

TECHNICAL DATA SHEET

ORBS™

Omni Remote Blasting System



Description

ORBS™ is Orica's latest generation, centralised, Electronic Blasting System. Compatible with i-kon™ II/III and eDev™ II detonators, ORBS™ enables operations to safely initiate multiple development headings and/or production blasts, from a remote, central location over a browser interface.

The ORBS™ system is used in conjunction with the following hardware:

- ORBS™ Controller
- Blaster 3000
- i-kon™ Logger II
- eDev™ Scanner 260
- Electronic device to run the user interface (PC, tablet etc.)

Electronic detonators including i-kon™ II/III and eDev™ II, and nonelectric blasts using an electronic starter detonator, can be fired in the same blast event.

Application

ORBS™ is a versatile technology that can be used with:

- (1) i-kon™ Electronic Blasting System in high value and complex blasts at large surface and underground operations and in the most challenging environments; and/ or
- (2) eDev™ system in mine development, including shaft sinking; and/ or
- (3) Nonelectric blasts using an electronic starter detonator (i-kon™ or eDev™).

Technical Properties

| Table Heading Left | | ORBS™ Controller |
|------------------------------------|--------|------------------------------------------------------|
| Maximum Blast Size | i-kon™ | Up to 30 Blasters; 90,000 dets |
| | eDev™ | Up to 30 Blasters; 18,000 dets |
| Voltage | | 12v DC 2A external power supply |
| Comms. with Network | | LAN 10/100 Mb/s |
| Supported Blaster Type | | Blaster 3000 |
| Supported Remote Blaster Interface | | LTE, Wi-Fi, LAN |
| Dimensions (cm) | | 14 x 14 x 12 |
| Weight (kg / lb) | | 1.4 / 3.1 |
| Display | | PC, Mobile Phone, Tablet. Chrome Browser required |
| Keypad | | Not applicable |
| Comms with Logger/Scanner | | Not applicable |
| Sealing | Closed | IP 40 |
| | Open | |
| Remote initiation? | | Yes |

Key Benefits

- Improved operational productivity by enabling up to 30 Remote Blaster 3000 to fire in one blast sequence.
- Reduced personnel exposure risks by firing development and production blasts from a remote, central location.
- 'Plug and Play' system.
- Builds on existing mine communication infrastructure with no need for additional specialised infrastructure.
- Builds on existing Blaster 3000 architecture.
- Reduced hardware requirements by eliminating all Controller Blaster 3000, which can be converted to Remote Blaster 3000.
- Compatible with LAN, Wi-Fi, and LTE comms systems.
- Chrome browser-based user-interface that can be used on a PC, tablet, phone, or other electronic device with access to the mine's communication network.

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- Testability of Remote Blaster 3000 from anywhere with access to the mine's communication network.
- One-off digital registration process to connect to Remote Blaster 3000 - no physical remote dongles required thereafter.
- User management with different access levels to the system.
- Enables firing of starter detonators, development, and production shots in same blast (supports both eDev™ and i-kon™).
- Enhances timing flexibility- user can fire sequentially or with an offset between groups of Remote Blaster 3000.

Recommendations for Use

ORBS™ can be used with i-kon™ II/III and/or eDev™ II electronic detonators. Do not use this blasting equipment with any other detonator, electric or electronic.

Storage and Handling

Storage and Operation

| Activity | | ORBS™ Controller |
|-------------------|-----|------------------|
| Operating | min | -4°F / -20°C |
| | max | 140°F / 60°C |
| Charging | min | 32°F / 0°C |
| | max | 140°F / 60°C |
| Transport/Storage | min | -22°F / -30°C |
| | max | 140°F / 60°C |

Safety

ORBS™ blasting equipment is designed for mine office environments and must not be submersed in water. Excessive impact must be avoided. Never open this blasting equipment. It should be repaired only by Orica or approved agents.

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Emergency Telephone Numbers

Within (country): 1800 033 111

Outside (country): 61 3 9663 2130