

# Combination Wave Surge Simulator

# CWS 600CT

## Datasheet



### In Compliance with

- > IEC 61000-4-5
- > EN/IEC 60255-5
- > ITU K.17

### Introduction

Designed according to IEC 61000-4-5 and ITU K.17, the Combination Wave Surge Simulator CWS 600CT can simulate the surges (impulse) caused by switching and lightning, and generate combination wave 1.2/50  $\mu$ s, 8/20  $\mu$ s, combination wave 10/700  $\mu$ s, 5/320  $\mu$ s. The product features built-in coupling/decoupling networks (CDN) rated up to 250 V AC/ 16 A and 18  $\mu$ F calibration capacitor. With intuitive graphical user interface, it is easy and convenient to conduct tests.

### Features

- > Combination wave 1.2/50  $\mu$ s, 8/20  $\mu$ s with pulse voltage up to 6 kV;
- > Combination wave 10/700  $\mu$ s, 5/320  $\mu$ s with pulse voltage up to 6 kV;
- > 5.7-inch color touch screen for operations on the front panel;
- > Built-in CDN rated 250 V AC/ 16 A;
- > Built-in 18  $\mu$ F calibration capacitor;
- > Ethernet and RJ45 interfaces can be used for PC remote control and test report printing;

### Application Areas

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

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
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 <sup>2</sup> banana plug wire
Detection output mode	Standard 1m coaxial cable
Size of crate (W*H*D)	19 inch/6U
Weight	Approx.50 kg
Temperature range	15-35 °C
Humidity range	45%-75%
Air pressure range	86 kPa ~ 106 kPa

1.2/50us, 8/20us technical parameters	
Test voltage range	0.3 kV-6.0 kV $\pm 10\%$
Voltage rise time	1.2 us $\pm 30\%$
Voltage duration	50 us $\pm 20\%$
Test current range	0.15 kA-3.0 kA $\pm 10\%$ (2 ohm)
Current rise time	8 us $\pm 20\%$
Current duration	20 us $\pm 20\%$
Output impedance	2 ohm /12 ohm
Output Polarity	Positive, negative, alternating
Repetition rate	6 s-99 s (The minimum time depends on the test voltage)
Peak Voltage Detection	BNC output from the front panel 1000 V:1 V; Real-time display of measured values
Peak Current Detection	BNC output from the front panel 500 A: 1 V; Real-time display of measured values
Counter	1-999
Trigger mode	Auto, manual and external trigger
Calibration Capacitor	18 $\mu$ F
CDN	Built-in CDN, 250 V AC, 16 A
Phase Synchronization	0° ~ 360° (45 Hz ~ 65 Hz)

**10/700us, 5/320us technical parameters**

Test Voltage (open-circuit voltage waveform)	0.3 kV – 6.0 kV± 10%
Voltage rise time	10 us± 20%
Voltage duration	700 us± 20%
Test Current (short-circuit current waveform)	7.5 A ~150 A± 10%
Current rise time	5 us± 20%
Current duration	320 us± 20%
Output impedance	15 ohm / 40 ohm optional
Repetition rate	16 s-99 s (the shortest time depends on the test voltage)
Test times	1-999
Trigger mode	Auto, manual and external trigger input

**Optional functions and accessories**

<p>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)</p>
<p>2.Signal line/Communication line CDN IEC61000-4-5                  (A) 4-wire communication line CDN                  (B) 8-wire communication line CDN</p>
<p>3. HV Differential probe, VCF-80 test voltage 8 KV,                  attenuation 1000: 1</p>
<p>4. Wide-band Current Monitor: CM 0220M</p>



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