Coupling/Decoupling Networks for EFT/Burst, Surge and Ring Wave Immunity Test SEPN 13016S



- IEC/EN 61000-4-4
- IEC/EN 61000-4-5
- IEC/EN 61000-4-12
- IEC/EN 61000-6-1
- IEC/EN 61000-6-2
- GB/T 17626.4
- GB/T 17626.5
- GB/T 17626.12

Features

> Supports EUT power supplies up to 1,300 V AC single-phase (line-to-line) or 220 V DC
> EUT current capacity 0 ~ 16 A
> EFT/burst coupling voltage up to 5.5 kV
> Surge coupling voltage up to 10.0 kV
> Ring wave coupling voltage up to 8.0 kV
> Automatic selection of coupling paths and phase synchronization
> Integrated EUT overcurrent protection
> LED indication of the pulse coupling path
> Integrated emergency stop button for enhanced safety

Introduction

The SEPN 13016S is an automatic coupling/decoupling network (CDN) designed for EFT/burst, surge, and ring wave immunity testing in accordance with IEC 61000-4-4, IEC 61000-4-5, and IEC 61000-4-12. It couples the specified disturbances onto the power lines of EUTs rated up to 1,300 V AC, 16 A single -phase or 220 V DC, 16 A. The CDN is compatible with 3CTEST CCS, EFT, CWS, and RWS series generators.

Application Areas



Technical Parameters

Technical Parameters for EFT/Burst Test	
Max. Test Voltage	6.0 kV
Voltage at CDN Port	0.25 kV ~ 5.5 kV ± 10% (6 kV generator)
Phase Synchronization	0° ~ 360°
Coupling Route	L1, DC+, DC-
Coupling Mode	Automatic
Coupling Capacitor	33 nF
Coupling Attenuation	<2 dB
Bursts Injection Port	SHV connector
Residual Pulse Voltage of EUT Injection Port	＜ 10% of applied test voltage
Technical Parameters for Surge Test	
Max. Test Voltage	10.0 kV
Voltage at CDN Port	0.25 kV ~ 10.0 kV ± 10% (10 kV generator)
Phase Synchronization	0° ~ 360°
Coupling Route	L1, N, PE, DC+, DC-
Coupling Mode	Automatic
Coupling Capacitor	9 μF, 18 μF
Coupling Resistor	10 Ω, 0 Ω
Coupling Attenuation	<2 dB
Surge Injection Port	4 mm banana plug
Residual Pulse Voltage of EUT Injection Port	Not exceed 15 % of the maximum applied test voltage or twice the rated peak voltage of the CDN, whichever is higher.
Technical Parameters for Ring Wave Test	
Max. Test Voltage	8.0 kV
Voltage at CDN Port	0.25 kV ~ 8.0 kV ± 10% (8 kV generator)
Phase Synchronization	0° ~ 360°
Coupling Route	L1, N, PE, DC+, DC-
Coupling Mode	Automatic
Coupling Capacitor	9 μF
Coupling Attenuation	<2 dB
Ring Wave Injection Port	4 mm banana plug
Residual Pulse Voltage of EUT Injection Port	Not exceed 15% of the maximum applied test voltage or twice the rated peak voltage of the CDN, whichever is higher.

General Parameters

EUT Voltage	Max. AC single-phase 1,300 V (line-to-line) 50 Hz /60 Hz Max. DC 220 V
EUT Current	0 ~ 16 A
EUT Power Switching Mode	Automatic
Working Power	AC 220 V ±10%, 50 Hz /60 Hz
Fuse	6 A
Max. Power Consumption	500 W
Auxiliary Interface	D-sub 25p
Working Status Indication	LED indication on front panel

General Parameters

Grounding Method	Flat grounding wire
Dimension	22 U rack, 600 (W)×1,600 (H) ×800 (D) mm (Incl. alarm indicator)
Weight	Approx. 123 kg
Ambient Temperature	15℃ ~ 35℃
Relative Humidity	45% ~ 75%
Atmospheric Pressure	86 kPa ~ 106 kPa

Standard Accessories

User Manual, Power Cord, Test Cables, Grounding Wire, Fuses (Spare Parts), RF Cables, CN25 Parallel Line

Optional Accessories

EFT/Burst CDN Calibration			
1	EFT/Burst Calibration Kit	Model: EFT-CA-KIT (SHV) Including: Attenuator TFB 500(SHV): 50 Ω load, 500:1 Attenuator: TFB 1000(SHV): 1,000 Ω load, 1,000:1 HV-RF connector: SHV-BNC-JJ BNC to banana plug: BNC(K)-2BP(J) RF cable	
Surge CDN Calibration			
1	High-Voltage Differential Probe	Model: VCF-80 Max. test voltage: 8 kV Attenuation: 1,000:1	
3	Wideband Current Monitor Probe	Model: CM 0220M Max. peak current: 20 kA Sensitivity: 0.01 V/A	
Ring Wave CDN Calibration			
1	High-Voltage Differential Probe	Model: VCF-80 Max. test voltage: 8 kV Attenuation: 1,000:1	
2	Wideband Current Monitor Probe	Model: CM 0103M Max. peak current: 5 kA Sensitivity: 0.1 V/A	

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