FP-SURGE 100M2

3-phase Coupling / Decoupling Network (CDN)

IEC/EN 61000-4-5, IEC/EN 61000-4-12,
ANSI C62.41 & 62.45

- Surge Combination Wave, 1.2/50 µs - 8/20 µs
- Ring Wave, 100 kHz
- 8 kV impulse voltage
- Line voltage 690 V AC (phase – phase)
- 100 A EUT current per phase

CDN with manual coupling path switching by HAEFELY.

HAEFELY

Overview

The FP-SURGE 100M2 coupling/decoupling network with manual coupling path switching is fully compliant with the standard requirements of IEC/EN 61000-4-5, IEC/EN 61000-4-12, and tests to meet the surge requirements of ANSI/IEEE C62.41 and C62.45. It is specifically designed to meet and exceed the requirements of IEC, EN, and ANSI tests for power line applications.

ANSI standards C62.41 and C62.45 contain essentially the same information as the IEC standards, but are based on U.S. experience with AC power lines. No requirements are included for voltage drop across decoupling reactors.

With a selector switch, the FP-SURGE 100M2 can handle different current ranges (0 - 25 A, 25 - 60 A and 60 - 100 A).

The FP-SURGE 100M2 EUT output has specially designed high voltage terminals that provide increased personal protection with respect to the high voltage pulse.

Key facts

- Phase angle synchronization for each coupling path
- **Synchronization Path Switching –** The FP-SURGE 100M2 synchronizes impulses with the selected coupling path.
- Manual selection of coupling elements, coupling elements and coupling path
- **Full 100 A Capability –** Both AC and DC loads up to 100A per phase can be connected through the FP-SURGE 100M2.
- Sturdy and Reliable – Careful component selection ensures that the FP-SURGE 100M2 will continue to operate under the most strenuous testing regime.
- Upgrade Possible – Previously delivered FP-SURGE 100M couplers can be upgraded in our factory.
- **Safe and easy –** Interlocked high voltage connections allow safe and easy handling.

FP-SURGE 100M2

3-phase Coupling / Decoupling Network (CDN)

Technical data

FP-SURGE 100M2	
Impulse voltage	max. 8 kV
Impulse current	max. 4 kA
Waveforms Surge Comb. Wave Ring Wave	 IEC / EN 61000-4-5 Ed. 3 IEC / EN 61000-4-12 Ed. 3
Max. voltage AC 50 / 60 Hz	690 V (phase-phase) 400 V (phase-neutral)
Max. voltage DC	110 V

Current ranges AC / DC for IEC 61000-4-5 Ed. 3	0 - 25 A, 25 - 60 A, 60 - 100 A
Current ranges AC / DC for IEC 61000-4-5 Ed. 3 and ANSI C62.41	0 - 100 A
Residual voltage at test supply input	max. twice the peak value of the rated line voltage
EUT Connections	HV safety terminals
Phase Sync.	follows coupling path
Phase Sync. accuracy	± 1°
Voltage drop due to decoupling inductors	≤ 10% with max. current and cos φ ≥ 0.7
General data	
Dimensions (W x D x H)	600 x 1000 x 1900 mm (23.6 x 39.4 x 74.8 in)
Weight	220 kg (485 lb)
Power supply spec.	85 – 264 V, 50/60 Hz

Options – 3-Phase CDNs

No. 2490170	FP-EFT 32M	Man. 3-Phase CDN for EFT/Burst 32 A / 690 V AC / 110 V DC
No. 2495860	FP-EFT 100M2	Man. 3-Phase CDN for EFT/Burst 100 A / 690 V AC / 110 V DC
No. 2490700	FP-SURGE 32A	Auto. 3-Phase CDN for Surge 32 A / 690 V AC/DC
No. 2490430	FP-COMB 32	Auto. 3-Phase CDN for Surge, Ring Wave, EFT/Burst 32 A / 480 V AC/DC
No. 2499990	FP-COMB 63/690-1	Auto. 3-Phase CDN for Surge, Ring Wave, EFT/Burst, 63 A / 690 V AC/DC

Scope of delivery

FP-SURGE 100M2 (No. 2490180)	1x HV cable to connect the generator
1x coaxial cable (1 m)	1x earth bonding cable (1 m)
1x 10 A mains cable (country specific)	Calibration certificate
User manual	

All information regarding appearance and technical data correspond to the current state of development at the time of release of this data sheet. We reserve the right to make technical changes. 112309