



Lightning Surge Generator

CWS 600 Series

- IEC/EN 61000-4-5
- ITU-T K.21
- GB/T 17626.5

Features

- > 5.7-inch color touch screen front panel operation;
- > Surge failure detection function;
- > Surge voltage and current measurement and acquisition;
- > Test sequence function;
- > Built-in CDN rated AC 300 V 20 A /32 A, DC 300 V 20 A/ 32 A;
- > External CDN with higher ratings are available;
- > Ethernet (RJ45) interfaces, used for PC remote control;

Introduction

The CWS 600 Series are designed in compliance with IEC/EN 61000-4-5 for simulating high-voltage surges induced by lightning transient and power grid switching transients.

The product can generate combination wave 1.2/50 μ s & 8/20 μ s and 10/700 μ s & 5/320 μ s (according to selected model) up to 6 kV. Built-in CDN rated AC 300 V, 20 A/32 A, DC 300 V, 20 A /32A or external CDN with higher ratings are available.

Application Areas



Technical Parameters

Technical Parameters for Surge as per IEC / EN 61000 - 4 - 5	
Open - circuit Voltage	0.25 kV ~ 6.0 kV, $\pm 10\%$
Short - circuit Current	0.125 kA ~ 3 kA, $\pm 10\%$
Output Impedance	2 Ω , 12 Ω
Open-circuit Voltage Wave	
Front time	1.2 μs $\pm 30\%$
Duration	50 μs $\pm 20\%$
Short-circuit Current Wave	
Front time	8 μs $\pm 20\%$
Duration	20 μs $\pm 20\%$
Repetition Rate	6 s ~ 99 s (The shortest interval is determined by the test voltage.)
Counter	1 ~ 999
Counter	1 ~ 999
Polarity	Positive, negative, alternative
Calibration capacitor	Built-in 18 μF capacitor
Coupling Resistor	0 Ω , 10 Ω
Coupling Capacitor	9 μF , 18 μF
Text Mode	Support test sequence function
Peak Voltage Monitor	LCD display, BNC output, 1,000 V: 1 V
Peak Current Monitor	LCD display, BNC output, 500 A: 1 V
Technical Parameters for Telecom Surge as per IEC / EN 61000 - 4 - 5	
Open - circuit Voltage	0.25 kV ~ 6.0 kV, $\pm 10\%$
Short - circuit Current	6.25 A ~ 150.0 A, $\pm 10\%$
Open-circuit Voltage Wave	
Front time	10 μs $\pm 30\%$
Duration	700 μs $\pm 20\%$
Short-circuit Current Wave	
Front time	5 μs $\pm 20\%$
Duration	320 μs $\pm 20\%$
Output Impedance	15 Ω , 40 Ω
Polarity	positive, negative, alternative
Repetition Rate	6 s ~ 99 s
Counter	1 ~ 999
Text Mode	Support test sequence function
Note: CWS 600(T) and CWS 600 (ST-300-20) have telecom surge function.	

Built-in CDN (Single-phase Full Auto)

EUT Rating	AC 300 V, 20 A / 32 A (optional), 50/60 Hz DC 300 V, 20 A / 32 A (optional)
EUT Power Input & Output	4 mm banana plug cables
EUT Voltage Monitoring Output	BNC output, 100 V: 1 V
EUT Current Monitoring Output	BNC output, 10 A: 1 V
Sync Mode	0° ~ 360°, 1° step or random mode
1.2/50 μ s Combination Wave	Built-in single-phase automatic CDN
Note: CWS 600(S-300-20) and CWS 600(S-300-32) integrate a built-in CDN.	

General Parameters

Display Screen	5.7-inch TFT touch screen
Working Power	AC 100 V ~ 264 V, 27 Hz ~ 63 Hz
Fuse	6 A
Maximum Power Consumption	300 W
Communication Method	Ethernet LAN
External Control Mode	D-sup 25 pin
External Trigger Mode	BNC, 5 V TTL
CRO Trigger Mode	BNC, 5 V TTL
Operating Control Input	BNC, 5 V TTL
External Synchronization Input	45 Hz ~ 65 Hz, 20 V ~ 400 V
Warning Lamp Output	Multiple-core connector. Optional warning lamp module.
Safety Circuit	Stop work when safety circuit is open
Failure Detection	LCD display in front panel and stop work when failure occurs
Working Status Indication	LED indication and LCD display in front panel
Earth Mode	Flat earth line
Trigger Mode	Manual, Auto, External Trigger
Dimension	6U rack, 620(W) * 450(H) * 280(D) mm
Weight	Approx. 50 kg
Ambient Temperature	15 °C ~ 35 °C
Relative Humidity	45% ~ 75%
Atmospheric Pressure	86 kPa ~ 106 kPa

Standard Accessories

Power Cord, Test Cables, Flat Grounding Wire, Fuse, RF Cable, User Manual

Optional Accessories

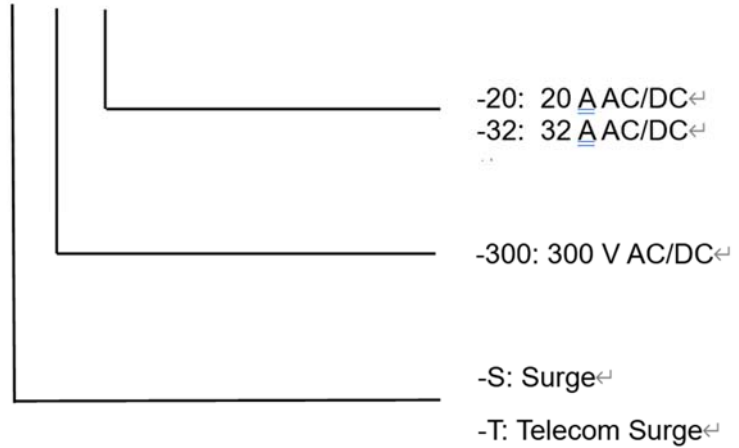
1	HV Differential Probe	Model: VCF-80 Test voltage 8 kV, 1,000:1	
2	Wide-band Current Monitor	Model: CM 0220M 20 kA, 0.01 V/A	
3	CDN for Surge Test on Power Supply Lines	Model: SPN series or SEPN series For EUT with higher ratings Contact sales for further information	
4	CDN for Surge Test on Communication Cables	Model: CDN 405 series Contact sales for further information	
5	Isolation Transformer	Model: select it according to EUT voltage and power	
6	Control Software	Model: Corelab >Support Windows 7/8/10/11 >Support Ethernet Interface >Support Test Sequence Test, easy to operate, generate & export test report	

CWS 600 Series Selection Guide

Surge Generator	Combination Wave	Built-in CDN
CWS 600 (ST-300-20)	1.2/50 μ s & 8/20 μ s 10/700 μ s & 5/320 μ s	Single-phase CDN AC/DC 300V, 20A
CWS 600 (ST-300-32)	1.2/50 μ s & 8/20 μ s 10/700 μ s & 5/320 μ s	Single-phase CDN AC/DC 300V, 32A
CWS 600 (S-300-20)	1.2/50 μ s & 8/20 μ s	Single-phase CDN AC/DC 300V, 20A
CWS 600 (S-300-32)	1.2/50 μ s & 8/20 μ s	Single-phase CDN AC/DC 300V, 32A
CWS 600 (S)	1.2/50 μ s & 8/20 μ s	no
CWS 600 (T)	10/700 μ s & 5/320 μ s	no

Naming Rules

CWS 600 (ST-300-20) ↵



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