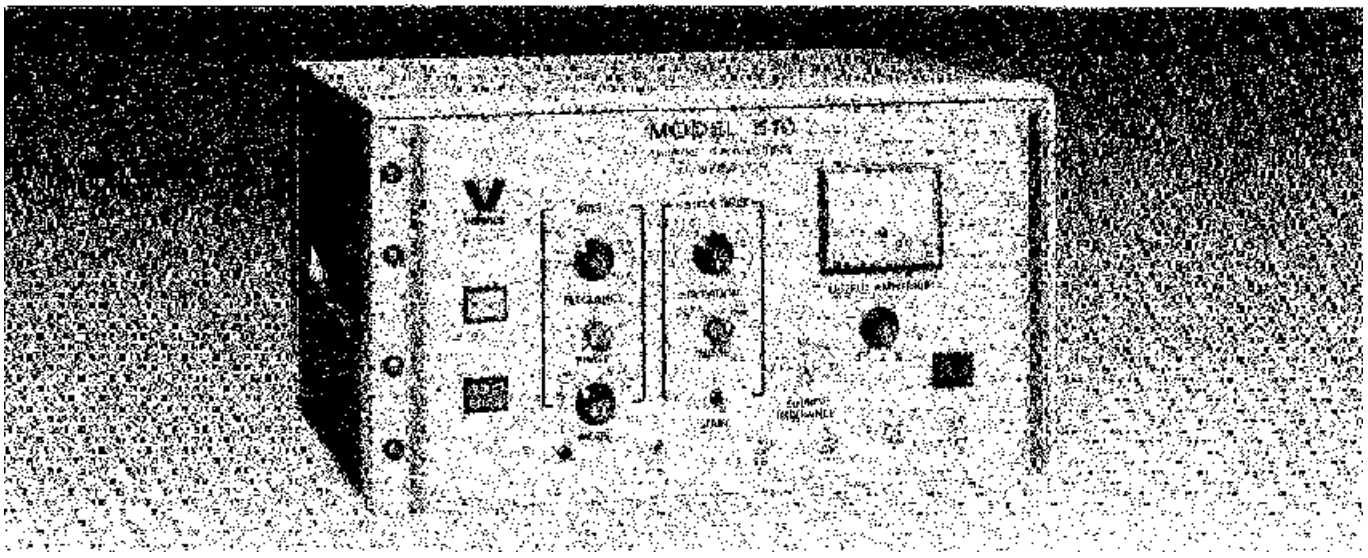
510

The Model 510 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).



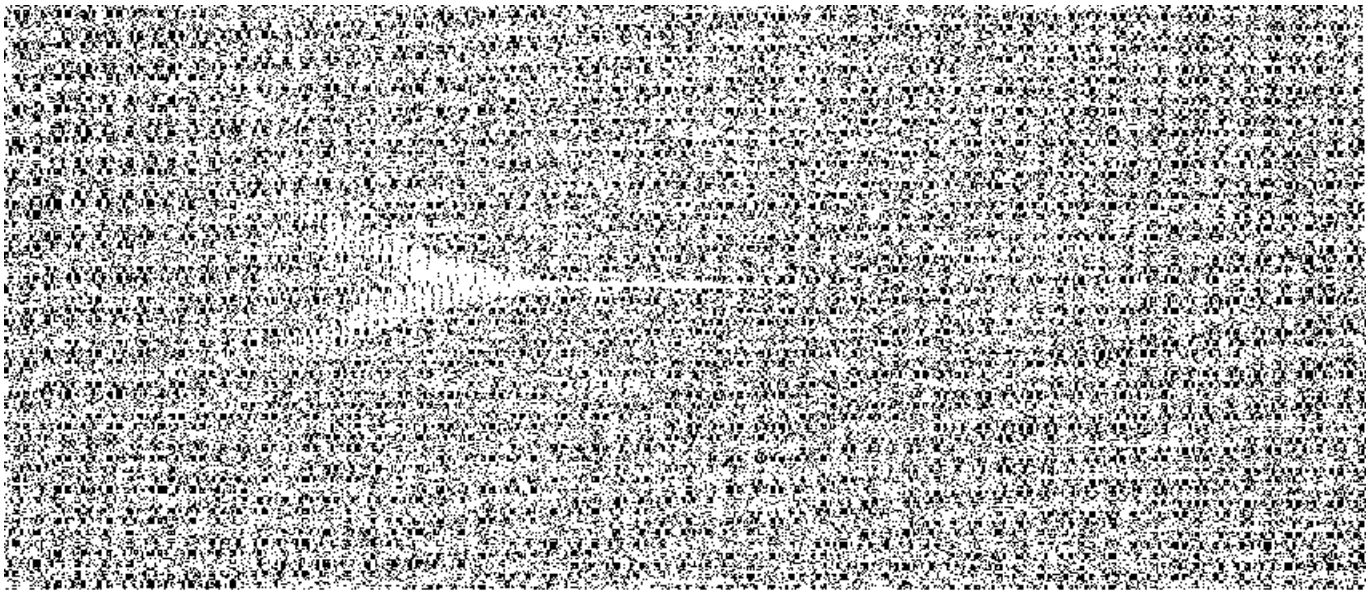
PRODUCT DESCRIPTION

The Model 510 is an easy-to-operate completely solid-state and fully shielded instrument, providing bursts of sine waves. This unit is completely protected against damage by a momentary and 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.

This instrument provides a manual trigger, an internal variable burst rate from 20 to 120 bursts per second, or can be synchronized to 1× or 2× 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. All controls are conveniently located on the front panel.

The burst created by the Model 510 may be one-shot, free running or synchronized to the power line. Provisions are included for bursts to continue for preset time intervals.
The Model 510 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



510

PRODUCT INFORMATION

Output Isolation:	Output Isolation is provided on the inner conductors of two type UG-831 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. (For other voltages and frequencies, see list of options.)
Input Power:	80 W
Output Voltage:	(Open Circuit; crest of 1st Half Cycle Peak) Variable by front panel control from 1.5 kV (<300 V with a more rapid envelope decay) to 2.5 kV.
Source Impedance:	Selectable 100 Ω, 150 Ω, 300 Ω, 600 Ω, 1200 Ω (source impedance selected with HV off)
Test Burst Rep Rate:	Manual one-shot, plus continuously variable from < 20 bursts per second to > 120 bursts per second, plus 50 or 60 Hz synchronized with power line, plus 100 or 120 Hz synchronized with power line. Phase or burst is adjustable through > 320° with respect to power line frequency.
Test Duration:	Continuously adjustable from < 2 seconds to > 10 seconds by front panel control.

PHYSICAL DIMENSIONS (Including Cabinet)

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

A	Continuously variable Test Burst Rep Rate from < 40 bursts per second to > 400 bursts per second in place of < 20 to > 120 bursts per second. Input power changed to 200 W.
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.
Q	Changes the input power requirement from 115 V ± 10%, 60 Hz to 100 V ± 10%, 50 Hz.
R	Rack mounting.

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 510 Surge Transient Generator.	

PHYSICAL DIMENSIONS (Including Cabinet)

	V-2269		V-2538	
Width	5½ inches	13.97 cm	19¾ inches	50.17 cm
Depth	11 inches	27.94 cm	18 inches	45.72 cm
Height	6¾ Inches	17.15 cm	6 inches	15.24 cm
Weight	12 lbs	5.44 kg	43 lbs	19.5 kg

Your Local Velonex Rep. is:

Specifications subject to change without notice.

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