

HV High-Power CDN for EFT/Burst and Surge Immunity Tests

SEPN 45100T

Datasheet



In compliance with

- > IEC/EN 61000-4-4
- > IEC/EN 61000-4-5
- > IEC 61000-6-1
- > IEC 61000-6-2
- > GB/T 17626.4
- > GB/T 17626.5

Introduction

The SEPN 45100T three-phase automatic coupling/decoupling network for EFT/Burst and surge immunity tests is designed according to test requirements of IEC/EN 61000-4-4 and IEC/EN 61000-4-5, features stable performance and convenient operation. The device is used together with CCS series, CWS series and EFT series of 3ctest. It can couple surge and EFT/Burst wave pulses onto three-phase mains supply system with voltage AC 450 V (three-phase-5-line)/DC 600 V and current 100 A and can also be customized according to actual EUT load.

Features

- > EUT DC load capacity 600 V 100 A;
- > EUT AC load capacity 450 V 100 A three-phase-five-wire;
- > EUT power supply automatic switching;
- > Over-current protection;
- > Test sequencing for testing voltage, polarity, phase sync. angle etc., realizing fully automatic networks switching;
- > Phase angle superimposition for arbitrary lines;

Application Areas

- | | |
|-----------------|----------------------|
| > Communication | > IT |
| > Telecom | > Military |
| > Medical | > Avionics |
| > Broadcast | > Electricity |
| > Railway | > New Energy Vehicle |

Technical Parameters – EFT/Burst	
3-Phase Automatic CDN	(As per IEC/EN 61000-4-4) Max. test voltage: 4.2 kV (Note: the actual output voltage is subject to the set value of the generator)
Phase Sync	Any combination of L1, L2, L3, N, PE with any phases and angles
Coupling Paths	Any combination of L1, L2, L3, N, PE
DC Coupling Route	L1、N
Switching of Coupling Paths	Automatic as per scheduled
Coupling Capacitance	33 nF
Coupling Attenuation	< 2 dB
Residue Impulse Voltage at EUT Input End	≤ 10 % of test voltage;

Technical Parameters - Surge	
3-Phase Automatic CDN	As per IEC/EN 61000-4-5, Max test voltage: 6.0 kV (1.2/50 μs), Max. test current: 3.0 kA (8/20 μs) (Note: the actual output voltage is subject to the set value of the generator)
Phase Sync	Any combination of L1, L2, L3, N, PE with any phases and angles
Coupling Paths	Any combination of L1, L2, L3, N, PE
Switching of Coupling Paths	Automatic as per scheduled
Coupling Capacitance	9 μF, 18 μF
Coupling Resistance	10Ω, 0Ω (standard or user-defined)
Coupling Attenuation	< 2 dB
Residual Impulse Voltage at EUT Input Terminal	≤ 15 % of test voltage or 2 times of rated peak voltage of CDN;

General Parameters	
EUT Load Capacity	Max AC 450 V 100 A 50 Hz / 60 Hz three-phase-five-wire
	Max DC 600 V 100 A
EUT Power Switching Mode	Automatic switching
Short-term Inrush Current	Peak value 400 A
Working Power Source of EMC Immunity Test System	AC 110 V/220 V±10%, 50 Hz /60 Hz±5% (AC 220 V 50 Hz in mainland China)
Fuse	6 A
Max. Power Consumption	200 W
Auxiliary Interface	D-sub 25p
Working Status Indication	LED indication on front panel
Grounded Mode	Flat grounded wire
Dimension	19"/35 U
Weight	Approx. 200 kg
Ambient Temperature	15 °C ~ 35 °C
Relative Humidity	45 % ~ 75 %
Atmospheric Pressure	86 kPa ~ 106 kPa

Accessories
User manual, Test line, 3-core Power line, Grounding line, Fuse (spare parts), Coaxial cable, CN25 Line

Optional Generators & Calibration Tools	
EFT 500x	EFT/Burst generator, as per IEC 61000-4-4, max. burst output voltage 4.8 kV
EFT 600x	EFT/Burst generator, as per IEC 61000-4-4, max. burst output voltage 6.0 kV
EFT 500x	EFT/Burst generator, as per IEC 61000-4-4, max. burst output voltage 7.0 kV
CWS 600x	Surge generator; as per IEC 61000-4-5; max. pulse output voltage 6.0 kV (1.2/50 μ s), output current 3.0 kA (8/20 μ s)
CWS 800x	Surge generator; as per IEC 61000-4-5; max. pulse output voltage 8.0 kV (1.2/50 μ s), output current 4.0 kA (8/20 μ s)
CWS 1000x	Surge generator; as per IEC 61000-4-5; max. pulse output voltage 10.0 kV (1.2/50 μ s), output current 5.0 kA (8/20 μ s)
CCS 600x	Surge and EFT/Burst generator; As per IEC 61000-4-4, max burst output voltage is 4.8 kV As per IEC 61000-4-5, max. pulse output voltage 6.0 kV (1.2/50 μ s), output current 3.0 kA (8/20 μ s)
CCS 1000x	Surge and EFT/Burst generator; As per IEC 61000-4-4, max burst output voltage is 4.8 kV As per IEC 61000-4-5, max. pulse output voltage 10.0 kV (1.2/50 μ s), output current 5.0 kA (8/20 μ s)
VCF-80	HV differential probe, for calibration of Surge generator (open-circuit voltage waveform); test voltage max 8 kV, attenuation: 1000:1;
TR 5025	HV current transducer, for calibration of Surge generator (short-circuit current waveform); Test current max 20 kA, attenuation 100:1;
Calibration Kit for EFT/Burst Generators	TFB 50: input impedance 50 Ω , output impedance 50 Ω , attenuation 55 dB; TFB 1000: input impedance 1000 Ω , output impedance 50 Ω , attenuation 60 dB; Supplied with network adaptors and tool box.



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