



# CDN 3063 AUTOMATED 3-PHASE COUPLING / DECOUPLING NETWORK SERIES



- 3-phase models with broad current range up to 100 A
- Fully automated surge and/or burst coupling
- IEC and ANSI coupling methods
- High accuracy switching technology
- Phase rotation indication for safe EUT operation
- Modular and upgradeable to fit new generator architecture

**The new, modular** CDN 3063 continue Teseq's philosophy of designing easily upgradeable test instruments that maximize the user's initial investment. Users can select a CDN from this series that fulfills their basic testing needs with the assurance that they can upgrade it to a model to fit different generator compatibility as their testing requirements change. The 3063 are designed for maximum reliability in a wide range of test setups. Over temperature protection, which allows short term operation at currents exceeding the nominal rating, prevents damage to internal components.

**Phase rotation indicator** in 3-phase units indicates a correctly sequenced power connection, preventing misleading line coupling, incorrect phase coupling especially precarious in synchronous mode and possible damage to the EUT.

**The fully automated IEC and ANSI compliant** coupling networks fulfill the new requirements for EUT currents over 16 A in the surge standard IEC/EN 61000-4-5:2005, as well special coupling modes and pulse amplitude control in the ANSI C62.45 standard, the ring wave pulse given in IEC/EN 61000-4-12:2006 and the EFT in IEC/EN 61000-4-4 Ed. 2:2004.

**The CDN 3063 couples surge and burst pulses into 1-, 2- or 3-phase power mains** of up to 480 V with a current range up to 32 A, 63 A or 100 A. This range incorporate the new IEC draft standard's provision for testing EUT's with high power consumption. Reduced decoupling inductances in series with the EUT power connection are specified in order to minimize series voltage losses. The draft standard defines three classes of filter inductance for the following current ranges: up to 16 A, 16 to 32 A, 32 to 63 A and 63 to 125 A.

**The CDN 3063 in combination with the NSG 3060 completely fulfills the unique coupling requirements specified by ANSI C62.41.** This standard requires a constant peak voltage amplitude for any EUT mains voltage and phase angle. This can only be realized when the instantaneous EUT mains power voltage at the selected phase angle is taken into account when the surge voltage is applied. The instantaneous mains voltage must either be subtracted from or added to the surge generator setting in order to keep the peak level constant with respect to ground (PE). Otherwise, the mains voltage is summed with the surge pulse amplitude thereby increasing or decreasing the stress on the EUT from the desired level.

**The CDN 3063 utilizes the latest electronic component technology** to accomplish the unique ANSI C62.41 coupling methodology, used to measure and track the mains voltage and simultaneously control the pulse phase angle. This remarkable phase coupling accuracy can also be used for IEC coupling and exceeds the existing standard's requirements, and represents a significant step forward in higher test results reproducibility.

The CDN 3063 in combination with the NSG 3040 broaden the effectiveness of the generator extremely and complete the generator usability for higher current level or 3-phase EUT application.

# CDN 3063

## AUTOMATED 3-PHASE COUPLING / DECOUPLING NETWORK SERIES

### Technical data coupling network

#### Dimensions/weight

| Versions  | CDN 3063-CXX  | CDN 3063-SXX                      | CDN 3063-BXX     |
|---|---|-----------------------------------|------------------|
| Description for the automated 3-phase coupling networks | Combined burst (EFT) and combination wave / ring wave | Combination wave / ring wave only | Burst only (EFT) |

| Versions        | Value<br>CDN 3063-X32   | Value<br>CDN 3063-S63 | Value<br>CDN 3063-S100 |
|-----------------|-------------------------|-----------------------|------------------------|
| Current rating: | 32 A EUT current        | 63 A EUT current      | 100 A EUT current      |
| Weight approx:  | 42 kg (96.6 lb)         | 100 kg (220.5 lb)     | 100 kg (220.5 lb)      |
| Dimensions W:   | 449 mm (17.7")          | 570 mm (22.4")        | 570 mm (22.4")         |
| H:              | 310.5 mm (12.25"), 7 HU | 840 mm (33"), 16 HU   | 840 mm (33"), 16 HU    |
| D:              | 565 mm (22.2")          | 630 mm (24.8")        | 630 mm (24.8")         |

#### Electrical parameter

|                                 |   |  |   |
|---------------------------------|---|--|---|
| EUT current:                    | 3 x 32 A continuous<br>(over temp. protection): 3 x 50 A for ca. 10 min.  | 3 x 63 A continuous<br>3 x 100 A for ca. 30 min. | 3 x 100 A continuous<br>3 x 150 A for ca. 30 min. |
| Instrument supply:              | 85 to 265 VAC, 50/60 Hz   |  |   |
| Standard-conform pulse:         | Electric fast transient EFT (Burst)<br>Combination wave<br>Ring wave  |  |   |
| Connections:                    | HV-surge pulse input from generator (Fischer connector)<br>EFT input connector from generator (SHV connector)<br>Connector for EUT supply input (Screw terminals Phoenix)<br>Connector for EUT supply output (Screw terminals)<br>Power inlet for CDN input<br>System cable (25 pin connector)<br>Earth connection<br>Phase rotation indication |  |   |
| EUT supply:                     | Three phase (5 wire)<br>Two phase (4 wire)<br>Single phase (3 wire)   |  |   |
| EUT frequency:                  | DC – 65 Hz with no loss, 400 Hz max. with power loss  |  |   |
| EUT VAC line to line:           | EUT VAC 30 to 480 VAC rms,<br>(below 30 V synchronisation not guaranteed, asynchronous mode only)   |  |   |
| EUT VAC line to neutral/ground: | EUT VAC 30 to 280 VAC rms,<br>(below 30 V synchronisation not guaranteed, asynchronous mode only)   |  |   |
| EUT VDC:                        | up to 125 VDC – full current range<br>up to 225 VDC – up to 7 A   |  |   |

**Teseq AG**  
 Nordstrasse 11F 4542 Luterbach Switzerland  
 T +41 32 681 40 40 F +41 32 681 40 48  
 sales@teseq.com [www.teseq.com](http://www.teseq.com)

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