



KeyTek ECAT® Model E510A



Plug-in module to produce combination wave specified by ANSI/IEEE C62.41 Cat. B and IEC 61000 4-5 to 10kV and 5kA

Electrical Open-Circuit Voltage	1.2/50µs, 0-10.1kV ±10% in 1 volt steps
Short-Circuit Current	8/20µs, 0-5.05kA with 2 ohm effective source impedance, ±10%
With the additional 10 ohm resistor, the peak short-circuit current = open-circuit voltage ÷12, ±10%. (The short-circuit current waveform is modified by the additional resistance.)	
Front Time Tolerance	±30% for voltage ±20% for current
Duration Tolerance	±20% voltage and current
Surge Repetition Rate	1 shot/18 seconds
Line Sync Accuracy	+15° with optional coupler/decoupler
Compatible Powerline Coupler/Decouplers	E455x-kV, E4555, E4556
Minimum System Requirements	E100 series control center
Options	E510A-VI - adds voltage and current monitoring

KeyTek ECAT® Model E511



Plug-in module to provide combination waves to 6 kV and 5kA, as required by British Telecom standards

ELECTRICAL	
Open-Circuit Voltage	1.2/50µs, 200V to 6.6kV ±5% in 1 volt steps
Short-Circuit Current	8/20µs, 170A to 5.5kA with 1.2 ohm effective source impedance, ±10%
Front Time Tolerance	±30% for voltage ±20% for current
Duration Tolerance	±20% voltage and current
Surge Repetition Rate:	1 shot/12 seconds
Line Sync Accuracy	±15° with optional coupler/decoupler
Minimum System Requirements	E100 Series control center with blank plug-in module (if no other half-width module is ordered)
Options	E511-VI - adds voltage and current monitoring

KeyTek ECAT® Model E513



Plug-in module to produce voltage ramps for testing surge protection components such as gas tube arrestors; meets surge simulator requirements of UL 864

WAVEFORMS	
Voltage Ramps	0.1kV/µs, 0.5kV/µs, 1.0kV/µs, 5.0kV/µs, 10kV/µs, 0.1kV/µs 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	-65µs for 0.1kV/µs; -40µs for 0.5kV/µs and 1kV/µs; -5µs for 5kV/µs and 10kV/µs
Current Durations	-45µs at 0.1kV/µs; -40µs at 0.5kV/µs and 1.0kV/µs; -5µs at 5kV/µs and 10kV/µs
Open-Circuit Voltage	0-3000V; ±5% in 1 volt steps
Short-Circuit Current	50A, ±10% when the peak open-circuit voltage is set to 3.0kV
Minimum System Requirements	E100 series control center with blank plug-in module (if no other half-width module is ordered)
Options	E513-VI - adds voltage and current monitoring

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/µs which is roughly triangular. Undershoots range from 5 to 25%

KeyTek ECAT® Model E514



Surge simulator for 10/1000µs current waves

WAVEFORMS	
Open-Circuit Voltage	Open-circuit voltage waveforms vary according to the peak short-circuit current level selected:
Peak I	Open-Circuit V
15A	10/1000µs, 50-1650V ±10%
60A	1kV/µs linear ramp, 50-1650V
100A	10/1000µs, 50-1000V
250A	1kV/µs linear ramp, 50-1650V ±10%
Short-Circuit Current	10/1000µs; software selectable at 15A, 60A, 100A, and 250A, ±10%
Rise Time Tolerance	±30%
Duration Tolerance	±20%
Surge Repetition Rate	15A, 60A - 1 shot/21 seconds 100A, 250A - 1 shot/59 seconds
Minimum System Requirements	E100 series control center
Options	E514-VI: Adds voltage and current monitoring