Minimate Pro6™

Instantel

Advanced Vibration, Overpressure and Sound Monitor

6 – Channel data acquisition for the following range of Applications:

- Blast monitoring for compliance
- Multi-point monitoring
- Remote monitoring - Auto Call Home™
- Blast analysis
- Near and Far-field blast analyis
- Sound Monitoring
- Pile driving
- Construction activity
- Demolition activity
- Structural monitoring
- Underwater monitoring
- Heavy Transportation

The **Instantel® Minimate Pro6** vibration, overpressure and sound monitors are built on the success of the **Minimate® Series III** monitoring systems.

The **Minimate Pro6** offers 64MBs of memory, improved ruggedness, including a metal case and connectors, and water resistance.

Connect two standard ISEE or DIN Triaxial Geophones to monitor vibration sources from two different locations. Or, connect one ISEE or DIN Triaxial Geophone and an ISEE Linear Microphone or optional Sound Microphone when air overpressure or sound data is required.

Versatile

Each compliance sensor's calibration date, serial number, and sample rate specification are determined by the Sensor Check feature of the unit and stored in the setup file. The sensor type, calibration date and serial number are also recorded on the Event Report.

For those challenging monitoring applications, such as tunneling, the **Minimate Pro6** monitoring unit includes EMI shielding and built-in noise and anti-aliasing filters; both the sensor and auxiliary channels are isolated.

With the optional **Instantel Blastware® Advanced Module** perform VDV monitoring, Signature Hole Analysis, and real time display of Histogram data.

Intelligent

View Peak Vibration and Zero Crossing Frequencies immediately after each event occurs. Toggle between Peak Vibration and Peak Overpressure with a simple push of a button. Data highlights including Operator, Trigger, Duration, and Maximum Vibration and Overpressure are also available for review, right on the monitors display.

Remote Monitoring

For remote installations, the **Instantel Auto Call Home** feature will automatically transfer event files from field to office as they are recorded using a variety of wireless modems. From there, the **Blastware Mail** feature of the **Instantel Blastware** software automatically distributes files or summary information to multiple e-mail addresses.

Vision™

Auto Call Home integrates with **Vision**, Instantel's Cloud-based event monitoring data hosting application (optional). With **Vision**, you can store monitoring data securely in the Cloud and deliver the information your stakeholders need—anytime, anywhere, instantly. Vision also lets you:

- View, sort, filter and print event data to identify trends before they become issues.
- Map your site—using technology from Google, you can place your monitoring units on a street or satellite map.
- Upload photos for a record of the latest progress.

Easy to use

Even with all of these features, the **Minimate Pro6** system is still easy for anyone to use. A high-contrast LCD and ten-key tactile keypad drives simple menu operations, while graphic icons indicate battery and memory levels at a glance.

Key Features

- Dedicated function keys and intuitive menu-driven operation enable quick and easy setup.
- Sample rates from 512 to 65,536 S/s per channel, independent of record times.
- Continuous monitoring means zero dead time between events, even while the unit is processing.
- **Instantel Histogram Combo™** mode allows capturing thousands of full waveform records while simultaneously recording in histogram mode.
- The **Auto Call Home** feature automates remote monitoring applications.
- Non-volatile memory with standard 7,100-plus event storage capacity.
- Records full waveform events over two hours long.
- Match any channel with a variety of sensors; geophones, accelerometers, hydrophones and a microphone channel.
- Optional Sound Microphone available for sound monitoring. Combine an ISEE or DIN Triaxial Geophone with the Sound Microphone to monitor two types of event data.

The World's Most Trusted Monitors — Vibration · Noise · Air Overpressure   **www.instantel.com**

Minimate Pro6™

General Specifications

Minimate Pro6 Channels	Channels 1-3, ISEE (or DIN) Triaxial Geophone, and
	Channels 4-6, a second ISEE (or DIN) Triaxial Geophone, or an ISEE Linear Microphone
Geophone	
Range	Up to 254 mm/s (10 in/s)
Response Standard	ISEE Seismograph Specification or DIN 45669-1
Resolution	0.00788 mm/s (0.00031 in/s)
Frequency Range (ISEE / DIN)	2 to 250 Hz, within zero to -3 dB of an ideal flat response / 1 to 315 Hz or 1 to 80 Hz
Accuracy (ISEE / DIN)	+/- 5% or 0.5 mm/s (0.02 in/s), whichever is larger, between 4 and 125 Hz / DIN 45669-1 standard
Transducer Density	2.13 g/cc (133 lbs/ft^3)
Maximum Cable Length (ISEE / DIN)	75 m (250 ft) / 1,000 m (3,280 ft)

