Underground Electronic Networking System

Product Description
BlastWeb™ is an electronic networking system designed to reduce costs by decreasing time spent on production and development blasting in underground mining operations. This centralized blasting system is the most sophisticated system available, having the capability to: communicate on different platforms, initiate up to 24 Blast Control Units (BCU) and reduce production time by up to an hour a day. It also improves safety allowing for blasts to be initiated above ground or in a distant safe location.

Customer Benefits
• Able to increase production time up to an hour a day.
• Improved safety and security because BlastWeb allows for blasts to be initiated from the surface while requiring a password and smart key to initiate.
• Allows for multiple blasting options—compatible with Dyno Nobel’s electronic initiation systems: DriftShot™, SmartShot™ and DigiShot® Plus. Dyno Nobel’s NONEL® line and detonating cord via DriftShot™ Starter.
• Easy installation to available communication systems on site. BlastWeb can communicate over WiFi, Ethernet, copper, fiber and leaky feeders.

Technical Information

<table>
<thead>
<tr>
<th>Properties</th>
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<tbody>
<tr>
<td>Temperature Limits</td>
<td>-20°C (-4°F) to 70°C (158°F)</td>
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<tr>
<td>Power Supply (BCU)</td>
<td>110V, 220V, 525V</td>
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<tr>
<td>Battery (BCU)</td>
<td>User replaceable/rechargeable 12V 7.2AH sealed lead acid battery</td>
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<tr>
<td>Weight (BCU)</td>
<td>± 50kg</td>
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<tr>
<td>Dimensions (BCU)</td>
<td>L = 540mm (1.8ft) W = 481mm (1.6ft) H = 732mm (2.4ft)</td>
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<tr>
<td>External Connectors (BCU)</td>
<td>Smart Key, USB, (RS-232 &amp; RS-485 for expansion—rear of unit)</td>
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<tr>
<td>Water Resistance (BCU)</td>
<td>Splash proof (IP64)</td>
</tr>
<tr>
<td>Number of BCU Fired at One Time</td>
<td>Up to 24</td>
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<tr>
<td>Number of Detonators Fired at One Time</td>
<td>Up to 28,000</td>
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</table>

*BCU—Blast Control Unit

Applicable Standard
BCU passes tests specified in:
SANS 1717-1 (South African National Standard for The Design and Approval of EDD initiation systems for use in mining and civil blasting)
CEN 13763-27 : European CEN-Testing specification for Explosives for civil uses—detonators and relays

See Product Disclaimer on page 2.
Customer Benefits (continued)

- **Continuous communication** between BCU, Surface Blast Controller (SBC) and detonators allows for status feedback so maintenance can be conducted on damaged firing cables.
- **Real time data collecting**—the BCU and SBC log all events; blast reports can be generated by the SBC.

System Components:

**Blast Control Unit (BCU)**
- Upstream communication to surface via in place communication networks
- Downstream communication to terminators and initiators via the blasting network
- Secure local and remote blasting by using relevant smart key
- Diagnostics on all connected components
- Ability to control the switching of underground fans and pumps

**Surface Blast Controller (SBC)**
- Ability to fire multiple BCUs (up to 24) from a centralized point, either from surface or underground
- Continuous communication with all connected BCUs at the underground work place, providing real-time information on all connected components
- Logging of all events and generation of blast reports

2-wire Terminator

- A visual indication to the user that the integrity of the blast network is in order, and the BCU has detected a good detonator installation at the face
- Electrical energy absorption as a result of the effects of the blast. This potentially damaging energy is absorbed by the terminator and not the BCU

Smart Keys

- Encrypted signal to initiate detonation with specific password
- Minimum time delay of two minutes
- Two different smart keys to allow for initiation to take place on the surface or underground. The red smart key initiates from the BCU, while the yellow smart key allows for centralized blasting from the SBC

Application Recommendations

Due to the system’s flexibility, contact your local Dyno Nobel representative for application recommendations.

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