detnet®

the future of electronic initiation

digishot®

detnet.com

DetNet® continues to strive towards excellence in electronic initiation. As a world leader in our field, we aim to deliver world-class safety, the latest technology and consistent quality; resulting in improved loading and fragmentation, to ensure mining becomes more sustainable today and into the future.

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Introduction

DigiShot® is an easy-to-use and reliable electronic initiating system primarily used in smaller blasting operations that demand accurate timing. It has the ability to blast remotely via RF with market-leading safety features.

Features & Benefits

- **Blaster-friendly Tagger**
  The CE4 Tagger is a light-weight, inherently safe, hand-held device that is used to select and store the blast hole location in the detonator. The CE4 Tagger may be used to test an individual detonator, part of the pattern or the entire circuit before leaving the bench.
- **Blast Scalability**
  Each Blaster can fire up to 300 detonators. For larger synchronised blasts (firing up to 600 detonators), an additional Blaster may be linked.
- **Rugged Reliability**
  The over-extruded detonator downline and robust connector ensures reliable communication between the DigiShot® Electronic Detonator, Bench Blaster and CE4 Tagger.
- **Better control of vibration**
  The accuracy and precise timing capabilities of the system result in a significant reduction in vibration levels during the blasting process, making the programmable DigiShot® electronic initiation system suitable for application in environmentally sensitive areas.
- **Easy-to-use software minimises training time**
  A simple, menu-driven software interface coupled with the ability to connect detonators in any order makes for a user friendly system that minimises training.
- **Automatic or fully programmable delay timing**
  Choose auto-timing to set the delays for a blast design with consistent inter-row and inter-hole timing, or manual timing to accommodate any delay scheme.
- **Security**
  The DigiShot® Blaster is password protected, requires a specific SmartKey and uses a coded signal to fire the blast.
- **Single Blasting Device**
  DigiShot® detonators connect directly to the blasting equipment without the need for intermediary equipment. Each Bench Blaster has a capacity for 300 detonators, allowing for simple deployment.
- **Remote Firing**
  The system offers a maximum remote firing capability of up to 1000 m line of sight.

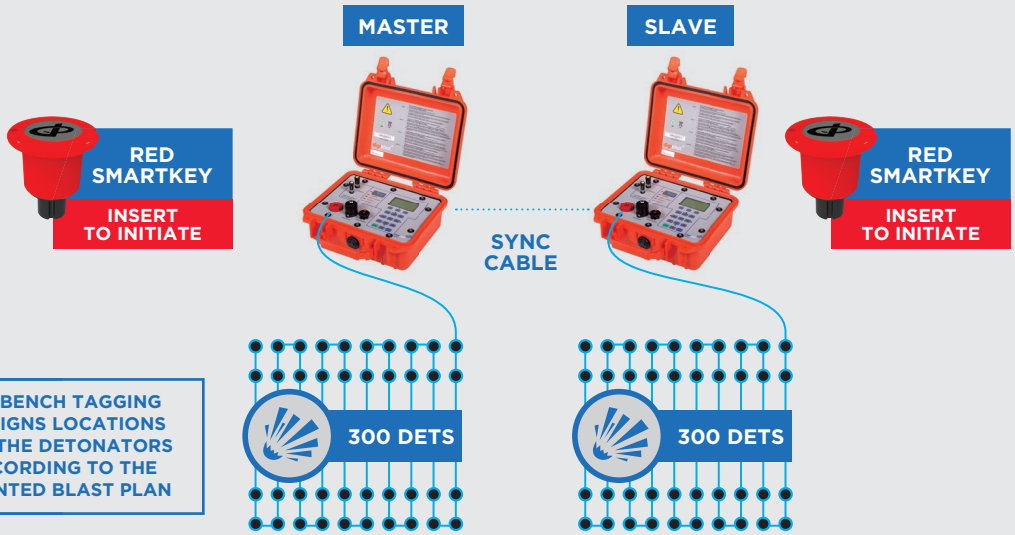
digishot® Deployment

REMOTE BLASTING

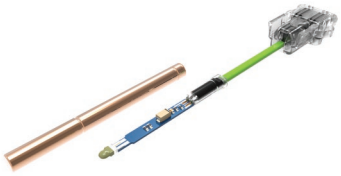
ON-BENCH TAGGING ASSIGNS LOCATIONS TO THE DETONATORS ACCORDING TO THE PRINTED BLAST PLAN

