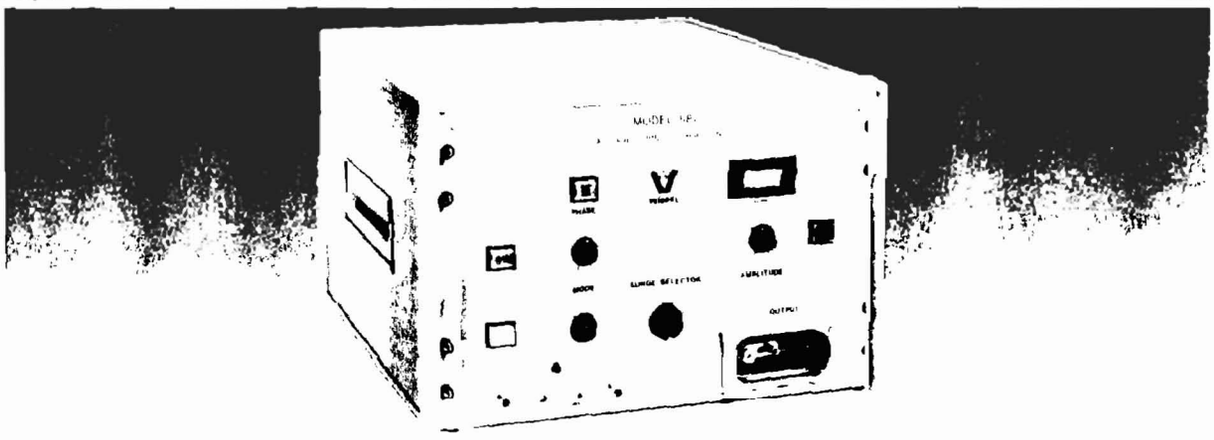
587

The Model 587 Voltage and Current Surge Generator is a compact, state-of-the-art instrument providing all three waveforms required by the ANSI/IEEE standard C62.41-1980 (formerly IEEE standard 587-1980) and IEC Publication 664-1980 for surge voltage testing in low-voltage AC power circuits on 120 V/240 V power lines.



PRODUCT DESCRIPTION

The Model 587 is an easy-to-operate, solid-state voltage and current generator, producing three well-defined waveforms, one oscillatory and two exponential. This instrument can be operated safely and effectively to meet a wide variety of applications, including the following standards.

ANSI/IEEE 62.41-1980

Category A: Long-branch circuits or wall outlets. Requires an Oscillatory wave shape of 6 kV amplitude with a current capability of 200 A (587 with option C).

Category B: Short-branch circuits or load near the circuit breaker panel. Requires an oscillatory wave shape of 6 kV amplitude with a current capability of 500 A. In addition, two exponential wave shapes are needed for impulse wave tests. A 6 kV_P voltage surge (open circuit) at 1.2 × 50 μs, and a 3 kA_P current surge (short circuit) at 8 × 20 μs.

IEC Report 664

Category I: Requires a 1.2 × 50 μs voltage waveform at 500 V — Telecommunication and Electronic testing. Following Category II.

Category II: Requires a 1.2 × 50 μs voltage waveform at 2.5 kV — Appliances, portable equipment. Following Category III

Category III: Requires a 1.2 × 50 μs voltage waveform at 4 kV — Fixed Installations. Following Category IV.

Category IV: Requires a 1.2 × 50 μs voltage waveform at 6 kV. Primary supply. Overhead lines, cable systems, including distribution bus and its overcurrent protection.

A surge selector switch, a power push button and 2 high-voltage push buttons are incorporated into this instrument for convenience and safety, and are located on the front panel. A front panel digital panel meter indicates peak voltage. Input power of 115 V ± 10%, 60 Hz is standard (input power options are available). The isolation network Model V-2734 is recommended to be used with the Model 587. An isolation network must be used when the EUT is connected to an AC power line.

The Model 587 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 WAVEFORMS

587

PHYSICAL DIMENSIONS

Width	19¾ inches	50.17 cm
Depth	21½ inches	54.61 cm
Height	13 inches	33.02 cm
Weight	100 pounds	45.36 kg

OPTIONS

B	Power line phase synchronized with 8 × 20 μs waveform.
C	Selectable short-circuit limit of 200 A/500 A
D	Current monitor (for use with oscilloscope).
E	High impedance isolation network auto switching mode.
L	Remote one-shot
M	Remote safety feature
P	Provides surges on 480 V_{RMS} power lines. (Available only in conjunction with an isolation unit)
R	Rack-mounting
T	Continuous Dual Waveform

INPUT POWER OPTIONS

F	Changes the input power requirement from 115 V, ± 10%, 60 Hz to 230 V, ± 10%, 50 Hz
G	Provides switch selectable input voltage 115/230 V, ± 10%, 60 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
N	Changes the input power requirement from 115 V, ± 10%, 60 Hz to 230 V, ± 10%, 60 Hz
Q	Changes the input power requirement from 115 V, ± 10%, 60 Hz to 100 V, ± 10%, 50 Hz
W	Changes the input power requirement from 115 V, ± 10%, 60 Hz to 200 V, ± 10%, 50 Hz

OPTIONAL MODELS	Waveforms	OPTIONS
588	1 (only)	C, D, F, G, J, K, L, M, P, Q and R.
589	2 & 3 (only)	B, D, F, G, J, K, L, M, N, P, Q and R. (Continuous Dual Waveform, Standard)
590	2 & 4 (only)	B, D, F, G, J, K, L, M, N, P, Q and R. (Continuous Dual Waveform, Standard)

ISOLATION NETWORK (V-2734)

Line Current:	The maximum line current to EUT is 20 A_{RMS}.
Surge Voltage:	Up to 6 kV
Surge Current:	Up to 3 kA peak
AC Line Voltage to EUT:	0-138 V_{RMS} (to 277 V_{RMS} with Option G) 50/60 Hz.
AC Line Current:	Up to 20 A_{RMS} continuous (additional input up to 3.4 A should be available from power line).
DC Line Voltage:	0 to ± 50 V_{DC} (Option D)
DC Line Current (to EUT):	Up to 20 A continuous (Option D)
Line Voltage Drop:	For AC operation, 12 V_{RMS} typical with 20 A, 60 Hz. For DC operations (Option D) 5 V typical with 20 A load.
Input Power:	115 V_{AC}, 50/60 Hz, 1 A (other options are available, see Model V 2734 Isolation Network Options).

PHYSICAL DIMENSIONS (V-2734)

Width	19¾ inches	50.17 cm
Depth	21½ inches	54.61 cm
Height	13 inches	33.02 cm
Weight	150 pounds	68.04 kg

OPTIONS

D	Adds DC power isolation to ± 50 V, 20 A.
E	Isolation network impedance switching for 6 kV, 1.2 × 50 μs mode.
G	0-277 V_{RMS}, 10 A_{RMS} capability.
H	Dual Voltage Monitor
R	Rack Mounting

Specifications subject to change without notice.

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