

"E-RAS" Engineering - Remote Activation System



E-RAS (Engineering Remote Activation System) is an explosives initiation system for Engineering explosive applications. The system consists of E-RAS receiver (**ER3x, where x is revision letter**). It is meant to be used with Mitekas TT3 series transmitter as standalone blasting machine in blaster mode. for secure remote activation of a big network of various explosive devices using digital encoded radio signal. E-RAS is designed to be as easy and safe to use, and at the same time provide possibilities to prepare it for a wide variety of detonation scenarios.

ESSENTIAL PARAMETERS

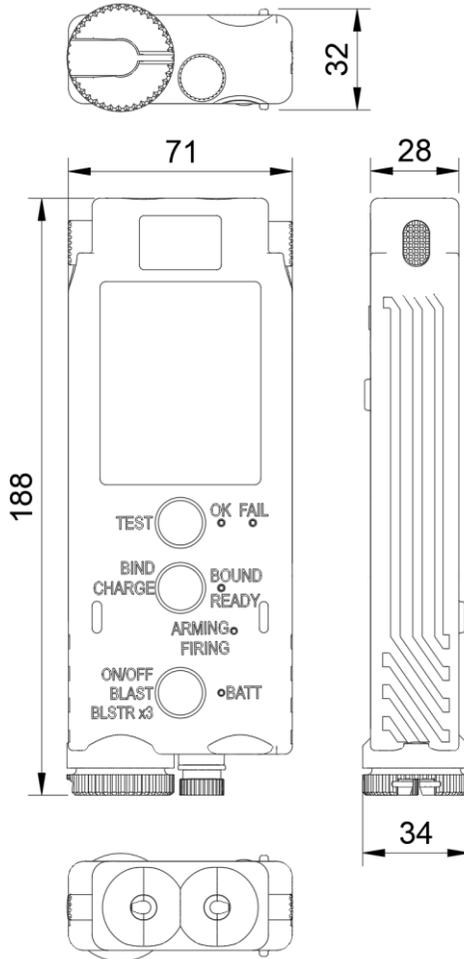
- Battery voltage measurement
- Two Lithium 18650 cells for a reliable power supply in low temperatures
- Up to 240 hours of Battery time for transmitter and receiver
- Safe encrypted (AES256) bidirectional digital communication and firmware
- Operational Frequency selection from 360 MHz to 950 MHz
- Robust reinforced IP67-rated housing with protective antenna cover
- Simple device status indication using LED lights and an illuminated LCD screen
- Four separate channels containing 4 receivers each for flexible binding options
- High voltage 400V / 25A initiation signal for multiple initiations at a time
- Internal antenna with the possibility to connect custom external antenna
- Low Weight – 280g without batteries

APPLICATIONS AND FEATURES

- Compact size device for optimal use and easy carrying in military uniform accessories
- Simple and fast preparation procedure for receiver check and activation for time limited situations
- Rugged and reliable design for heavy duty usage under any conditions keeping the easy servicing
- Control buttons are watertight and at the same time are easy to use wearing thick gloves
- Simple device status indication using LED lights and illuminated LCD screen with following features:
 - Representation of transmitter status and receiver network
 - Representation of receiver statuses and binding

MECHANICAL INFORMATION

ER3A – Receiver/Blaster



TECHNICAL DATA

<p>MECHANICAL</p> <ul style="list-style-type: none"> ➤ External measurements: <ul style="list-style-type: none"> ○ Receiver – 188 x 71 x 34/28 mm ➤ Weight: receiver - 280 g. ➤ Material: Nylon PA12
<p>ENVIRONMENT</p> <ul style="list-style-type: none"> ➤ Operating temperature -40°C to +71°C ➤ IP rating – IP67
<p>ELECTRICAL</p> <ul style="list-style-type: none"> ➤ Battery type Li-ion 18650 cell 3.7V. (>3000mAh, 4.2V max-3.0V min) – 2 cells ➤ Battery time (3000mAh batteries): <ul style="list-style-type: none"> ○ up to 240 hours (including energy for one initiation) ➤ Electric Detonator (ED) resistance measurements (0-80Ω with 0.1Ω resolution, 2Ω accuracy)
<p>CONNECTIVITY</p> <ul style="list-style-type: none"> ➤ Typical communication distance between transmitter and receiver (868 MHz, standard antenna, no interference or jamming): ➤ Direct line of sight – 10000 meters ➤ Open terrain – 3000 meters ➤ Urban terrain – 2000 meters ➤ Sparse forest or bushes – 1500 meters ➤ Dense city conditions, high-rise buildings –650 meters ➤ Dense and wet forest – 400 meters ➤ Maximum number of supported receivers– 12 devices ➤ Frequency range: 358MHz-955MHz (excluding 575MHz-583MHz and 717MHz-778 MHz ranges) ➤ Internal antenna usage frequency range: 830 MHz – 870 MHz ➤ In a standby mode, transmitters and receivers do not emit any signals
<p>INITIATION</p> <ul style="list-style-type: none"> ➤ Up to x17,6 J Electric Detonator (ED) initiation charge ➤ Up to 400V Integrated electric charge voltage ➤ Up to 25A discharge current

Safety guidelines

- Always follow the descriptions and rules described in this User Manual
- Do not open the device housing or make manipulations with device electronics. If the device housing is opened, it will become unusable

Damage & Warranty

Only the manufacturer has the right to repair the device if it is damaged. If the housing of any device has been opened or damaged, it is mandatory to return the device to the manufacturer or supplier. Warranty 12 months or otherwise stipulated in the purchase/supply contract.