FP-SURGE 100M2

3-Phase Coupling / Decoupling Network for Surge / Ring Wave

Datasheet

HAEFELY

Current and voltage – our passion

General Description

IEC and EN standards cover testing of 3 phase AC and DC power ports. They include recommendations for the coupling and decoupling component values within the CDN. These values are largely based on the European model for AC power lines. FP-SURGE 100M2 includes all the IEC and EN requirements with manual coupling path switching. FP-SURGE 100M2 EUT output has specially designed HV terminals, which provide enhanced personnel safety in relation to the high voltage impulse.

A selector switch allows the FP-SURGE 100M2 to handle various ranges of current (0…25A, 25…60A, and 60…100A).

The ANSI standards C62.41 and C62.45 contains much the same information as the IEC but based around the American experience with AC power lines. No requirements about voltage drop across the decoupling inductors are included.

Features	Advantages
▪ Combination wave 1.2/50 µs - 8/20 µs	☑ **International Application –** Specifically designed to meet and exceed the requirements of IEC, EN, and ANSI tests for power line applications
▪ Ring wave 100 kHz	☑ **Synchronization Path Switching –** The FP-SURGE 100M2 synchronizes impulses with the selected coupling path
▪ 8 kV impulse voltage	☑ **Safe and Easy –** The interlocked HV connections allow your operators to test safely and easily
▪ Line voltage 690 Vac phase-phase	☑ **Full 100 A Capability –** Both AC and DC loads up to 100A per phase can be connected through the FP-SURGE 100M2
▪ 100 A EUT Current per phase	☑ **Sturdy and Reliable –** Careful component selection ensures that the FP-SURGE 100M2 will continue to operate under the most strenuous testing regime
▪ Phase angle synchronization for each coupling path	☑ **Upgrade Possible –** Previously delivered FP-SURGE 100M couplers can be upgraded in our factory
▪ Manual selection of coupling elements and coupling path	☑ **Flexible operation –** Allows manual selection of testing parameters

Applications

- Single & Three phase power line systems
- IEC 61000-4-5 Edition 3
- IEC 61000-4-12 Edition 3
- ANSI C62.41 & C.62.45 Power lines
- Many IEC & EN Product standards

Scope of Supply

- FP-SURGE 100M2
- HV cable to connect the generator
- Coaxial cable 1 m
- Earth bonding cable 1 m
- 10 A Mains Cable (country specific)
- Users Manual

Technical Data

Device	
Impulse voltage	Max. 8 kV
Impulse current	Max. 4 kA
Maximum AC voltage 50 / 60 Hz	690 V (phase-phase) 400 V (phase-neutral)
Max. DC voltage	110 V
Current Ranges AC and DC for IEC 61000-4-5 Ed.3	0… 25 A 25… 60 A 60… 100 A
Current Ranges AC and 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	± 1º
Voltage drop due to decoupling inductors	≤ 10% with max. current and cos φ ≥ 0.7

Environmental, Mechanical and Power Supply	
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

Global Presence

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