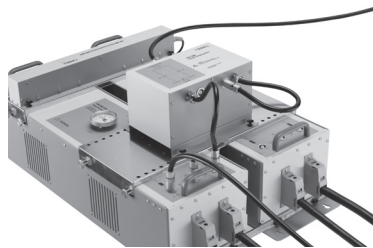




CDN 3083-S100M MANUAL SURGE COUPLING NETWORK



- For EUT power supplies up to 620 V
- 100 A per phase with generous overload capacity
- Complies with IEC/EN 61000-4-5 and ANSI C62.45
- Easy upgradeable from IEC to ANSI coupling

The manual coupling network CDN 3083 fulfils the requirements called for in the Surge standard IEC/EN 61000-4-5: 2005, including the new features concerning high currents as well as in the ANSI C62.45 standard and relevant standards.

The form of construction selected suits the demands placed on the instrument in its working environment. In its basic form, the coupler is made for use on a floor or for table top placement in an EMC laboratory or in a development workshop. It can be even mounted onto the wall to have free space on test bench, for instance.

High-current couplers often have to be taken to a test site when it is commonly impossible to move a large installation into the laboratory. For more convenience, the CDN 3083 can be disassembled in handy parts and can easily move to other places. Wheels with braking features can be mounted to manoeuvring the coupler even on ramps and uneven surfaces.

In order to keep voltage losses within reasonable limits with increasing current levels, the IEC has defined three classes of filter inductances, namely: up to 20 A, 20 to 60 A and 60 to 100 A. Classic high-current couplers cannot therefore be used any longer for lower current levels since the filtering effect is insufficient. Through the use of special choke technology, Teseq has managed to avoid the costly disadvantage of using several couplers. By using an auto-adaptive back filter, the CDN 3083 fulfils the requirements for both protection and voltage drop over the range from just a few amps to full load.

The nominal maximum current rating of 100 A per phase can, during short test periods, be considerably exceeded. The unit will tolerate the frequently encountered inrush currents without complaint and, in extreme cases, it can be overstress until the internal environment have reached the maximum temperature.

For single phase application even 200 A per phase is possible by paralleling 2 decoupling network paths and adding decoupling units.

The CDN 3083 is tested for safety in compliance with IEC 61010. The rugged connection terminals together with the solid earth line assure a proper connection, this in combination with a solid housing.

Technical specifications

The coupling network CND 3083 serves to inject the following standardized surge pulses from the surge generator into the mains supply to the device under test:

- Voltage surge of up to 8 kV which follows the 1.2/50 μ s curve (open-circuit)
- Current surge of up to 4 kA which follows the 8/20 μ s curve (short circuit conditions)

The CDN 3083 is designed to be used with an EUT supply of up to 620 V rms at 100 A. Operation is manual, simple and designed to be safe. The construction takes into account the relevant specifications issued by the VDE and IEC concerning personal safety. The CDN 3083 enables coupling modes with all types of symmetrical and asymmetrical coupling given in the IEC 61000-4-5 and ANSI C62.41 2002 and other related standards.

CDN 3083-S100M MANUAL SURGE COUPLING NETWORK

The CDN 3083-S100 set:

- 1 x Surge decoupling network CDN 3083-S100 N – L1
- 1 x Surge decoupling network CDN 3083-S100 L2 – L3
- 2 x Earth rail
- 1 x Allen key isolated
- 1 x User Manual CDN 3083 E
- 1 x Test certificate
- 1 x Wheel set
- 2 x Connection tables, laminated

IEC coupling set

- 1 x INA 3080 Surge coupling unit

ANSI coupling set/optional IEC coupling

- 2 x INA 3080 Surge coupling unit
- 1 x Connection cable

Depending on generator used, following complementary items are in the set:

NSG 2050 generator system

- 1 x INA 3085 Synchronisation unit for NSG 2050 system
- 2 x Cable 1 m, with Fischer/Lemo connectors
- 1 x Dummy plug for NSG 2050 generator

NSG 3040 and Modula

- 1 x INA 3084 Synchronisation unit for NSG 3040 family
- 2 x Cable 1 m, with each a Fischer/Fischer connectors

Pulse voltages/current	8 kV/4 kA max.
EUT power supply	Line-to-line or line-to-PE 620 Vrms; (max.440 Vrms for NSG 3040 and Modula) per Phase 100 A nom. continuous current; 0 – 60 Hz (max. 400 Hz with power losses)
EUT connectors	Screw-terminals, 230 A, up to 110 mm ² , AWG 4-4/0
Max. Temperature	70°C
Decoupling conditions	As per IEC 61000-4-5 and ANSI C62.45
Coupling modes	Surge Differential, Lines to PE, Common to PE (with ANSI coupling set or with optional INA 3080 for IEC)
Dimensions	850 x 520 x 345 mm (L x D x H)
Weight	80 kg approx.
Optional accessories	INA 3080 Surge coupling unit MD 300 Current measuring probe MD 200/200A Voltage measuring probe