



CDN 3063 AUTOMATED 3-PHASE COUPLING/DECOUPLING NETWORK



- 3-phase models with broad current range
- Fully automated surge and burst coupling
- IEC and ANSI coupling methods
- High accuracy switching technology
- Phase rotation indicator 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. The phase rotation indicator in 3-phase units indicates a correctly sequenced power connection, preventing possible damage to the EUT.

These 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. 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 20 A, 20 to 60 A and 60 to 100 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.

To accomplish the unique ANSI C62.41 coupling methodology, the CDN 3063 utilizes the latest electronic component technology 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.

TESEQ

Advanced Test Solutions for EMC



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Technical data coupling network

Dimensions/Weight

Parameter	Value
CDN 3063-B32:	Automated 3-phase coupling network for burst (EFT)
CDN 3063-S32:	Automated 3-phase coupling network for surge (combination wave, ring wave)
CDN 3063-C32:	Automated 3-phase coupling network for burst (EFT) and surge (combination wave, ring wave)
Dimensions CDN 3063-C32:	W: 449 mm (17.7"), H: 310.5 mm (12.25", 7 HU), D: 565 mm (22.2")
Weight CDN 3063-C32:	43 kg (94.8 lb) approx.

Electrical parameter

Parameter	Value
Standards-compliant pulses:	Electric fast transient EFT (burst) up to 4.8 kV Combination wave up to 6.6 kV Ring wave up to 6.6. kV
Decoupling attenuation:	Residual pulse voltage on EUT power supply inputs; conforms to IEC/EN 61000-4-5 Residual voltage on non-pulsed power supply inputs; conforms to IEC/EN 61000-4-5
Instrument supply:	85 – 265 V _{AC}
AC/DC EUT current range:	3 x 32 A continuous (over temperature protection) 3 x 40 A for approx. 35 min (over temperature protection) 3 x 50 A for approx. 10 min (over temperature protection)
EUT voltage range:	3-phase (5 wire) usable for 2-phase (4 wire) and 1-phase (3 wire) EUT V _{AC} 30* to 480 V _{AC} rms, line to line EUT V _{AC} 30* to 280 V _{AC} rms, line to neutral, 50/60 Hz EUT V _{DC} 0 to 480 V _{DC} DC - 65 Hz with no EUT power loss, 400 Hz max. with EUT power loss *(below 30 V synchronization not guaranteed, asynchronous mode only)
Connections front panel:	HV-surge pulse input from generator (Fischer connector) EFT connector from generator (SHV connector) Ground/PE connection
Connections rear panel:	Connector for EUT supply, Phoenix screw terminals, phase rotation detection