

8-Channel **Blastmate III™** and **Minimate Plus™**

Multi-sensor Vibration and Overpressure Monitors

Range of Applications:

- Multi-point Monitoring
- Blast analysis
- Structural monitoring - Flex™

Two complete compliance setups with a single monitor

For those situations when multiple monitoring points are located within close proximity to each other, the 8-channel **InstanTel® Blastmate III™** and **Minimate Plus™** multi-sensor vibration monitors can provide a flexible and cost effective monitoring solution.

Built on the powerful 4-channel Series III platform, the 8-channel systems allow you to connect two triaxial geophone sensors and two microphones to a single monitor. This lets you install two completely separate monitoring locations easily and economically. Coupled with the Transfer Function of the **InstanTel Blastware® Advanced Module** software, collect event data and determine the Natural Frequency of a building or structure without the need of a second instrument. And since the 8-channel systems are fully supported by **Blastware** software, the setup is as easy as configuring a standard 4-channel monitor.

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

Even with all this, you still have full access to all of the powerful Series III features like the **InstanTel Histogram Combo™** monitoring mode, zero dead time between events, and flexible sample rates up to 65,536 S/s, depending on the number of channels you have enabled. This gives you the control and confidence to monitor reliably in almost any situation.



Key Features

- 2 triaxial geophones and 2 microphones on the same monitor.
- 8 user-programmable channels available for advanced monitoring applications.
- Fully supported by Blastware software for easy setup and operation.
- Full sample rate flexibility using the **Blastware Compliance Module** software – 1,024 S/s, 2,048 S/s, and 4,096 S/s. Using the **Blastware Advanced Module** software – 65,536 S/s.

8-Channel **Blastmate® III** and **Minimate® Plus**

General Specifications

Blastmate III and Minimate Plus

Channels	Two Microphones and two Triaxial Geophones or 8 independent channels
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 ³)
Frequency Range (ISEE / DIN)	2 to 250 Hz between -3dB of an ideal 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
Range	88 to 148 dB (500 Pa (0.072 PSI) Peak)
Resolution	0.25 Pa (0.0000363 PSI)
Accuracy	+/- 10% or +/- 1 dB, whichever is larger, between 4 and 125 Hz
Frequency Range	2 to 250 Hz between -3 dB roll off points
A-weight Range	50 to 110 dBA
A-weight Resolution	0.1 dBA

Waveform Recording

Record Modes	Manual, Single-shot, Continuous
Seismic Trigger	0.125 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 and 2,048 S/s in compliance mode, independent of record time – in advanced mode, 8 channel 512-8,192 S/s, up to 65,536 S/s in single channel mode
Record Stop Modes	Fixed record time, InstanTel® AutoRecord™ record stop mode
Record Time	1 to 100 seconds (programmable in one-second steps) or 500 seconds plus 0.25 seconds pre-trigger
AutoRecord Time	Quiet 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 quiet window, or until available memory is filled.
Cycle Time	Recording uninterrupted by event processing - no dead time
Storage Capacity	
Full Waveform Events	140 one-second events at 1,024 S/s sample rate, 8 channels (700 event capacity with optional memory upgrade)
Event Summaries	875 (4,375 event capacity with optional memory upgrade)

Histogram Recording

Record Modes	Histogram and InstanTel Histogram Combo™ combined recording mode (monitor captures triggered waveforms while recording in Histogram mode)
Recording Interval	2, 5 or 15 seconds; 1, 5 or 15 minutes
Storage Capacity	For standard memory: 23,328 intervals - 1.4 days at 5-second intervals or 240 days at 15-minute intervals For extended memory: 7 days at 5-second intervals or 1200 days at 15-minute intervals

Physical Specifications

Dimensions (Blastmate III / Minimate Plus)	269 x 355 x 165 mm (10.6 x 14.0 x 6.5 in) / 81 x 91 x 160 mm (3.2 x 3.6 x 6.3 in)
Weight (Blastmate III / Minimate Plus)	6.4 kg (14 lbs) / 1.4 kg (3 lbs)
Battery (Blastmate III / Minimate Plus)	Rechargeable 6 V sealed gel cell - capacity: 270 hours / 210 hours of continuous monitoring
User Interface (Blastmate III / Minimate Plus)	63-key keypad; full keyboard with dedicated function keys / 8-key keypad with domed tactile keys
Display	4-line x 20-character, high contrast, backlit LCD with on-line help
PC Interface	RS-232
Auxiliary Inputs and Outputs	External Trigger, Remote Alarm
Printer (Blastmate III only)	High resolution thermal printer
Environmental	
LCD Operating Temperature	-10 to 50°C (14 to 122°F)
Electronics Operating Temperature	-20 to 60°C (-4 to 140°F)
Remote Communications	Compatible with Telephone, GSM, Cellular, RF, Satellite, Short-haul modems, and Ethernet® device servers. Automatically transfers events when they occur with the InstanTel Auto Call Home™ automated call-in feature.
Additional Features	Monitor start/stop timer

Corporate Office:
309 Legget Drive,
Ottawa, Ontario K2K 3A3
Canada

US Office:
808 Commerce Park Drive,
Ogdensburg, New York 13669
USA

Toll Free: (800) 267 9111
Telephone: (613) 592 4642
Facsimile: (613) 592 4296
Email: sales@instanTEL.com



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