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**INLEC.COM**

# DATA-SHEET



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**0333 6000 600**

**WHY BUY**  
WHEN YOU CAN HIRE

# Micromate™

## Vibration and Air Overpressure Monitor for Regulatory Compliance

### Range of Applications:

- Blast-monitoring for compliance
- Near-field monitoring
- Pile driving
- Compaction
- Construction activity
- Dynamic compaction monitoring
- Demolition activity
- Heavy transportation
- Environmental monitoring
- Tunnel and subway monitoring
- Bridge monitoring
- Structural monitoring and analysis
- Remote access monitoring

### Monitoring Redefined

With **Micromate™**, InstanTel has redefined industry standards for functionality and ease of use. **Micromate** provides reliable regulatory compliance monitoring with an ISEE or DIN Triaxial Geophone and ISEE Linear Microphone. Small enough to fit in your hand, **Micromate** is the first monitor in the industry to provide a touch screen interface. Support of USB 2.0 allows use of memory sticks and approved external devices such as USB hubs, modems, printers and GPS. Ruggedness and reliability, cornerstone attributes of InstanTel products, are designed in.

### Communications

**Micromate** supports USB 2.0 on both the host and device ports, operating up to 12 MB/s. External memory sticks, and InstanTel compatible printer, modem and a host of USB peripherals are supported. Supported peripherals are automatically identified when connected, and associated commands and functions are made available (in much the same manner that you are accustomed to with your laptop and computer). **Micromate** supports InstanTel's **AutoCall Home™** feature; when an event occurs the event is immediately captured and is automatically transmitted to your computer (there is no need to prompt the unit to transmit data).

### Easy to Use

With the use of a color touch screen and icon based user interface, InstanTel sets a new industry standard for efficiency and ease of use. A key pad compliments the user interface. Whether you prefer touch screens, key pads, or a combination of both, you'll find the **Micromate** intuitive to use and easy to learn. A full display touch screen keyboard makes entry of data and notes convenient and easy. Of course, the unit can be interfaced to a laptop or computer as well. Connectors are color coded for easy identification and installation.

### Saving Events

Events and unit settings are saved in a reliable on-board, non-volatile memory with ample storage capacity for most applications and up to 1,000 events (with additional optional memory capacity available). Data can be transferred for

off-unit storage or off-unit data manipulation to a computer or laptop via the convenient USB interface or via use of a compatible modem. Data retrieval can be as simple as copying events to an external USB memory stick (no laptop or computer is required).



### Rugged and Reliable

Simply put, the **Micromate** is built to last. It's built to be reliable, every day and all day – for years! The base unit comes with a fully sealed top panel, non-corrosive industrial grade connectors and fully sealed electronics. The base unit housing and connectors provide a water resistant seal. The custom molded housings for the geophone and base unit are made of superior impact polycarbonate. An optional protective "boot" complete with faceplate provides the highest level of durability and ruggedness available in InstanTel's product line.

### Key Features

- USB 2.0 with Host and Device support
- USB support for memory sticks, and InstanTel compatible field printer, modem and GPS devices,
- Large, high resolution, color graphics touch screen. Easy to read and navigate menu structure
- Context Sensitive Icons: Icons are only shown if they are relevant to what you are doing
- Short Cut Icons: Fast, one touch access to the most commonly used features
- Context Sensitive Help at your fingertips
- Integrated Keypad: Large 10-key interface with dedicated function keys
- Supports InstanTel's **Auto Call Home** for remote automated data reporting/transmission
- Monitor Scheduler: Assign different setup files, scheduled self checks, scheduled Auto Call Home times and when to start and stop monitoring
- Small enough to be hand-held
- Rugged and reliable: Field rugged and durable design with a fully sealed top panel, non-corrosive connectors, and sealed electronics to enhance water resistance
- Optional protective boot and faceplate
- Storage capacity for 1,000 events (additional capacity optional)
- Optional printer for immediate in-field printing of reports
- 10 day battery life (standard), 15 days (optional)



