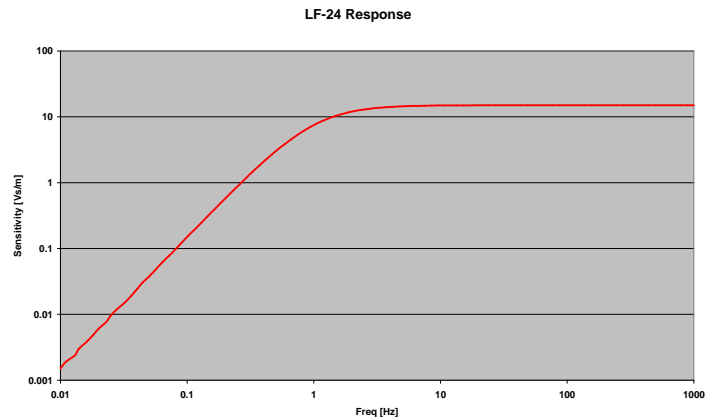
Mounting thread M8

Operating temperature range -20°C to 60°C
Storage temperature range -40°C to 70°C

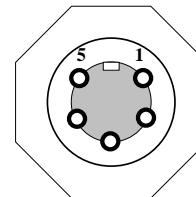
Connector

Type Amphenol series C091-M 5-pin (IP-65)

Warranty period 180 days



Connector Pinning



Pin

- 1 Signal +
- 2 Power -
- 3 Power Gnd
- 4 Power +
- 5 Signal Gnd

Wire colour

- Yellow
- Grey
- Green
- Pink
- White

Ordering Information

LF-24 Vertical P/N 1100241
LF-24 Horizontal P/N 1100242

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