

LF-24 Low Frequency Velocity Sensor

- Economic design for very low frequency vibration-monitoring applications
- Small dimensions compared to conventional 1Hz geophones
- Low power electronic circuit, provides an inverse-filter function below the geophone's natural frequency
- Bandwidths extended to 0.3 Hz or 1 Hz @ 100% damping
- Fully temperature compensated
- Damping characteristics unaffected by external load
- Low output impedance
- Rugged design allows for high shocks
- Hermetically sealed package
- 6-pin, watertight connector Hirose (IP-65)
- Available in vertical and horizontal versions
- Customized designs available



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 an inverse-filter function below the geophone natural frequency to compensate for the 12 dB/oct signal roll-off, extending the recording bandwidth. This compensation circuit permits the use of a higher-natural-frequency geophone, allowing for high impact shocks that could seriously damage conventional low frequency geophones. In addition, the circuit is fully temperature compensated and maintains its Damping and Sensitivity characteristics over the operating range. The electronics are fully potted for increased reliability. The 6-pin connector is provided for signal output and power supply.

Specifications for: LF-24 Low Frequency Velocity Sensor

Frequency	
LF-24/1Hz Natural Frequency	1 Hz
LF-24/0.3Hz Natural Frequency	0.3 Hz
Tolerance	± 10%
Maximum tilt angle for specified Fn	Vertical type 10° Horizontal type 5°
Spurious frequency	>240 Hz (typically 280 Hz)
Distortion	
Distortion coil with 0,7 in/s p.p.	Vertical <0.10%
coil to case velocity	Horizontal <0.15%
Distortion measurement frequency	12 Hz
Damping	
Damping	100%

*All parameters specified at 20°C

Specifications for: LF-24 Low Frequency Velocity Sensor

Sensitivity

Sensitivity	15 V/m/s (0.38 V/in/s)
Tolerance	± 10%
Equivalent input noise	300nm/s. sqrt(Hz) above 10 Hz
Power supply voltage	±11 to ±25V DC
Supply current	±2mA at 11V ±3mA at 15V ±6mA at 25V
LF-24/1Hz Offset	4mV Max.
LF-24/0.3Hz Offset	50 mV Max.

Physical Characteristics

Diameter	32.5 mm (1.28 in)
Height	78.6 mm (3.09 in)
Weight	325 g (11.46 oz)
Mounting thread	3/8 in UNF-24 x 3/4 in
Mounting torque	4.5 Nm (40in-lb) max.
Shock survivability	981 m/s ² (100g) peak
Operating temperature range	-20°C to 60°C
Storage temperature range	-40°C to 70°C

Connector

Type	Hirose LF07WBP-6P (IP65)
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Warranty

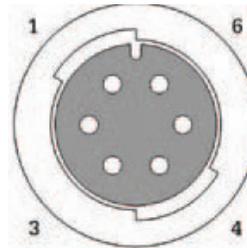
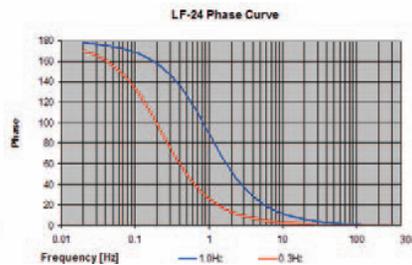
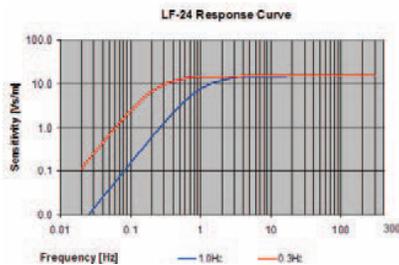
Warranty period	180 days
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Ordering information

LF-24/0.3Hz RVS Vertical	P/N 1100261
LF-24/0.3Hz RVS Horizontal	P/N 1100262
LF-24/1Hz RVS Vertical	P/N 1100251
LF-24/1Hz RVS Horizontal	P/N 1100252

Interface cable options

Hirose LF07WBP-6S	
1m. shielded cable-unterminated	P/N 6080021
5m. shielded cable-unterminated	P/N 6080025



Connector Pinning		
Pin		Color
1	Signal +	White
2	Signal Gnd	Brown
3	Power Gnd	Green
4	Power +	Yellow
5	Power -	Grey
6	nc	
	Chassis	Shield

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.