# Micromate™

## General Specifications

Channels	Microphone and Triaxial Geophone (ISEE or DIN)
Vibration Monitoring	
Range	Up to 254 mm/s (10 in/s)
Response Standard	ISEE or DIN 45669-1
Resolution	0.00788 mm/s (0.00031 in/s)
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	2.0 g/cc (127 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)	1000 m (1093 yards)
Air Overpressure Monitoring	
Weighting Scales	ISEE Linear Microphone
Response Standard	ISEE Seismograph Specification
Linear Range	88 to 148 dB (500 Pa [0.072 psi] Peak)
Linear Resolution	0.0156 Pa (2.2662x10 <sup>-6</sup> psi)
Linear Accuracy	+/- 10% or +/- 1dB, whichever is larger, between 4 and 125 Hz
Linear Frequency Response	2 to 250 Hz between -3 dB roll off points
Maximum Cable Length (ISEE)	500 m (547 yards)

## 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 pa to 500 pa (100 dB to 148 dB)
Sample Rate	1,024, 2,048, 4,096 S/s per channel (independent of record time)
Record Stop Mode	Fixed record time, <b>InstanTel AutoRecord™</b> record stop mode
Record Time	1 to 90 seconds (programmable in one-second steps) plus a pre-trigger at 0.25, 0.50, 0.75, or 1.0 second
<b>AutoRecord</b> 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 - zero dead time
Storage Capacity	
Full Waveform Events	1,000, 1 second events at 2,048 S/s sample rate (memory upgrade optional)

## Histogram Recording

Record Modes	Histogram and <b>InstanTel Histogram Combo™</b> (monitor captures triggered waveforms while recording in Histogram mode)
Recording Interval	2 to 30 seconds in 1 second increments, and 30 seconds to 30 minutes in 30 second increments
Histogram Storage Capacity	Approximately 220,000 intervals. Examples: 5 days at 2 second intervals, or 150 days at 1 minute
Histogram Combo Storage Capacity	Example: 30 Days of Histogram recording at 1 minute intervals, and over 900 1 second waveform events

## Physical Specifications

Dimensions	101.6 x 135.1 x 44.5 mm (4.15 x 5.32 x 1.75 in)
Weight	.5 kg (1.1 lbs)
Battery	10 day rechargeable lithium ion (optional 15 day battery upgrade available)
User Interface	10 domed tactile keys, colour touch screen, and full display keyboard with dedicated icons for common functions
Display	QVGA, 320 x 240 color touch screen
Printer	Precision high-resolution
PC Interface	USB
Auxillary Inputs and Outputs (Optional)	External trigger, Remote alarm
Environmental	
Printer/LCD Operating Temperature	-10 to 45°C (14 to 122°F)
Electronics Operating Temperature	-40 to 45°C (-4 to 140°F)
Remote Communications	Compatible with these supported modems; Sierra Wireless™ Airlink® Raven Series X, XT, GX400, or LS300
Electrical Standard	CE Class B - The Micromate has been tested and passed IEC (CB scheme test report available) 61010-1



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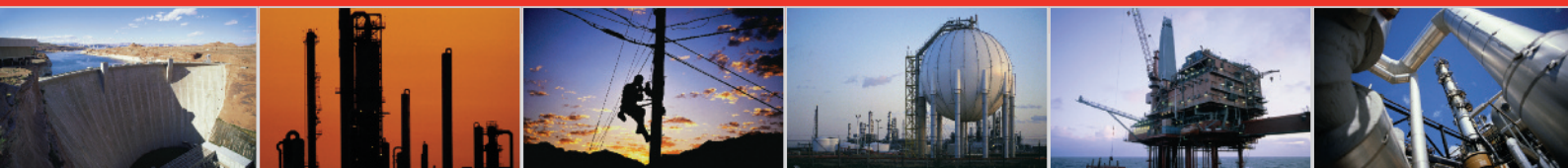
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980-721001-000 Rev 04 - Product Specifications are Subject to Change

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

## Europe's leading Test Equipment Hire Specialist



LAB NO. 0535



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