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# DATA-SHEET



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**WHY BUY**  
WHEN YOU CAN HIRE

# Minimate Plus™

## Advanced Vibration and Overpressure Monitor

### Range of Applications:

- Blast-monitoring for compliance
- Near-field blast analysis
- Pile driving
- Construction activity
- Demolition activity
- Heavy Transportation
- Bridge monitoring
- Structural analysis
- Underwater blast monitoring
- 4 or 8 channel data acquisition
- Remote monitoring - Auto Call Home™
- Structural monitoring - Flex™

When we asked what you wanted in a vibration monitor, you said “Everything.” So, we designed the **Instantel® Minimate Plus™** vibration and overpressure monitor. Ever since, it has become a favourite of contractors, consultants, engineers and blasters, because it offers unrivalled features and versatility in a rugged and easy-to-use package.

### Versatile

Use the **Minimate Plus** monitor with an **Instantel Standard Triaxial Geophone** (ISEE or DIN version) and an overpressure microphone (Linear or A Weight) to provide a rugged, reliable compliance monitoring system. Add the **Instantel 8-Channel** option and a single monitor may be used with two triaxial geophones and two microphones.

For more demanding monitoring applications, the **Instantel Blastware® Advanced Module** software provides the capability to monitor a broad selection of vibration and overpressure sensors, as well as sensors for structural and environmental measurements. Monitor vibration, ambient environmental conditions, and the movement of structural cracks, all at the same time, all using the same **Minimate Plus** monitor.

### Intelligent

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 wired or wireless modems. From there, the **Blastware Mail** feature of the **Blastware** software automatically distributes files or summary information to multiple e-mail or text messaging addresses.

### Easy to use

Even with all of these features, the **Minimate Plus** system is still easy for anyone to use. A high-contrast LCD, eight-key tactile keypad, coupled with simple menu-driven operations, provides complete control and confidence.

**Minimate Plus** - everything you need and more.



### Key Features

- **Instantel Histogram Combo™** mode allows capture of full waveform records while recording in histogram mode.
- **Auto Call Home** feature automates remote monitoring applications.
- Sample rates from 1,024 to 4,096 S/s, per channel with up to 65,000 S/s available on a single channel.
- Available **Instantel 8-channel** option allows for two standard geophones and two microphones to be operated from one **Minimate Plus** monitor.
- Non-volatile memory with standard 300-event storage capacity (optional 1,500-event capacity).
- Records waveform events up to 100 seconds long with standard setup, or up to 500 seconds with advanced setup.
- Continuous monitoring means zero dead time, even while the unit is processing.
- Any channel can be matched to a wide variety of sensors - geophones, accelerometers, or hydrophones.

# Minimate Plus™

## General Specifications

## Minimate Plus

Channels	Microphone and Triaxial Geophone or 4 independent user-configurable channels (two Microphones and two Triaxial Geophones or 8 independent channels with optional 8-channel upgrade)
Vibration Monitoring (with Standard Triaxial Geophone)	
Range	Up to 254 mm/s (10 in/s)
Resolution	0.127 mm/s (0.005 in/s) or 0.0159 mm/s (0.000625 in/s) with built-in preamp
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 <sup>3</sup> )
Frequency Range (ISEE / DIN)	2 to 250 Hz, within zero to -3 dB of an ideal flat response / 1 to 315 Hz
Maximum Cable Length (ISEE / DIN)	75 m (250 ft) / 1,000 m (3,280 ft)
Air Overpressure Monitoring	
Weighting Scales	Linear or A-weight
Linear Range	88 to 148 dB (500 Pa (0.072 PSI) Peak)
Linear Resolution	0.25 Pa (0.0000363 PSI)
Linear Accuracy	+/- 10% or +/- 1 dB, whichever is larger, between 4 and 125 Hz
Linear Frequency Response	2 to 250 Hz between -3 dB roll off points
A-Weight	
A-weight Range	50 to 110 dBA
A-weight Resolution	0.1 dBA
A-weight Frequency Response	15 to 8,000 Hz

## Waveform Recording

Record Modes	Manual, Single-shot, Continuous
Seismic Trigger	0.127 to 254 mm/s (0.005 to 10 in/s)
Acoustic Triggers	
Linear	100 to 148 dB
A-weight	55 to 110 dBA
Sample Rate	1,024 to 4,096 S/s per channel (independent of record time), up to 65,536 S/s in single-channel mode with advanced software (max 8,192 S/s per channel for 8 channels)
Record Stop Mode	Fixed record time, <b>Instantel® AutoRecord™</b> record stop mode
Record Time	1 to 100 seconds (programmable in one-second steps), or advanced mode, 500 seconds plus 0.25 seconds
<b>AutoRecord</b> Time	pre-trigger Auto window programmable from 1 to 9 seconds, plus a 0.25 second pre-trigger. Event is recorded until activity remains below trigger level for duration of auto window, or until available memory is filled. Recording uninterrupted by event processing - no dead time
Cycle Time	
Storage Capacity	
Full Waveform Events	300 one-second events at 1,024 S/s sample rate (1,500 event capacity with optional memory upgrade)
Event Summaries	1,750 (8,750 event capacity with optional memory upgrade)

