HV High-Power Coupling/Decoupling Network SEPN 100125T(F150125)

- 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

Features

> EUT DC load capacity 1,500 V DC, 125 A
> EUT AC load capacity 1,000 V AC, 125 A, three-phase five-wire
> Current range: 0 A ~ 125 A, with three automatic range selections: 0 A ~ 32 A, 32 A ~ 63 A, and 63 A ~ 125 A.
> Support overcurrent protection
> Scheduled setting of test parameters, including test voltage, polarity, and phase synchronization angle, enabling fully automatic network switching
> Phase angle superposition of any lines
> Coupling path indication (LED indicators)
> Selectable coupling resistor according to IEC standard or user-defined modes
> Plug-in insulated connectors for safe and convenient operation
> Emergency stop button automatically disconnects EUT power supply and HV coupling paths

Introduction

The SEPN 100125T (F150125) HV High-Power Coupling/Decoupling Network complies with IEC 61000-4-4 and IEC 61000-4-5, featuring fully automatic three-phase coupling/decoupling and supports both AC and DC power supply testing.

The SEPN 100125T (F150125) is compatible with CCS, CWS, and EFT series, with a maximum EUT load capacity of 1,000 V AC, 125 A (three-phase, five-wire) and 1,500 V DC, 125 A. Other voltage and current ratings are available upon request.

Application Areas

Technical Parameters

Network Type	Fully automatic three-phase CDN
EUT Load Capacity	Max DC 1,500V, 125A Max AC 1,000V, 125A, 50/60Hz three-phase five-wire
EUT Current Monitor	BNC output, 100 A: 1 V
Coupling Path	Automatic switching of any coupling path combination among L1, L2, L3, N, and PE
Phase Synchronization	Phase angle superposition between any lines of L1, L2, L3, N, and PE
EUT Power Switching Mode	Automatic switching
IEC/EN 61000-4-4 EFT/Burst Tests Technical Parameters	
Test Voltage at Network Port	Coupled waveform: 5/50 ns 0.25 kV ~ 4.5 kV ± 10% (with 5 kV generator) 0.25 kV ~ 5.5 kV ± 10% (with 6 kV generator)
Pulse Input Port	SHV
Coupling Capacitor	33 nF
Rise Time	5.5 ns ± 1.5 ns, 50 Ω load
Pulse Width	45 ns ± 15 ns, 50 Ω load
IEC/EN 61000-4-5 Surge Tests Technical Parameters	
Test Voltage at Network Port	Coupled waveform: 1.2/50 μs 0.25 kV ~ 10 kV ± 10% (with 10 kV generator)
Test Current at Network Port	Coupled waveform: 8/20 μs 0.125 kA ~ 5 kA ± 10% (with 10 kV generator)
Surge Input Port	4 mm banana socket
Coupling Capacitor	9 μF, 18 μF
Coupling Resistor	10 Ω / 0 Ω
Open-circuit Voltage Waveform	Front time: 1.2 μs ± 30% Continuous time: 50 μs ± 20%
Short-circuit Current Waveform (2Ω)	Front time: 8 μs ± 20% Continuous time: 20 μs ± 20%
Coupling Attenuation	<2 dB (automatic generator compensation)
Residual Pulse Voltage at EUT Injection Port	≤ 15% of the applied test pulse voltage or ≤ 2 times the peak voltage rating of the CDN
For different EUT current ratings, the surge pulse waveform parameters are evaluated according to IEC 61000-4-5 Clause 6.3.	

General Parameters

EUT Power Input/Output Ports	Plug-in insulated connector
Working Power	AC 220 V, 50 Hz /60 Hz
Fuse	6 A
Max. Power Consumption	500 W
Auxilliary Interface	D-sub 25pin
Working Status Indication	Front panel LED indication
Grounding Method	Flat grounding wire
Dimension	19-inch/22U rack, 600 (W)*1,250 (H)*800 (D) mm
Weight	Approx. 150 kg
Ambient Temperature	15 °C ~ 35 °C
Relative Humidity	45% ~ 75% RH (no condensation)
Atmospheric Pressure	86 kPa ~ 106 kPa

Standard Accessories

User Manual, Fuse, Power Cord, Test Cable, Coaxial Cable, CN25 Cable, Grounding Wire, RF Cable, Single-Line EFT/Burst Test Fixture, Surge Calibration Test Fixture

Optional Generator

1	EFT/Burst Generator	Model: EFT 500x/600x/700x Standard: IEC 61000-4-4	
2	Combination Lightening Surge Simulator	Model: CWS 600x/800x/1000x Standard: IEC 61000-4-5 Output waveform: 1.2/50 μs, 8/20 μs	
3	Compact Combination Simulator	Model: CCS 500x/600x/800x/1000x Standard: IEC 61000-4-4/-5 Output waveform: 1.2/50 μs, 8/20 μs	

Optional Accessories

1	High-Voltage Differential Probe	Model: VCF-80 Max. test voltage: 8 kV Attenuation: 1,000:1 For open circuit voltage waveform calibration of CWS	
2	Broadband Current Monitor Probe	Model: CM 0220M Sensitivity: 0.01 V/A	
3	EFT/Burst Calibration Kit	Model: EFT-CA-KIT (SHV) Including: Attenuator TFB 500(SHV): 50 Ω load, 500:1 Attenuator: TFB 1000(SHV): 1000 Ω load, 1000:1 HV-RF connector: SHV-BNC-JJ BNC to banana plug: BNC(K)-2BP(J)	

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