

Combination Wave Simulator – CWS x00G/SPN xxT Series

Datasheet



In Compliance with

- > IEC 61000-4-5
- > IEC 61000-4-9
- > IEC 61326
- > IEC 61850-3
- > GB/T 17626.5
- > ITU-T K.12
- > UL1449
- > ITU K45
- > ITU-T K.20

Introduction

Almost all electrical equipment and devices can be affected by the unidirectional surges caused by over-voltages from switching and lightning transients. CWS x00G/SPN xxT series is a particularly designed system for the surge immunity tests for three phase EUTs with automatic switching of external CDN, and can also be used for pulsed magnetic field immunity tests. The products are in full compliance with CE and CCC requirements. The series includes 6 kV & 8 kV generators CWS 600G & CWS 800G, and SPN with EUT load capacity: AC 380V or 450 V, & 16 A – 100 A or customizable.

Features

- > 5.7" color touch screen front panel operation;
- > Surge voltage up to 6 kV/8 kV, surge current up to 3 kA/4 kA;
- > Surge voltage/current monitoring on LCD display (optional);
- > Fault detection (optional);
- > Test sequencing, easy operation;
- > External automatic 3-phase 5-wire CDN;
- > Can be used for IEC 61000-4-9 tests with optional induction coils;
- > RJ45 for PC control & test report printing.

Applications

- | | |
|-----------------|-------------------------------|
| > Communication | > Technology |
| > Telecom | > Military |
| > Medical | > Avionics |
| > Broadcast | > New Energy Electrical Power |
| > Railway | > New Energy Vehicles |

General Parameters	
Display	5.7" TFT color touch screen
Operating power supply	AC 110 V/220 V $\pm 10\%$, 50/60 Hz
Fuse	6 A
Max power	250 W
Storage space	Unlimited (PC)
Communication method	Ethernet, RJ 45
External control method	D-sub 25p
External triggering input	BNC, 5 V TTL
CRO triggering input	BNC, 5 V TTL
Operation control input	BNC, 5 V TTL
External sync input	45 Hz – 65 Hz, 20 V – 500 V between different terminals; 0 – 500 V between terminals & the case;
Alarm indicators output	0-220 V AC, 10 A; 0-48 V DC 3A (subject to the type of external signal indicators)
Safety circuit	No operation when the safety circuit is open
Fault detection	Shown on LCD display, operation will be stopped
Operating status	LED indicators on front panel, LCD display
Grounding method	Grounding strips
Grounding connection	Standard 1 m coaxial cable
Dimension	19", 6U x 2 units
Weight	30 kg
Operating temp.	15 °C ~ 35 °C
Operating relative humidity	45% ~ 75%
Operating air pressure	86 kPa ~ 106 kPa

Technical Parameters (IEC 61000-4-5)	
Test voltage	0.3 kV–6.0 kV/8.0 kV, $\pm 10\%$ (CWS 600G/800G)
Voltage waveform	Tf: 1.2 μ s $\pm 30\%$, Td: 50 μ s $\pm 20\%$
Test current	0.15 kA – 3.0 kA/4.0 kA, $\pm 10\%$
Current waveform	Tf: 8 μ s $\pm 20\%$, Td: 20 μ s $\pm 20\%$
Source impedance	2 Ω
Output polarity	+, -, +/-
Coupling capacitance	9 μ F, 18 μ F
Coupling resistance	10 Ω , 0 Ω (as per IEC standards or customized)
Surge period	5 s – 99 s (the min. depends on test voltage)
Test times	1 – 999
Triggering mode	Automatic, manual or external triggering
Sync.	0° - 360°, 1°step or by random steps

External CDN	
Model No.	SPN 38XXT
Coupling Capacitance	9 μ F / 18 μ F
Decoupling Inductance	1.5 mH
Coupling Mode	Automatic, test sequence
EUT load capacity	Max: AC 380 V 16 A/32 A 3-phase-5-wire

Accessories	
3-core power cable、Short-circuit plug、Testing wires、 Grounding cables、Fuse、Coaxial cables、User manual	

Optional Accessories	
1. Coupling/Decoupling Networks	
CDN 405AF8	CDN for interconnected cables (unshielded asymmetrical lines) (90 V GDT; test voltage 6 kV (or customizable); AE/EUT terminals: RJ 45; current withstand: 1 A; decoupling residual voltage: 90 V;)
CDN 405T8	CDN for interconnected cables (unshielded symmetrical lines) (90 V GDT; test voltage 6 kV (or customizable); AE/EUT terminals: RJ 45; current withstand: 1 A; decoupling residual voltage: 90 V;)
CDN 405T8A1	CDN for interconnected cables (unshielded symmetrical lines) (90 V GDT; test voltage 6 kV (or customizable); AE/EUT terminals: RJ 45; current withstand: 1 A; decoupling residual voltage: 90 V;)
2. PC control software CoreLab	
Supports Windows XP/7; easy test setting, test sequencing, rich test standards library; test report generation.	



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