



Industrial Seismology, Inc.

Mini-Seis III Specifications

General

Channels	Three seismic channels and one acoustic channel.
Seismic	
Range	Standard 260 mm/s (10.24 in/s). Other ranges may be customized at the factory.
Resolution	0.008 mm/s (0.0003 in/s) depending on the range.
Frequency Range (ISEE)	2 to 250 Hz at 1024 sample rate as per ISEE Seismograph Performance Specifications for Blasting Seismographs. The upper frequency limit is 1/4 the sample rate.
Frequency Range (DIN)	From 1 to 315 Hz.
Accuracy (ISEE)	Conforms with the ISEE Performance Specifications for Blasting Seismographs.
Accuracy (DIN)	DIN 45669-1 Standard.
Transducer Density	Approximately 2.01 g/cc (125 lb/ft ³)
Accelerometers	Optional accelerometers allow the transducer to be oriented in any direction without leveling.

Acoustic

Weighting	Linear overpressure or A weighting if appropriate hardware is present.
Linear Range	0.0156 Pa (0.000156 Mb) depending on range.
Linear Frequency Range	2 to 250 Hz at 1024 sample rate as per ISEE Seismograph Performance Specifications for Blasting Seismographs. The upper frequency limit is 1/4 the sample rate.
Linear Accuracy	Conforms with the ISEE Performance Specifications for Blasting Seismographs.
A Weighting Range	50 to 120 dBA.
A Weighting Resolution	0.1 dBA.

Timer

Allows an instrument to be active only during selected times on a daily basis.

Communication

USB or serial. Serial baud rates from 1200 to 230400.

Internal Data Storage

Over 500 MB memory.

Storage Capacity

Over 2000 waveform and histogram records. Optional 4000 record storage available.

External Data Storage

Write to USB thumb drive.

System Log

The system log tracks on/off times, changes to setup parameters and internal system operation.

Operating Modes

Waveform, histogram, histogram/waveform and manual.

Data Reporting

The seismograph can automatically report both waveform and histogram events without needing to deactivate the current operating mode.

Data Retrieval

Data can be downloaded without requiring deactivation of the current operating mode.

Waveform Modes

Waveform

Standard mode used for blast monitoring and discrete transient event monitoring.

Manual

Trigger from the keypad or an external switch.

Simultaneous Triggering

Using a combination of manual and triggered modes, multiple units can be connected in serial for simultaneous triggering.

Sample Rate

1024, 2048, 4096 or 16384 samples per second per channel.

Duration

1 to 120 seconds at 1024, 2048 or 4096. 1 to 7 seconds at 16384.

Pre-Trigger

1 second at 1024 sample rate. The pre-trigger time decreases proportional to the sample rate.

Minimum Trigger Level

Seismic

0.127 mm/s (0.005 in/s) depending on range.

Linear Acoustic

88 dBL depending on range.

Downtime Between Events

None for sample rates less than 16384.

Dynamic Sensor Test

A dynamic sensor test is performed at the end of every event in waveform mode. This test will appear in the pre-trigger of continuous events.



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Histogram Modes

Histogram	Standard mode for recording discrete measurements from continuous and semi-continuous sources.
Histogram/Waveform	A waveform is recorded while the histogram is running when one of the trigger thresholds is met or exceeded.
Sample Period	1, 10, 20, 30, 40, 50 or 60 seconds.
Data Stored	Channel peaks, their frequencies and the vector sum.
Histogram Interval	The histogram interval determines how long a histogram will run before deactivating and starting a new histogram. From 1 to 12 hours or 0 which starts a new histogram at midnight.
Histogram Storage	The internal memory is sufficient to store over a year of histogram data using a 60 second period.

Reporting

General	Reporting requires an approved remote access device capable of port forwarding serial data. The reporting can be run through the White Reporting Service™ or handled by the user with the White AutoReceive™ software.
Waveform Mode	With reporting activated, after a recording, the seismograph will output a string of characters consisting of the unit serial number and other information.
Histogram Mode	With reporting activated, after a histogram is made inactive, the seismograph will output a string of characters consisting of the unit serial number and other information.

Physical

Size	Approximately 15 cm. x 11.5 cm. x 9 cm. (6 in. x 4.5 in. x 3.5 in.).
Weight	Approximately 1.6 Kg. (3.5 lbs.) without accessories.
Battery	Internal 6.0 volt rechargeable.
Display	The high contrast graphics display facilitates the instrument's setup. It also allows the operator to view operating parameters and summary data.
Keypad	The alphanumeric keypad can be used to supply comments and setup data.
Clock	A 24 hour clock maintains the date and time to the second, even if the primary power fails.
Operating Time	With a fully charged battery the unit will operate from 7 to 10 days at 1024 samples per second. Longer times may be obtained using the timer mode or external power from a solar panel or deep cycle battery.
Charging	An internal charging circuit allows charging with the supplied plug-in wall mount charger or available 10 to 15 volt DC supply. Power supplies for international use are available.
Operating Temperature	0 to 130 degrees F (-18 to 54 degrees C).