



Industrial Seismology, Inc.

Mini-Seis III Pro Specifications

General

Channels	Standard - three seismic channels and one acoustic channel. Optional – three additional seismic channels and one additional acoustic channel (8 channel model). Support is available for non-standard sensors.
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 2017 Edition. The upper frequency limit is 1/4 the sample rate.
Frequency Range (DIN)	From 1 to 315 Hz.
Accuracy (ISEE)	Conforms with ISEE Performance Specifications for Blasting Seismographs 2017 Edition.
Accuracy (DIN)	DIN 45669-1 Standard.
Transducer Density	Approximately 2.01 g/cc (125 lb/ft ³)
Acoustic	
Weighting	Linear overpressure.
Range	0.0156 Pa (0.000156 Mb) depending on range.
Frequency Range	2 to 250 Hz at 1024 sample rate as per ISEE Seismograph Performance Specifications for Blasting Seismographs 2017 Edition. The upper frequency limit is 1/4 the sample rate.
Linear Accuracy	Conforms with ISEE Performance Specifications for Blasting Seismographs 2017 Edition.
Timer	Allows an instrument to be active only during selected times on a daily basis.
Communication	High speed USB or serial.
Storage Capacity	Up to 4096 waveform and histogram records of any duration.
External Data Storage	Write to USB thumb drive.
System Log	The system log tracks on/off times, changes to setup parameters and system operation.
Operating Modes	Waveform, histogram, histogram/waveform and manual.
Data Reporting	Waveform and histogram events can be reported without needing to deactivate the current operating mode.
Data Retrieval	Data can be downloaded without requiring deactivation of the current operating mode.
GPS	Optional integrated GPS stores location information in the record summary

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.
Multi-Level Triggering	Three trigger levels allow for the use of warning lights and sounds.
Sample Rate	1024, 2048, 4096, 8192, 16384 samples per second per channel over 8 channels. Also 65536 and 131072 samples per second over 1 channel.
Duration	1 to 120 seconds at all sample rates.
Pre-Trigger	1 second at 1024 sample rate. The pre-trigger time decreases proportional to the sample rate.
Minimum Trigger Level	
Seismic	0.254 mm/s (0.01 in/s) depending on range.
Linear Acoustic	88 dBL depending on range.
Downtime Between Events	None at all sample rates.
Dynamic Sensor Test	With the exception of the single channel and non-standard sensors, a dynamic sensor test is performed at the end of every event in waveform mode.



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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 Rate	1024, 2048 or 4096 samples per second over 8 channels.
Sample Period	1, 10, 20, 30, 40, 50, 60 seconds and 15 minutes.
Data Stored	Channel peaks, their frequencies and optionally 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.

Reporting

General	Reporting requires an approved remote access device capable of port forwarding TCP data. The reporting can be provided by the White Reporting Service™ or handled by the user with the appropriate version of 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 keypad can be used to navigate screens and modify 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).

