

Combination Wave Surge Simulator

CWS xxxCT Series

Datasheet



*The picture is only for reference.

In Compliance with

- > IEC 61000-4-5
- > EN/IEC 60255-5
- > UL 1449
- > ANSI C62.41
- > GB/T 17626.5

Introduction

The CWS xxxCT series Combination Wave Surge Simulator is specially designed to simulate surge pulses interference and capable of producing combination waveform 1.2/50 μ s, 8/20 μ s, combination waveform 10/700 μ s, 5/320 μ s as well as voltage wave 1.2/50 μ s (optional). It can fully meet IEC 61000-4-5 standard requirements. CWS 1000CT can also meet CE and CCC requirements and perform surge tests with external coupling/decoupling network.

Features

- > 5.7 inch color touch screen operation on the front panel;
- > Test voltage up to 10 kV;
- > Produces 1.2/50 μ s, 8/20 μ s, 10/700 μ s, 5/320 μ s high voltage pulse waveforms to meet IEC 61000-4-5;
- > Compliance with 500 ohm output impedance 1.2/50 μ s impulse withstand voltage test (optional);
- > Surge voltage and current monitoring and LCD display;
- > Test sequence function and easy operation;
- > Optional for external CDN (SPN series);
- > Optional for external magnetic coil and module to meet IEC 61000-4-9;

Application Areas

- > Communication
- > Telecommunication
- > Medical
- > Broadcast and TV
- > Railway
- > Information technology
- > Military
- > Aviation
- > New energy and Power
- > Electric Vehicle

1.2/50 μ s, 8/20 μ s Combination Wave	
Test Voltage	CWS 600CT: 0.3 kV ~ 6.0 kV \pm 10% CWS 800CT: 0.3 kV ~ 8.0 kV \pm 10% CWS 1000CT: 0.3 kV ~ 10.0 kV \pm 10%
Voltage Rise Time	1.2 μ s \pm 30%
Voltage Duration	50 μ s \pm 20%
Test Current	CWS 600CT: 0.15 kA ~ 3.0 kA \pm 10% CWS 800CT: 0.15 kA ~ 4.0 kA \pm 10% CWS 1000CT: 0.15 kA ~ 5.0 kA \pm 10%
Current Rise Time	8 μ s \pm 20%
Current Duration	20 μ s \pm 20%
Polarity	+, -, +/- Alternative
Source Impedance	2 ohm
Repetition Rate	11 s-99 s (the shortest time depends on the test voltage)
Voltage Peak Detection	Front panel BNC output:1000 V:1 V; LCD display the measured value
Current Peak Detection	Front panel BNC output::500 A:1 V; LCD display the measured value
Counter	1-999
Trigger Mode	Auto, manual and external trigger input

1.2/50us voltage wave (optional)	
Test Voltage Range	CWS 600CT: 0.3 kV ~ 6.0 kV \pm 10% CWS 800CT: 0.3 kV ~ 8.0 kV \pm 10% CWS 1000CT: 0.3 kV ~ 10.0 kV \pm 10%
Voltage Rise Time	1.2 us \pm 30%
Voltage Duration	50 us \pm 20%
Polarity	+, -, +/- Alternative
Output Impedance	500 ohm
Repetition Rate	11 s-99 s (the shortest time depends on the test voltage)
Voltage Peak Detection	Front panel BNC output:1000 V:1 V; LCD display the measured value
Counter	1-999
Trigger Mode	Auto, manual and external trigger input

10/700 μ s, 5/320 μ s Combination Wave	
Test Voltage	CWS 600CT: 0.3 kV ~ 6.0 kV \pm 10% CWS 800CT: 0.3 kV ~ 8.0 kV \pm 10% CWS 1000CT: 0.3 kV ~ 10.0 kV \pm 10%
Voltage Rise Time	10 μ s \pm 20%
Voltage Duration	700 μ s \pm 20%
Test Current Range	CWS 600CT: 7.5 A ~ 150 A, \pm 10% CWS 800CT: 7.5 A ~ 200 A, \pm 10% CWS 1000CT: 7.5 A ~ 250 A, \pm 10%
Current Rise Time	5 μ s \pm 20%
Current Duration	320 μ s \pm 20%
Polarity	+, -, +/- alternative
Output Impedance	15 ohm, 40 ohm
Repetition Rate	16 s-99 s (the shortest time depends on the test voltage)
Counter	1 ~ 999
Trigger Mode	Auto, manual and external trigger input

General parameters	
Display Screen	5.7inch TFT Touch Screen
Range of Working Power Supply	AC 110 V/220 V, \pm 10%, 50/60 Hz \pm 5% (AC 220 V / 50 Hz for China)
Fuse	6 A
Max. Power Dissipation	200 W
User Storage Space	Infinity (PC)
Communication Mode	Ethernet, RJ45
External Control Mode	BNC,5 VTTL
CRO Trigger Output	BNC,5 VTTL
Run Control Input	BNC,5 VTTL

General parameters	
External Sync Input	45-65 Hz, 20-500 V between dotted end and no dot end 0-500 V among dotted end, no dot end and crate
Output Of Warning Lamp	0-220 V AC 10 A/0-48 V DC 3 A The power supply depends on the types of external signal lamp
Safety Circuit	Stop working when the safety loop is open circuit.
Failure Detection	LCD will display the failure on the front panel and interrupt instrument working.
Instrument Working Status Indicator	LED on the front panel indicates and LCD displays
Instrument Grounding Connection	Use flat ground wire
EUT Power Input	4mm banana plug wire
Detection Output Mode	Standard 1m coaxial cable
Size of Crate (W*H*D)	19 inch/6U 450 mm (W) * 280 mm(H) * 610 mm (D)
Weight	Approx.38 kg
Temperature Range	15 °C~ 35 °C
Humidity Range	45%-75%
Air Pressure Range	86 kPa ~ 106 kPa

Accessories
Test Line, 3-core Power Line, Earth Line, Coaxial Cable, Fuses (spare parts), User Manual

Optional functions and accessories
1. Surge CDN SPN series IEC61000-4-5 SPN 3816T/32T (three phase 380 V 16 A/32 A) SPN 38100T (three phase 380 V 100 A) SPN 6916T/32T (three phase 690 V 16 A/32 A)
2.Signal line/Communication line CDN IEC61000-4-5 (A) 4-wire communication line CDN (B) 8-wire communication line CDN
3. Pulse magnetic field converter PMC 1200 IEC 61000-4-9
4. Magnetic coil : TCXS111 single-turn coil 1 m×1 m
5. HV Differential probe, VCF-80 test voltage 8 kV, attenuation ratio: 1000: 1
6. Wide-band Current Monitor: CM 0220M

Naming Rule:

