ELECTRONIC INITIATION SYSTEMS FOR MILITARY AND LAW ENFORCEMENT OPERATIONS

By DynITEC GmbH

Since 2002, advancing from the heritage of Dynamit Nobel, DynITEC GmbH is a leading producer of energetic materials and electronic initiation systems for military and civil applications and explosive devices for military and police use. The company is working with law enforcement and civil sector organisations in more than 20 countries worldwide.

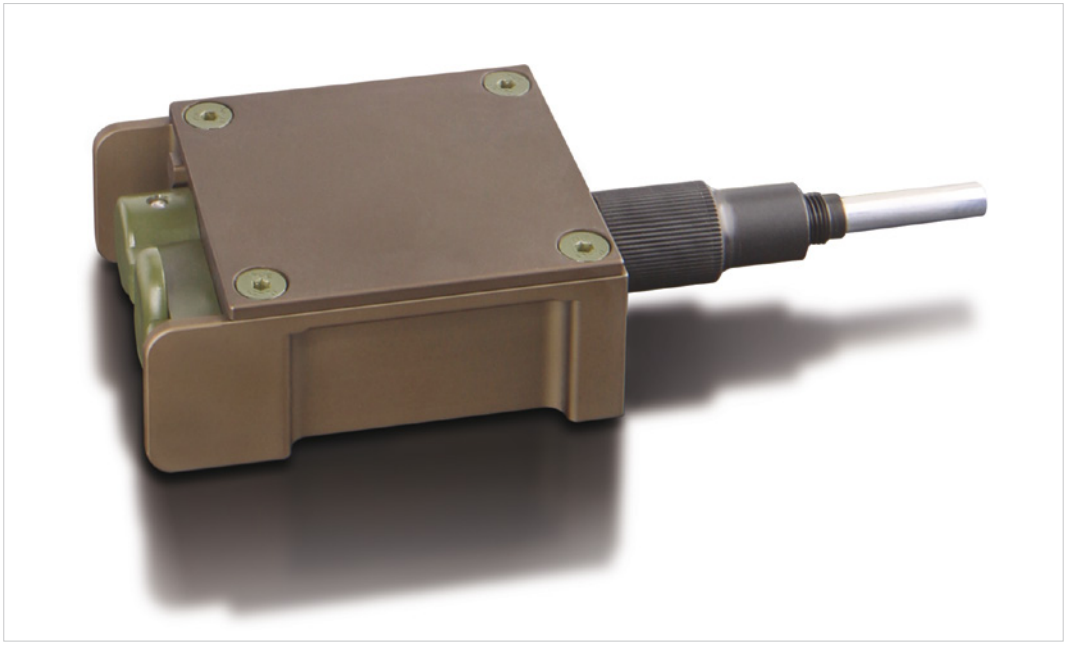
Considering customers' needs and feedback, DynITEC has put a lot of thought and effort into its SPG (transmitting and programming device) - a small, lightweight, rugged bi-directional remote firing and programming device with a rugged, reusable receiver. The system adheres to military specifications and is already in use in military units of several countries worldwide.

DynITEC team has revisited its time-controlled unit ZAE (Zeitauslöseeinheit); made of a solid block of aluminum, the system can withhold the military's rough way of handling equipment in harsh conditions. It is waterproof, as well as seawater proof, and suitable for underwater operations. It can also be programmed with a time-delay for a predetermined number of minutes (for example, 19:45h) or set in real-time mode. The system's time set can be up to 72 hrs and can ignite all standard blasting caps from Class 1 up to Class 3.

Notwithstanding the successes with previous developments, such as the Combifire or HZG Hybrid (Counter-IED Report Spring/Summer 2018 https://bit.ly/325O8Un), DynITEC offers lasting performance, even in a harsh military environment, for its lightweight bi-directional Remote Firing and programming system Smart BFAS (C-IED Report Autumn 2018 - https://bit.ly/2FeHzWw). It is also made of a solid block of aluminum, with waterproof feature and immersion to 7 meters, rugged to military specification MIL-STD 810. The Smart BFAS System is designed for complex blasting operations for use within the military and police community. The Smart BFAS System prevents jamming and allows the operator to conduct all actions remotely. The pre-programmed safety time feature allows the operator to set up and retract safely from the danger area because the receiver ignores any command during this safety time.

