

515

The Model 515 Surge Transient Generator is designed to produce the Surge Withstand Capability (SWC) wave shape and characteristic that meet and exceed those required by the IEEE/ANSI standard C37.90a-1978 (formerly IEEE standard 472-1974).



PRODUCT DESCRIPTION

The Model 515 is an easy-to-operate completely solid-state and fully shielded instrument, providing bursts of damped sine waves. This unit is completely protected against damage by a momentary or sustained external short. It is fully shielded to prevent extraneous burst signals from feeding into any external equipment, and solid-state design eliminates jitter and erratic performance.

The instrument provides a manual trigger, an external trigger capability, an in-

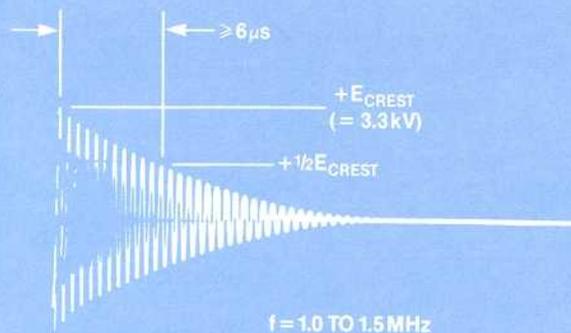
ternal variable burst rate from 20 to 120 bursts per second, or can be synchronized to 1x or 2x line frequency. To activate the high-voltage, two high-voltage push buttons are incorporated on opposite sides of the instrument, and must be pressed simultaneously for operator safety. It also has an indicator to show when the test is in progress. All controls are conveniently located on the front panel.

The burst created by the Model 515 may be one-shot, free running or synchro-

nized with the power line. This instrument also features external trigger capability to synchronize with external events. Provisions are included for bursts to continue for preset time intervals.

The Model 515 is designed to determine susceptibility against possible damage caused by line transient surges, and can be used in a wide variety of applications including the testing of: components, equipment and systems.

THE WAVEFORM



Damped Oscillatory
 $E_0 = 1.5 \text{ to } 3.3 \text{ kV}$
 $f = 1.25 \text{ MHz nominal}$
 $t_R = < 100 \text{ ns}$

Envelope decay to 50% of crest value is $6.0 \mu\text{s}$, minimum open circuit

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PRODUCT INFORMATION

Test Burst Rate:	Manual one-shot, plus continuously variable from <20 bursts per second to >120 bursts per second, plus 60 Hz or 120 Hz synchronized with power line. Phase or burst is adjustable through >320° with respect to power-line frequency, plus external trigger one-shot to 120 bursts per second.
Test Duration:	Continuously adjustable from <2 seconds to >10 seconds by front panel control, plus a front panel indicator for test in progress.
Output Isolation:	Output Isolation is provided on the inner conductors of two type UG-931 High-Voltage Connectors. Output may be directly applied to any power line voltage up to 500 V _{RMS} .
Shielding:	Transient burst signal generator is fully shielded to prevent unwanted radiation or conduction of signal.
Monitor Output:	A low-level 1000:1 attenuated output referenced to ground is provided for scope monitoring.
Trigger Output:	A front panel scope trigger output signal is provided, which is present prior to turning the high voltage on.
High Voltage:	Two push buttons (located on opposite sides of the instrument) must be simultaneously pushed in order to obtain high voltage output.
Input Voltage:	115 V ± 10%, 60 Hz
Input Power:	100 W

PHYSICAL DIMENSIONS (Rack Mounted units are slightly less.)

Width	19¾ inches	50.17 cm
Depth	18 inches	45.72 cm
Height	11¼ inches	28.58 cm
Weight	70 lbs	31.75 kg

OPTIONS

F	Changes the input power requirement from 115 V ± 10%, 60 Hz to 230 V ± 10%, 50 Hz.
J	Changes the input power requirement from 115 V ± 10%, 60 Hz to 100 V ± 10%, 60 Hz.
K	Changes the input power requirement from 115 V ± 10%, 60 Hz to 115 V ± 10%, 50 Hz.
L	Remote One-Shot Feature.
Q	Changes the input power requirement from 115 V ± 10%, 60 Hz to 100 V ± 10%, 50 Hz.
R	Rack mounting.
W	Changes the input power requirement from 115 V ± 10%, 60 Hz to 200 V ± 10%, 50 Hz.

ISOLATION NETWORKS

	V-2269	V-2538
Maximum Current:	10 A _{RMS} per phase.	30 A _{RMS} per phase.
Number of AC Lines:	Any number up to and including four.	
Maximum Voltage:	700 V _{RMS} between input lines and case.	
Isolation Inductance:	≥370 μH <5 mH in each line.	
Coupling Capacitance:	0.1 μF ± 10% from surge-transient generator input to each line.	
Electrical Connections (Power Line-In & EUT):	Barrier strips with lugs for connection between power in and DUT (or EUT) are provided on rear of instruments. Two cables are supplied to interconnect to Velonex Model 515 Surge Transient Generator.	

Your Local Velonex Rep. is:

Specifications subject to change without notice

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