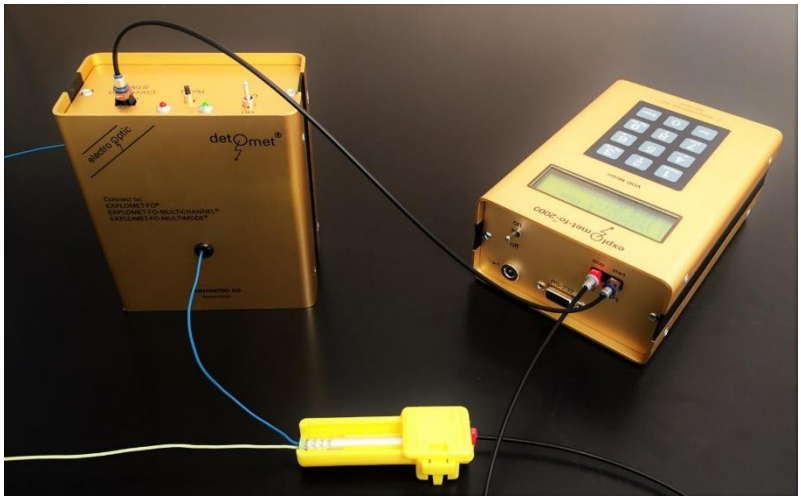
Introducing the Explomet 4

Following the successful launch of the Explomet 2T+, and shortly thereafter its larger counterpart, the Explomet 3, we believed we had reached the limits of ultra-high precision timing in a truly portable instrument. That was without counting on the determination, expertise and relentless drive for innovation of our engineering team.

Built upon decades of experience in high-precision measurement technology, Swiss craftsmanship, meticulous attention to detail, and perhaps that uniquely Swiss desire to measure everything, the Explomet 4 was born.

The Explomet 4 combines all the proven strengths of the Explomet 2T+ and the Explomet 3 while introducing a major new feature: Detomet Mode.

For many of our long-standing customers, the name *Detomet* will sound familiar. First introduced in the early 2000s alongside the iconic Explomet-FO-2000™, the original Detomet™ was designed to measure the delay times of electric detonators. Although innovative for its time, it remained in the shadow of the internationally successful Explomet-FO-2000™, largely because the available electronic technology had not yet reached its full potential.



Year 2001 – Photo taken from the Detomet™ manual.

The Detomet receives 1) START via the current flowing in the detonator's electrical wire and then receives 2) STOP via the optical signal emitted during the explosion at the tip of the electrical detonator.

The Detomet is connected to the Explomet-fo-2000 via an optical fiber to transmit the detonator delay data to the Explomet-fo-2000's display screen.

The original operating principle was simple yet effective. The Detomet received a START signal from the electric current flowing through the detonator lead wire and a STOP signal from the optical flash generated when the detonator functioned. The measured delay was then transmitted via optical fiber to the Explomet-FO-2000™ display unit.

Twenty-five years later, we have brought this concept back to life in a completely redesigned and fully integrated platform.

Compact, powerful, intuitive and exceptionally precise, the Explomet 4 is the most advanced and comprehensive measuring instrument ever developed by Kontinitro, representing our most significant technological achievement since the introduction of the first Explomet in the late 1970s.

Available Hardware Formats

The Explomet 4 is available in two hardware configurations:

Portable Format

- Compact aluminum housing based on the Explomet 2T+ platform
- 6 optical inputs
- Lightweight and field portable

Suitcase Format

- Rugged transport case similar to the Explomet 3
- 8 optical inputs
- Optional integrated thermal printer
- Designed for advanced testing and field operations

Operating Modes

Explomet 4 Mode:

The Explomet 4 measures time intervals between optical fiber inputs without requiring any predefined triggering sequence.

The instrument accepts between 1 and 6 optical inputs and records time intervals with a resolution down to 0.01 microseconds (µs).

Input position X1 can be triggered either:

- Optically through a fiber optic cable
- Electrically through a dedicated trigger input

When the distances between optical fiber positions are entered into the instrument, the Explomet 4 automatically calculates the Velocity of Detonation (VOD) in meters per second.

Typical applications include:

- VOD measurement in explosive cartridges
- VOD measurement in blast holes
- Top-to-bottom detonation verification
- Shock tube timing analysis
- General explosive performance testing

Detomet 4 Mode :

The Detomet 4 mode has been completely redesigned and integrated into the Explomet 4 platform.

Input position X1 starts five independent counters simultaneously, while five optical inputs stop each counter individually.

Measurements are displayed in milliseconds with a reading resolution down to the microsecond.

This configuration is particularly suitable for:

- Electric detonator delay measurements
- Shock tube detonator delay measurements
- Surface delay measurements on blast fields
- Analysis of firing sequences
- Delay verification between successive explosions

Data Storage and Security

All measurements are automatically stored on a removable SD card in CSV format and can be easily imported into:

- Microsoft Excel
- LibreOffice Calc
- OpenOffice
- Any compatible data analysis software

Each measurement is stored individually while also being integrated into a complete test history.

For additional security, a duplicate copy of all measurement data is simultaneously saved to an internal memory card. In the event of SD card failure or loss, the complete measurement history can be restored.

Available Configurations

The instrument is available in three software configurations:

- Explomet 4
- Detomet 4
- Explomet 4+ (combined Explomet and Detomet functionality)

Slow Combustion Measurements

The Explomet 4 also incorporates a dedicated measurement system for slow-burning materials.

Typical applications include:

- Propellants
- Powders
- Fuses
- Ignition systems
- Fuels
- Pyrotechnic materials

Measurement durations of up to 3 minutes can be recorded with high accuracy.

On-Screen Data Review

For rapid field verification, the instrument allows direct access to the last ten recorded measurements without requiring a computer or external software.

Multilingual User Interface

The Explomet 4 user interface is available in six languages:

- English
- French
- Spanish
- Portuguese
- Russian
- Polish

A New Generation of Measurement Technology

The Explomet 4 represents the culmination of more than four decades of experience in the development of high-precision timing instruments for explosives, detonators and propellants.

Combining the capabilities of the Explomet and Detomet product families into a single platform, it delivers unmatched versatility, reliability and accuracy for laboratory testing, field operations, mining, civil engineering, military applications and research environments.

Your Kontinitro Team