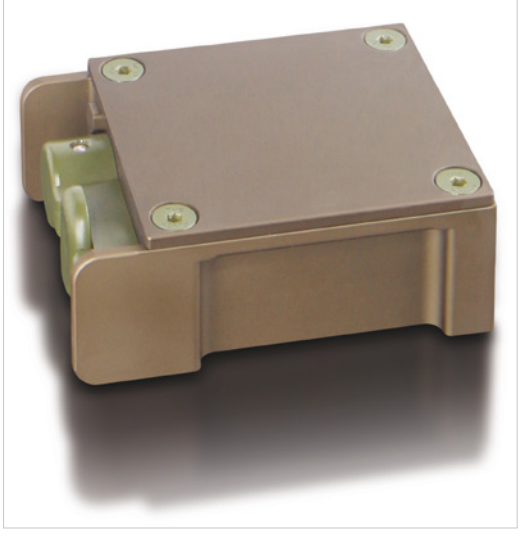
The programming device has an additional feature, where the time-delay can be programmed by the end-user between ignition groups. For example, between ignition groups 1 and 2 can easily set up a delay of 12.5 seconds.

The Transmitter (SPG) incorporates a safety feature through a safety key that prevents unauthorized use without adaptation, in accordance with the law enforcement blasting regulations. DynITEC intends to provide the community with a system that can help the operators carry out all their missions and initiate anything that could prevent any mission failure. The



Time-controlled unit ZAE (Zeitauslöseeinheit).

company has created a Transmitter that is rugged enough to be used in all climate zones and temperature ranges with and without gloves. The Transmitter (SPG) can arm and disarm the receiver (FAE AS4-4) remotely and conduct a remote communication, circuit and battery status test of all programmed receivers on request. A tricolor LED indicates all results and can repeat all tests at any time. As an additional feature, the SPG can arm and disarm all receivers as required and offers the possibility to select up to ten firing groups to initiate simultaneously , or set up a programmed delay time or individual groups like group 8. In each group, the operator can program as many receivers (FAE AS 4-4) as required.



Rugged, reusable receiver (FAE AS 4-4), made of a solid block of aluminum, is waterproof and can be programmed to a group of the transmitter (SPG) and individually, either to electric or electronic initiation ESK3. The electric firing output is designed to fire Class 1 to Class 4 blasting caps, cartridges of rocket wrenches and disrupters, cable cutters, or pyrotechnics with sufficient output to accommodate the receiver (FAE AS 4-4) and at the same time to keep a safe distance.

The benefit of using and firing Electronic Blasting Cap ESK3 (C-IED Report Spring/Summer 2020 https://bit.ly/2QZGyED) is that it can be used in every

environment where electric blasting caps are forbidden or cannot be safely used. Designed for law enforcement applications, the electronic blasting cap ESK3 is extremely safe against stray currents, radar radiation, or other electromagnetic interference (EMI) like mobile devices. Therefore, the ESK3 is ideal for C-IED operations at or near railroad tracks or places where electric blasting caps are not fit for purpose. Next to the above, the electronic blasting cap is safe against unauthorized use. Triggering by electrostatic charging, conventional blasting machines, or battery is not possible.

Benefits are visible in terms of economics and weight. For operations where every gram makes the difference, the safety features with electronic blasting caps and even communication systems can be stored and used next to the same device. For underwater operations, the ESK3 is waterproof to 100 meters and available on request as a non-magnetic version to conduct countermeasures on sea mines.

Sample of a ZAE Time Controlled Initiation System (TCIS).

The ESK3 has been given multiple NSN numbers (Cage Code C8403) through different countries, tested to military specification and introduced in several NATO countries.

Should the operator need to expand the receiver's capability to be able to use NONEL/Shock Tube systems, this can be achieved by adding the DynITEC FZ Adapter. The FZ Adapter is made from a solid block of aluminum and features easy maintenance in the field. With this add on, connected easily to the Receiver (FAE AS 4-4), the operator can use one system to cover all modern initiation possibilities available on the market (wired electric, electronic and Nonel/Shocktube).

The receiver (FAE AS 4-4) also has build-in batteries and a circuit tester, meaning that no additional circuit tester is needed.

Should additional information be required, please do not hesitate to contact us at eod-ied@dynitec.com or call +49 176 81123643. ■