## Histogram Recording

Record Modes	Histogram and <b>Instantel Histogram Combo™</b> (monitor captures triggered waveforms while recording in Histogram mode)
Recording Interval	2, 5 or 15 seconds; 1, 5 or 15 minutes
Storage Capacity	46,656 intervals - 3 days at 5-second intervals or 486 days at 15-minute intervals (with memory upgrade - 15 days at 5-second intervals or 540 days at 15-minute intervals)

## Physical Specifications

Dimensions	81 x 91 x 160 mm (3.2 x 3.6 x 6.3 in)
Weight	1.4 kg (3 lbs)
Battery	Rechargeable 6 V sealed gel cell - capacity for 210 hours of continuous monitoring
User Interface	8-key keypad with domed tactile keys
Display	4-line x 20-character, high-contrast, backlit LCD
PC Interface	RS-232
Auxillary Inputs and Outputs	External Trigger, Remote Alarm, coordinate download from GPS
Environmental	
LCD Operating Temperature	-10 to 50°C (14 to 122°F)
Electronics Operating Temperature	-20 to 55°C (-4 to 131°F)
Remote Communications	Compatible with Telephone, GSM, Cellular, RF, Satellite, Short-haul modems and Ethernet® device servers. Automatically transfers events when they occur through the <b>Instantel Auto Call Home™</b> feature.
Additional Features	Monitor start/stop timer
Electrical Standards	CE Class A

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714B0052 Rev 09 - Product Specifications are Subject to Change

**The World's Most Trusted Vibration Monitors**

# INLEC, supporting you to deliver a world class service, every day, in every sector ...



## OUR COMMITMENT TO YOU

### A wealth of knowledge and experience.

You can take advantage of expert advice to ensure you get the best, most appropriate and cost effective equipment for the job. We supply a wide variety of industries, so if there is another way to do the job or save you time and money we'll pass on the benefit of our experience for free.

### Honest advice, just a phone call away.

If we don't have a particular item, rather than hiring you something that won't do the job, we would rather direct you to an alternative supplier. You will always be provided with full instructions and if you still need help, call our technical team on Nationwide Low Call 0333 6000 600. Our aim is to save you time, frustration and money.

### Top quality equipment from major manufacturers.

With Inlec you'll get the most accurate, reliable and well-maintained equipment available. Prices are regularly reviewed to ensure you always enjoy the best value for money. We have made a significant investment in test equipment so we ensure that it's well packed to minimise damage and delay.

### We really do listen to you.

You won't waste your time contacting Inlec. Every request for equipment is logged and carefully considered. Listening to our customers helps keep our product range up to date and relevant. If you are unhappy about any aspect of our service please let us know so we can put it right.

## YOUR 5 WAY GUARANTEE

### 1 GUARANTEE SAME DAY DESPATCH

We understand why prompt delivery is important to you. So, if we confirm your order before 3pm, you are guaranteed same day despatch.

### 2 OUR PRICE GUARANTEE

Inlec guarantee you real value for money. Our price match policy is simple - if you can hire the same product for less elsewhere, we guarantee to match that price and reduce it by a further 10% of the difference - and still deliver our industry leading technical and customer support.

For full details check our price-match guarantee online

### 3 TOP QUALITY GUARANTEED

All equipment is thoroughly checked prior to dispatch to ensure you receive it in full, safe working order. Your shipment will be securely packed and include manufacturer's instructions, accessories or consumables and a valid calibration certificate where appropriate. In addition, Inlec offer a 24 hour replacement service if you decide the equipment is not suitable for your application\*.

### 4 FRIENDLY, KNOWLEDGEABLE ADVICE GUARANTEED

Inlec are happy to provide you with free advice, from an unbeatable team of experienced, knowledgeable and friendly engineers and hire experts.

### 5 YOUR GUARANTEE OF THE BEST CUSTOMER SERVICE

Throughout your hire we will work hard to ensure you enjoy the very best in support and service from Inlec. We guarantee you won't find better service anywhere in the industry.

\*subject to availability and conditions

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