LOCAL BLASTING

ON-BENCH TAGGING ASSIGNS LOCATIONS TO THE DETONATORS ACCORDING TO THE PRINTED BLAST PLAN



DigiShot® Electronic Detonator



- A fully programmable electronic detonator
- The copper detonator shell fits into a standard booster
- Millisecond timing accuracy
- The connector is small, transparent, rugged and water resistant with finger-friendly grips for ease of use

CE4 Tagger

- Assigns a location to the detonator
- Tests leakage and troubleshoots the bench
- Can test up to 300 detonators
- Excellent battery management technology and standard USB charging
- Automatic detonator testing during tagging

Bench and Base Blaster

** Bench and Base Blaster are interchangeable

Bench Blaster	Base Blaster
Blaster connected to lead-in harness wire and placed at a safe distance in close proximity to the bench	Placed at point of safety and remotely controls the firing of the Bench Blaster
Can be used in standalone mode to fire up to 300 detonators	Easy-to-follow menus lead the user through all delay and firing options
Receives remote firing command from Base Blaster	Unit requires a password to activate blast

SmartKeys

Yellow Key

- Used for remote blasting
- Last physical link in blast circuit on Bench Blaster
- Blast can be aborted by removing the SmartKey from the Bench Blaster
- PIN protected
- Must be paired with a red SmartKey

Red Key

- Used for remote blasting from a Base Blaster and, in this case, must be paired with the yellow SmartKey in use
- The SmartKey is password protected to reduce the risk of any unauthorised person initiating the blast
- Used for local blasting directly from a Bench Blaster and, in this case, is the last physical link in the blast circuit
- Blast can be aborted by removing the SmartKey from Bench or Base Blaster
- Detonator fire command is stored in the SmartKey and blasting is not possible until the key has been inserted

Key Technical Features

DigiShot® Detonator	
Temperature	-40 °C to +80 °C -40 °F to +176 °F
Dynamic Shock Resistance	<=15954.15 Psi / 110 MPa
Detonator Shell South Africa North American	**Copper** L: 93.5 mm – 94.5 mm, OD: 7.49 mm - 7.54 mm L: 3.68 in – 3.721 in, OD: 0.295 in - 0.297 in
Detonator Strength	8D (South African Strength Definition) #12 (North American Strength Definition)
Net Explosives Quantity (NEQ)	1 g / detonator
Connector	Rugged, water-resistant
In-Hole Sleep time (Polyethylene)	A maximum of 7 days (when tested in 100% diesel, 500 kPa pressure and starting temperature of 60 °C / 140 °F - end temperature of (25 °C / 77 °F)

DigiShot® Blaster	
Temperature Limits	-10 °C to +55 °C +14 °F to +131 °F
Battery	Non-user replaceable rechargeable 12 V, 2.3 Ah lead acid battery
Weight	Approximately 10.5 kg / 23.15 lbs
Keypad	Tactile touch pad with numeric and soft keys
Display	320 x 240 pixels / 128 mm x 64 mm / 5.04 in x 2.52 in LCD with backlight
External Connectors	1 set of terminals to connect to 2-wire detonator harness Custom USB, sync link and charging connector
Operating time from a fresh battery	Approximately 6 hours at 25 °C (77 °F). Operating time is influenced by detonator load, backlight settings and operational temperature
Software upgrade	Via a PC and a custom USB cable
Water-resistance	Splash proof (IP54)

CE4 Tagger	
Temperature Limits	-30 °C to +60 °C -22 °F to +140 °F
Battery	Internal 3.7 V Lithium Polymer / External pack 6 x 1.5 V
Battery Life	Approximately 10 hours at 25 °C (77 °F)
Weight and Dimensions	570 g / 1.25 lbs; 213 mm (L), 88 mm (W), 38 mm (H)
Water and Dust Resistance	IP57
Display	128 x 128 pixels / 44.78 mm x 44.78 mm / 1.76 in x 1.76 in
Software Upgrade	Via the USB connector in the CE4 Tagger, using a flash drive

DetNet® South Africa (Pty) Ltd
Block 1B, Founders Hill Office Park, Centenary Road, Modderfontein
P O Box 10, Modderfontein, 1645, South Africa
T +27 11 657 7600 F +27 11 657 7601 www.detnet.com

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