



# ECAT<sup>®</sup>

## Model E509A

### Surge Simulator for Three-terminal 10/1000 $\mu$ s Telecom Testing



*A plug-in module for ECAT systems for true three-terminal testing using 10/1000 $\mu$ s voltage and current waves, as required by Bellcore GR-1089-CORE.*

#### FEATURES

- **Software selectable Surge waveforms:**
  - 10/1000 $\mu$ s, 600V, 100A/side peak short-circuit current
  - 10/1000 $\mu$ s, 1000V, 100A/side peak short-circuit current
  - 10/1000 $\mu$ s, 1500V, 100A/side peak short-circuit current
- **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 (the E509A waveforms are not coupled to the AC mains).
  - 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<sup>®</sup>-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<sup>™</sup>** 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 E509A

## SPECIFICATIONS AND TOLERANCES

### WAVEFORMS

**Waveforms:** 10/1000 $\mu$ s, 50-600V -0/+15% peak open-circuit voltage; 100A/side -0/+15% peak short-circuit current

10/1000 $\mu$ s, 50-1000V -0/+15% peak open-circuit voltage; 100A/side 0/+15% peak short-circuit current

10/1000 $\mu$ s, 50-1500V -0/+15% peak open-circuit voltage; 100A/side -0/+15% peak short-circuit current

**Note:** *All voltage and current specifications are minimum values, in accordance with Bellcore GR-1089-CORE.*

*Outputs are all true three-terminal outputs for testing either two or three-terminal devices or inputs. Outputs can be connected in parallel to double the available peak short-circuit current when testing two-terminal devices.*

**Front Time Tolerance:** -30%/+0 for voltage;  
-40%/+0 for 1500V waveform and current

**Duration Tolerance:** -0/+50% for voltage;  
-0/+20% for current

**Surge Repetition Rate:** 1 shot/40 seconds

## 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.

### PHYSICAL

**Height:** 21cm (8<sup>1</sup>/<sub>4</sub>"")  
**Width:** 42cm (16<sup>1</sup>/<sub>2</sub>"")  
**Depth:** 52cm (20<sup>3</sup>/<sub>8</sub>"")  
**Weight:** 16kg (35 lbs.)

### MINIMUM SYSTEM REQUIREMENTS

#### E100 series control center

### AVAILABLE OPTIONS

**E509A-S:** Adds an oscilloscope trigger for any Surge network.

**E509A-VI:** Provides monitoring of the peak surge voltages and currents at the output of the E509 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 E509-VI.*

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



One Lowell Research Center  
Lowell, Massachusetts 01852-4345 USA  
1 800 753 9835 • Tel: 1 978 275 0800 • Fax: 1 978 275 0850  
email: sales@keytek.com  
http://www.keytek.com

A division of Thermo Voltek, a Thermo Electron company  
KeyTek and ECAT are registered trademarks and PQF is a trademark of Thermo Voltek Corporation. ©Thermo Voltek. Specifications are subject to change without notice. Printed in USA.