



# PRODUCT INFORMATION

## BROCHURE

1.1B

# E★STAR DETONATORS



**E★STAR** electronic detonators feature maximum safety, timing accuracy and initiation selection for most blasting applications. Using the E★STAR Tester equipment it is possible to check the detonators at any time and with the E★STAR Logger equipment it is possible to program them for any delay within the range of 1 to 20,000 ms. With the E★STAR Blaster device it is possible to fire up to 1,600 detonators per blast.

## PRODUCT OVERVIEW

### EQUIPMENT

The system should be operated only by trained and authorized personnel using the dedicated equipment designed specifically for operating E★STAR detonators. The currently approved equipment is E★STAR Tester, E★STAR Logger, E★STAR Blaster, E★STAR Remote Blaster and E★STAR Mini Blaster, E★STAR Remote and equipment for dual blasting E★STAR Blaster Sync.



### BENEFITS

- Copper shell for high water resistance and long sleep time
- Delay range 1 – 20,000 ms
- Minimum delay increment 1 ms
- Maximum accuracy 0.01% of nominal delay
- Up to 1,600 detonators controlled by 1 Blasting Machine and 1 Logger
- Multiple ways of programming
- Possible remote blasting
- Possible dual blasting - up to 3,200 detonators in one shot
- Multi-level detonator verification prior each blast
- 100% verification of reliability of blast

## STANDARD TECHNICAL DESCRIPTION

|                                       |   |
|---------------------------------------|---|
| Detonator standard shell material     | Copper  |
| Detonator standard leg wires material | Copper coated steel   |
| Base charge                           | 720 mg  |
| Water pressure resistance             | 1 MPa / 28 days   |
| Temperature range for application     | -20 °C < T < +50 °C   |
| Label marking                         | Product name, Wire length, Data matrix code (traceability), Detonator serial number (for RFID labels) |
| Delay interval                        | Programmable 1 – 20,000 ms (increments of 1 ms)   |

## STANDARD PACKAGING

| Wire length (m)        | Packaging 1.1B UN 0511 (pcs) |       | Packaging 1.4S UN 0513 (pcs) |         |
|------------------------|------------------------------|-------|------------------------------|---------|
|                        | Loop                         | Spool | Loop                         | Spool   |
| 4.8                    | 100                          | -     | -                            | -       |
| 6                      | 100                          | -     | 48                           | -       |
| 9                      | 60                           | 75    | -                            | 40      |
| 12                     | 60                           | 75    | -                            | 32      |
| 15 / 18 / 20 / 24 / 30 | -                            | 75    | -                            | 30 / 20 |

E★STAR detonators are packaged in cardboard box of outer dimension  
 1.1B- 533 x 271 x 277 mm  
 1.4S- 385 x 296 x 210 mm / 15.16 x 11.65 x 8.27 in.  
 Other wire lengths are possible on demand.

## USE

- Open pit mining
- Quarries
- Underground mining
- Construction and tunnels

## SHELF LIFE, STORAGE & DISPOSAL

- Shelf life is five years from date of manufacture under good storage conditions.
- Recommended conditions: -30°C to +40°C, in original package.
- E★STAR must be stored in magazines for detonators. Detonators cannot be store in the same magazines as high explosives (packaged emulsions, booster, etc.) and blasting agents (ANFO). These magazines must accomplish the current legal requirements.
- Disposal: According to local regulations. If you have any questions, ask the supplier.

## TRANSPORT – UN CLASSIFICATION

Shipping Name: DETONATOR ASSEMBLIES, ELECTRONIC  
 Class & Division: 1.1B / 1.4S  
 ID Number: UN 0511 / 0513

Contact your local Austin Powder representative for further information.

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