	ISEE Linear Microphone	**Sound Level Microphone**
Microphones (Sold separately)		
Weighting Scales	ISEE Linear Microphone	A-Weight or C-Weight
Response Standard	ISEE Seismograph Specification (2011)	Fast (125s) or Slow (1s)
Range	2 to 500 Pa (0.00029 to 0.0725 psi [88 to 148 dB])	30 to 140 dB A or C
Resolution	0.0156 Pa (2.2662x10^{-6} psi)	0.05 dB (Display limit 0.1dB)
Frequency Response	2 to 250 Hz between -3 dB roll off points	Up to 20 kHz
Accuracy	+/- 10% or +/- 1dB, whichever is larger, between 4 and 125 Hz	IEC 61672 Class 1
Maximum Cable Length	75 m (250 ft)	75 m (250 ft)

Optional Advanced Sensors	High Pressure Microphone, High Frequency Geophone, Uniaxial and Triaxial Accelerometer, and Hydrophone
Contact Instantel for more information	

Waveform Recording

Record Modes	Waveform, Waveform Manual
Seismic Trigger	0.13 to 254 mm/s (0.005 to 10 in/s)
Linear Acoustic Trigger	2.0 to 500 Pa (0.00029 to 0.0725 psi)
Sample Rate	512, 1,024, 2,048, 4,096, 8,192, 16,384, 32,768, 65,536 S/s per channel (independent of record time)
Record Stop Mode	Fixed record time, **Instantel AutoRecord™** record stop mode
Record Time	1-9,000 seconds (1-30 seconds, then 30-second increments up to 150 minutes) plus a 0.25 second pre-trigger
AutoRecord Time	Event is recorded until activity remains below trigger level for duration of auto window, or until available memory is filled.
Cycle Time	Recording uninterrupted by event processing, monitoring, or communication - no dead time below 65 KHz.
Minimate Pro6 Storage Capacity	64 MBs. Optional 240 MBs.
Full Waveform Events	7,100-plus 1 second events at 1,024 S/s sample rate with two geophones

Histogram Recording

Record Modes	Histogram and **Instantel Histogram Combo™** (monitor captures triggered waveforms while recording in Histogram mode)
Recording Interval	1 to 30 seconds at 1 second intervals, and 30 seconds to 60 minutes at 30 second intervals
Histogram Storage Capacity	512,000 intervals, examples: 11.9 days at 2 second intervals, or 355 days at 1 minute
Histogram Combo Storage Capacity	Example: 30 days of Histogram recording at 1 minute intervals, and over 6,500 1 second waveform events

Physical Specifications

Dimensions	25.4(l) x 11.75(w) x 10.80(h) cm (10.00 x 4.63 x 4.25 in); length dimension includes connectors and dust caps
Unit Weight	2.27 kg (5 lbs)
Battery	10 Days
User Interface	10 domed tactile with separate keys for common functions
Display	7-line x 32-character, high-contrast, multi-color backlit LCD
PC Interface	Ethernet® cable, supplied, for PC to unit connection (Auto Call Home is not supported over Ethernet), or RS-232 with an optional USB adapter
Auxillary Inputs and Outputs	External Trigger and Remote Alarm
Environmental	
LCD Operating Temperature	-20 to 45 °C (-4 to 113 °F)
Electronics Operating Temperature	-40 to 45 °C (-40 to 113 °F)
Water Resistance	IP67 – submerse to 30 cm (1 ft.) for 24 hours
Remote Communications	Instantel approved serial communication modems
	Automatically transfers events when they occur through the **Instantel Auto Call Home** feature
	Monitor start/stop timer
Additional Features	(Optional) **Vision** provides you and your stakeholders with secure, encrypted, Cloud-based access to the data they need, providing instant sharing for time-sensitive projects.
Electrical Standards	CE Class B

Instantel

StanleyBlack&Decker

720B0002 Rev 10 - Product Specifications are Subject to Change

The World's Most Trusted Monitors — Vibration · Noise · Air Overpressure