

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

SEPN 100100T10

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 100100T10 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 AC1000 V (three-phase-5-line)/DC 1500 V and current 100 A and can also be customized according to actual EUT load.

Features

- > EUT load capacity DC 1500 V 100 A, AC 1000 V 100 A three-phase-five-line;
- > Current Range (0 A-100 A) is divided into 3 groups: 0 A-32 A, 32 A-63 A, 63 A-100 A, manual switching;
- > Overcurrent protection;
- > Test sequencing for voltage, polarity, phase sync angle etc., realizing fully automatic switching;
- > Phase angles can superpose on arbitrary lines;

Application Areas

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

Technical Parameters – EFT/Burst	
Three-phase Fully-automatic CDN	As per IEC/EN 61000-4-4; Voltage up to 4.2 kV; Note: due to the attenuation of CDN, the actual impulse voltage output from the port of CDN depends on the pulse voltage setting value in generators
Phase Sync	Any combination of L1, L2, L3, N, PE with any phases and angles
Coupling Route	Any combination of L1, L2, L3, N, PE
DC Coupling Route	L1 (DC+), N (DC-)
Coupling Switching Mode	automatic switching, test sequencing
Coupling Capacitor	33 nF
Coupling Attenuation	<2 dB
Residual Pulse Voltage on EUT Injection Port	$\leq 10\%$ of test voltage;

Technical Parameters - Surge	
Three-phase Fully-automatic CDN	As per IEC/EN 61000-4-5; test voltage up to 10.0 kV(1.2/50 μ s) , test current up to 5.0 kA(8/20 μ s); Note: The actual pulse voltage output from CDN depends on the setting value in generators
Phase Sync	Any combination of L1, L2, L3, N, PE with any phases and angles
Coupling Route	Any combination of L1, L2, L3, N, PE
DC Coupling Route	L1 (DC+), N (DC-)
Coupling Switching Mode	automatic switching, test sequencing
Coupling Capacitance	9 μ F、18 μ F
Coupling Resistance	10 Ω 、0 Ω
Coupling Attenuation	<2 dB
Residual Pulse Voltage on EUT Injection Port	$\leq 15\%$ of test voltage or 2 times of rated peak voltage of CDN;

General Parameters	
EUT Load Capacity	Max AC 1000 V 100 A 50 Hz/60 Hz 3-phase-5-line Max DC 1500 V 100 A
EUT Mains Switching Mode	Automatic Switching
Short-term Inrush Current	Peak value 400 A
Working Mains	AC 110 V/220 V ($\pm 10\%$), 50 Hz /60 Hz ($\pm 5\%$) (default AC 220 V 50 Hz in mainland China)
Fuse	6 A
Max. Power Consumption	200 W
Auxiliary Port	D-sub 25p
Working Status Indication	LED indication on front panel
Grounded Connection Mode	using flat earth line
Dimension	35U rack
Weight	Approx. 180 kg
Ambient Temperature	15 $^{\circ}$ C ~ 35 $^{\circ}$ C
Relative Humidity	45 % ~ 75 %
Atmospheric Pressure	86 kPa ~ 106 kPa

Accessories	
1. 3-core power line	5. Fuse (spare part)
2. Testing line	6. Coaxial line
3. Earth line	7. User manual
4. 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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