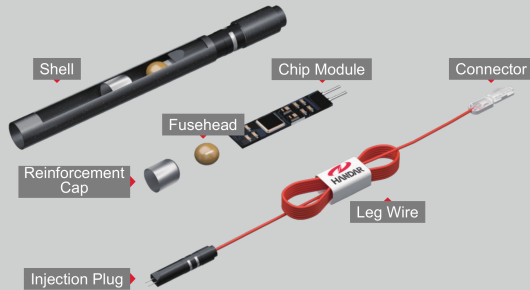


1. Description

An electronic detonator initiating system for small-section development (hole spacing ≤ 600 mm), pile-foundation blasting, demolition and other projects requiring high vibration resistance.

Electronic Detonator Structure



Integrated Logger & Blaster



2. Applications

In addition to general blasting, particularly suitable for small-section development, pile-foundation blasting and demolition.

3. Key Benefits

Superior resistance to static electricity, stray currents and radio-frequency interference. IoT-based intelligent control with authorized firing and a testable blasting network. Vibration, interference, surge-current, tensile, water and abrasion resistance are greatly improved compared with the standard type.

4. Testing Items and Technical Properties

Testing Item	Technical Properties	Testing Item	Technical Properties
Delay Time	16000 ms; minimum delay interval 1 ms.	Leg Wire Abrasion Resistance	A 1500 g weight acts vertically on the leg wire insulation, positioned between the abrasive belt and the weight. Abrasion distance: ≥ 60 cm; no short circuit.
Delay Accuracy	0-1000 ms: $SD \leq 0.6$ ms; >1000 ms: $CV \leq 0.06\%$.	Water Resistance	Normal initiation after immersion at 0.3 MPa water pressure for 15 days.
Blast Shock Wave Resistance	Tested to EN 13763-27 (2025); minimum distance without failure: 80 mm.	Plain Detonator Charge	RDX: 720 ± 40 mg; Initiating explosive: 280 ± 20 mg.
Anti-Static Performance	No explosion when the leg wires are discharged using a 500 pF capacitor, 5000 Ω series resistor and 25 kV charging voltage.	Initiation Capacity	Penetrates a 5 mm lead plate; hole diameter ≥ 10 mm.
Surge Current Resistance	A four-stage protection circuit prevents damage to the electronic ignition module from high-frequency, high-voltage transients and low-frequency, low-voltage high currents.	Maximum Load per Logger & Blaster	400 / 800 detonators; maximum communication distance 1000 m with 0.6 mm diameter copper conductors.
Vibration Resistance	Jolt tester: cam speed (60 ± 1) r/min; drop height (150 ± 2) mm; duration 15 min. No explosion, structural loosening or damage during the test; normal initiation afterwards.	Cascaded Capacity	1 master unit supports 10 slave units.
Leg Wire Tensile Strength	Under a static tensile load of 20 kg (196 N) for 5 min, the leg wire core and insulation must not break or suffer damage or short-circuit.	Wireless Remote Range	3 km
		Shelf Life	2 years

5. Recommendations for Use

01	Individually test each electronic detonator before loading it into a blasthole. Use only detonators that pass the test.
02	Do not screw or forcibly insert an electronic detonator directly into an explosive cartridge or package. Avoid rough loading, stemming and forceful pulling when charging and tamping blastholes to prevent damage and accidents.
03	Load the prepared primer assembly according to the blast design. Connect the connectors to the Harness Wire in accordance with the work plan and network design. Do not reuse the harness wire, as exposed conductors may cause short circuits.
04	Keep the leg wire insulation intact during network connection; exposed conductors may cause short circuits. Do not apply tension exceeding the specified tensile strength.
05	Check the network with the logger & blaster. Proceed with the firing sequence only after a successful check. If the check fails, resolve the faults indicated by the device, then retest the network. Proceed only when the network passes.

6. Packaging

Leg Wire Length (m)	Units per Box	Units per Carton	Carton Weight (kg, ± 0.5)
7	5 or 10	100	11
10		100	15
15		50	11
20		50	14
25		40	14

Note Carton weights exclude blast-isolation sleeves. Other electronic detonator specifications are available on request.

7. Storage and Shipping

UN No.	Product Name	Proper Shipping Name	Classification Code
0511 / 0513	Anti-Vibration Electronic Detonator Initiating System	Detonators, electronic, for blasting	1.1B / 1.4S

Storage Store in a magazine approved for Class 1.1B / 1.4S explosives or higher.

8. Precautions

01	Handle with care during shipping, storage and use. Do not subject the product to impact, compression, throwing or heating.	04	Network blasting is prohibited during thunderstorms.
02	In case of accidental fire, use only water or a water-based extinguisher. If there is a risk of explosion, evacuate immediately and move nearby personnel to a safe area.	05	Store any detonators remaining after blasting in accordance with the applicable regulations.
03	Do not dismantle electronic detonators without authorization, as this may cause an explosion.	06	For matters not covered here, comply with the relevant national laws, regulations and standards.

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