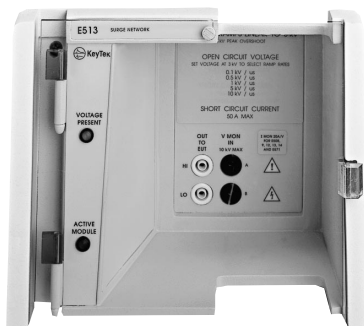




# ECAT<sup>®</sup>

## Model E513

### Surge Simulator for Voltage Ramps



*A plug-in module for ECAT systems to produce voltage ramps for testing surge protection components, such as gas tube arrestors. Meets the surge simulator requirements of UL 864.*

#### FEATURES

- **Controlled Open-Circuit Voltage Ramps of:** 0.1kV/ $\mu$ s, 0.5kV/ $\mu$ s, 1.0kV/ $\mu$ s, 5.0kV/ $\mu$ s, 10kV/ $\mu$ s.
- **Open-Circuit Voltage: to 3kV peak**
- **Short-Circuit Current: to 50A peak**
- **All test parameters under software control** via KeyTek SurgeWare™.
- **Ability to add a complete range of modules:**
  - Surge and EFT simulator modules for all major national and international standards.
  - AC mains coupler/decouplers for single or three-phase lines, to 600V rms, and 100A continuous AC line current.
  - I/O line coupler/decouplers for all types of lines, including telecom and RS-232.

#### SYSTEM BENEFITS

- **The ECAT is configurable as a compact, standalone system** with one test capability or as an integrated, multiple capability tester.
- **Unparalleled safety features** for high voltage testing, including a complete interlock system that not only disables simulator operation if activated, but completely removes AC mains power from the EUT, when using any KeyTek AC mains coupler/decoupler.
- **Automatic report generation** using KeyTek's exclusive Windows®-based software.
- **Modular system construction** provides the ability to upgrade test capabilities as requirements change or evolve.
- **Single port testing for Surge, EFT and PQF™** mains coupled disturbances allows changing test modes without switching off power to the EUT. This avoids lost time due to re-initializing the EUT between tests.

# Model E513

## SPECIFICATIONS AND TOLERANCES

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### WAVEFORMS

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**Voltage Ramps:** 0.1kV/ $\mu$ s, 0.5kV/ $\mu$ s, 1.0kV/ $\mu$ s, 5.0kV/ $\mu$ s, 10kV/ $\mu$ s, 0.1kV/ $\mu$ s is linear to 2.5kV; all other ramps linear to 3.0kV

*Note: Specified ramp rates are obtained with an open-circuit voltage setting of 3.0kV.*

**Voltage Durations:** ~65 $\mu$ s for 0.1kV/ $\mu$ s; ~40 $\mu$ s for 0.5kV/ $\mu$ s and 1kV/ $\mu$ s; ~5 $\mu$ s for 5kV/ $\mu$ s and 10kV/ $\mu$ s

**Current Durations:** ~45 $\mu$ s at 0.1kV/ $\mu$ s; ~40 $\mu$ s at 0.5kV/ $\mu$ s and 1.0kV/ $\mu$ s; ~5 $\mu$ s at 5kV/ $\mu$ s and 10kV/ $\mu$ s

**Open-Circuit Voltage:** 0-3000V  
 $\pm$ 5% in 1 volt steps

**Short-Circuit Current:** 50A,  $\pm$ 10% when the peak open-circuit voltage is set to 3.0kV

**NOTE:** *To obtain linear fronts, waves are quasi-square waves with 20-25% initial overshoots beyond peak open-circuit voltages, except for the 0.1kV/ $\mu$ s which is roughly triangular. Undershoots range from 5 to 25%.*

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### ECAT: AN EXTRAORDINARY CONCEPT IN EMC TESTING FOR VULNERABILITY TO SURGE, EFT AND POWER QUALITY.

ECAT is a totally integrated and modularized system which offers unprecedented testing ease, accuracy and versatility to manufacturers, test houses, and anyone who will be testing for effects of Pulsed EMI.

ECAT is designed to test products according to a broad range of international standards developed by ANSI, the IEC, CENELEC and other agencies. The European Norms, developed by CENELEC, became mandatory on January 1, 1996 for all equipment shipped into the European Union or shipped across EU borders.

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### PHYSICAL

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**Height:** 21cm (8<sup>1</sup>/<sub>4</sub>"")  
**Width:** 21cm (8<sup>1</sup>/<sub>4</sub>"")  
**Depth:** 52cm (20<sup>3</sup>/<sub>8</sub>"")  
**Weight:** 53kg (24 lbs.)

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### MINIMUM SYSTEM REQUIREMENTS

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#### E100 series control center

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### AVAILABLE OPTIONS

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**E513-VI:** Provides monitoring of the peak surge voltages and currents at the output of the E513 module. All measurements are logged by software for diagnostic evaluation or Go/No-Go testing.

*Note: If an ECAT coupler/decoupler is included, waveform monitoring is available at the output of the coupler/decoupler without the addition of Option E513-VI.*

**E513-S:** Adds an oscilloscope trigger for any Surge Network.

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*For additional ECAT® product literature call, email or fax the KeyTek sales department.*



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