



Lightning Surge Generator

CWS 1000N

- IEC/EN 61000-4-5
- IEC/EN 61000-4-9
- GB/T 17626.5
- GB/T 17626.9

Features

- > 5.7-inch color touch screen front panel operation
- > Surge voltage and current measurement and acquisition
- > Built-in CDN rated AC 250 V 20 A, DC 220 V 12 A
- > Max. test Voltage is 10 kV
- > Can control external three-phase CDN (SPN Series)

Introduction

The CWS 1000N Lightning Surge Generator complies with IEC/EN 61000-4-5 and IEC/EN 61000-4-9 standards, and is capable of simulating surge transients generated by grid switching and lightning strikes. This unit outputs the 1.2/50 μ s combination wave with a max. pulse voltage of 10 kV.

It integrates a built-in single-phase coupling/decoupling network, supporting EUT load ratings up to AC 250 V, 20 A and DC 220 V, 12 A. Featuring user-friendly operation, the CWS 1000N supports test sequence function.

Application Areas



Technical Parameters

Pulse Source	
Test Voltage	0.5 kV ~ 10 kV, $\pm 10\%$ (CWS 1000N)
Test Current	0.25 kA ~ 5 kA, $\pm 10\%$ (CWS 1000N)
Voltage Waveform	Front time: 1.2 $\mu\text{s} \pm 30\%$ Duration: 50 $\mu\text{s} \pm 20\%$
Current Waveform	Front time: 8 $\mu\text{s} \pm 20\%$ Duration: 20 $\mu\text{s} \pm 20\%$
Polarity	+, -, first + than -
Output Impedance	2 Ω
Repetition Time	6 s ~ 180 s (The shortest interval is determined by the test voltage.)
Counter	1 ~ 999
Phase Sync	0° ~ 360° (45Hz~65Hz)
Calibration capacitor	Built-in 18 μF capacitor
Trigger Mode	Manual, Auto, External Trigger
Built-in CDN	
EUT Rating	AC 250 V, 20 A
	DC 220 V, 12 A
Coupling Capacitance	9 μF (Line-to-Ground), 18 μF (Line-to-Line)
Coupling Resistance	10 Ω (Equivalent Impedance: 12 Ω), 0 Ω (Equivalent Impedance: 2 Ω)
Coupling Attenuation	<2 dB
Coupling Switching Mode	Automatic
Residual Pulse Voltage at EUT Injection Terminal	No more than 15% of the applied test pulse voltage or twice the peak rated voltage of the coupling/decoupling network.

General Parameters

Display Screen	5.7-inch TFT touch screen
Working Power	AC 220 V, $\pm 10\%$, 50/60 Hz
Fuse	10 A
Max. Power Consumption	300 W
Communication Mode	Ethernet LAN
External Control Mode	D-sup 25 pin
External Trigger Mode	BNC, 5 V TTL
Operating Control Input	BNC, 5 V TTL
Failure Detection	LCD display in front panel and stop work when failure occurs
Working Status Indication	LED indication and LCD display in front panel
Grounding Mode	Flat grounding wire
EUT Power Voltage Injection	$\phi 4$ / $\phi 6$ mm banana plug cables
Dimension	6U rack, 450 mm * 280 mm * 620 mm
Weight	Approx. 44 kg
Atmospheric Pressure	86 kPa ~ 106 kPa
Ambient Temperature	15°C ~ 35°C
Relative Humidity	45% ~ 75%

Standard Accessories

Three-core Power Cord, Test Cables, Grounding Wire, Fuse, User Manual

Optional Module

1	Lightning Surge Coupling/Decoupling Network	Model: SPN Series Complies with standards IEC/EN 61000-4-5 and GB/T 17626.5. Customizable according to the voltage class requirements of EUT	
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Optional Accessories

1	HV Differential Probe	Model: VCF-80 Test voltage 8 kV, 1,000:1	
2	Wide-band Current Monitor	Model: CM 0220M 20 kA, 0.01 V/A	
3	Isolation Transformer	Model: select it according to EUT voltage and power	
4	PC Control Software	Model: Corelab >Support Windows 7/8/10/11; >Support Ethernet Interface; >Support sequence test, easy to operate, generate and export test report.	

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