

CNI 503X SERIES

COMBINED 3-PHASE COUPLING/DECOUPLING NETWORKS FOR BURST AND SURGE TESTING UP TO 10KV



FOR TESTS ACCORDING TO ...

- > ANSI/IEEE C62.41
- > EN 61000-4-12
- > EN 61000-4-4
- > EN 61000-4-5
- > EN 61000-6-1
- > EN 61000-6-2
- > EN 61543
- > IEC 60601-1-2
- > IEC 61000-4-12
- > IEC 61000-4-4
- > IEC 61000-4-5
- > IEC 61008-1
- > IEC 61009-1
- > IEC 61326
- > IEC 61850-3
- > ITU-T K.20
- > ITU-T K.21
- > ITU-T K.45

COUPLING/DECOUPLING NETWORKS FOR EFT/BURST AND SURGE







The three-phase coupling/decoupling networks of the CNI 503x series are used to couple EFT/Burst pulses and Surge pulses on DC-lines or to three-phase (4-wire or 5-wire supply lines) mains supply systems for voltages up to 1,000VDC / 3x690VAC. This includes the more and more common testing of inverters used in the area of renewable energies (e.g. photovoltaic systems, wind power stations, electric cars).

Within the range of EM TEST coupling/decoupling networks we offer different models for test voltages from 5kV up to 10kV with DUT currents of 16A, 32A, 63A and 100A (higher current ratings on request) for the various test requirements and equipment configuration.

HIGHLIGHTS

- > **Combined coupler for EFT/Burst and Surge**
- > **Surge as per ANSI/IEEE C62.41 (models CNI 503Bx only, other couplers on request)**
- > **LEDs indicate active mode and coupling**
- > **Automatic selection of Surge impedance**
- > **Fully remote controlled by EM TEST generators**

APPLICATION AREAS

- | | |
|---|--|
|  INDUSTRY |  TELECOM |
|  MEDICAL |  RESIDENTIAL |
|  BROADCAST |  RENEWABLE ENERGY |

TECHNICAL DETAILS**BENEFITS**

The CNI 503x-series coupling/decoupling networks are built fully complying to the standard requirements of EN/IEC 61000-4-4 and EN/IEC 61000-4-5. Residual voltage levels are carefully considered as well as the value of the decoupling inductors in order to meet the requirements with regard to voltage drop at the rated current of each type of CDN. Apart from the coverage of the EN/IEC 61000-4-5 standard the CNI 503Bx series also fully complies with the surge test requirements outlined in ANSI/IEEE C62.41.

Being fully controlled by the related generators couplings of the CNI 503x are set automatically as selected for the test (either by manual operation or via software). When performing surge tests the generators will automatically set the required source impedance depending on the standard and the coupling mode.

TECHNICAL DETAILS

MODEL OVERVIEW

AVAILABLE CNI 503X-MODELS UP TO 5.5KV

CNI 503A	3x480V, 16A AC
CNI 503A S1	3x690V, 16A AC
CNI 503A2	3x480V, 32A AC
CNI 503A S2	3x690V, 32A AC
CNI 503A3	3x480V, 63A AC
CNI 503A S3	3x690V, 63A AC
CNI 503A4	3x480V, 100A AC
CNI 503A S4	3x690V, 100A AC

AVAILABLE CNI 503X-MODELS UP TO 7KV

CNI 503B5	3x480V, 16A AC
CNI 503B S1	3x690V, 16A AC
CNI 503B7	3x480V, 32A AC
CNI 503B7.3	3x480V, 32A AC 1,000V, 32A DC
CNI 503B7.5	3x690V, 32A AC 1,000V, 32A DC
CNI 503B S2	3x690V, 32A AC
CNI 503B8	3x480V, 63A AC
CNI 503B S3	3x690V, 63A AC
CNI 503B9	3x480V, 100A AC
CNI 503B9.2	3x480V, 100A AC 1,000V, 100A DC
CNI 503B9.4	3x690V, 100A AC 1,000V, 100A DC
CNI 503B S4	3x690V, 100A AC

AVAILABLE CNI 503X-MODELS UP TO 8KV

CNI 503A10	3x480V, 16A AC
CNI 503A12	3x480V, 32A AC
CNI 503A13	3x480V, 63A AC
CNI 503A14	3x480V, 100A AC

AVAILABLE CNI 503X-MODELS UP TO 10KV

CNI 503A16	3x480V, 16A AC
CNI 503A18	3x480V, 32A AC
CNI 503A19	3x480V, 63A AC
CNI 503A20	3x480V, 100A AC

TECHNICAL DETAILS (5.5KV MODELS)

CNI 503A, 5.5KV

Three-phase CDN	according to EN/IEC 61000-4-4 and EN/IEC 61000-4-5 for Burst up to 5.5kV Surge up to 5kV
EUT supply	3x480V, 16A AC
Dimensions	Size: 19" / 6 HU Weight: approx. 25kg

CNI 503A S1, 5.5KV

Three-phase CDN	according to EN/IEC 61000-4-4 and EN/IEC 61000-4-5 for Burst up to 5.5kV Surge up to 5kV
EUT supply	3x690V, 16A AC
Dimensions	Size: 19" / 6 HU Weight: approx. 27kg

CNI 503A2, 5.5KV

Three-phase CDN	according to EN/IEC 61000-4-4 and EN/IEC 61000-4-5 for Burst up to 5.5kV Surge up to 5kV
EUT supply	3x480V, 32A AC
Dimensions	Size: 19" / 6 HU Weight: approx. 35kg

CNI 503A S2, 5.5KV

Three-phase CDN	according to EN/IEC 61000-4-4 and EN/IEC 61000-4-5 for Burst up to 5.5kV Surge up to 5kV
EUT supply	3x690V, 32A AC
Dimensions	Size: 19" / 6 HU Weight: approx. 37kg

CNI 503A3, 5.5KV

Three-phase CDN	according to EN/IEC 61000-4-4 and EN/IEC 61000-4-5 for Burst up to 5.5kV Surge up to 5kV
EUT supply	3x480V, 63A AC
Dimensions	Size: 19" / height depending on the size of the rack Weight: approx. 100kg

TECHNICAL DETAILS

CNI 503A S3, 5.5KV	
Three-phase CDN	according to EN/IEC 61000-4-4 and EN/IEC 61000-4-5 for Burst up to 5.5kV Surge up to 5kV
EUT supply	3x690V, 63A AC
Dimensions	Size: 19" / height depending on the size of the rack Weight: approx. 100kg

CNI 503A4, 5.5KV	
Three-phase CDN	according to EN/IEC 61000-4-4 and EN/IEC 61000-4-5 for Burst up to 5.5kV Surge up to 5kV
EUT supply	3x480V, 100A AC
Dimensions	Size: 19" / height depending on the size of the rack Weight: approx. 100kg

CNI 503A S4, 5.5KV	
Three-phase CDN	according to EN/IEC 61000-4-4 and EN/IEC 61000-4-5 for Burst up to 5.5kV Surge up to 5kV
EUT supply	3x690V, 100A AC
Dimensions	Size: 19" / height depending on the size of the rack Weight: approx. 100kg

TECHNICAL DETAILS (7KV MODELS)

CNI 503B5, 7KV	
Three-phase CDN	according to EN/IEC 61000-4-4, EN/IEC 61000-4-5 and ANSI/IEEE C62.41 for Burst up to 5.5kV Surge up to 7kV
EUT supply	3x480V, 16A AC
Dimensions	Size: 19" / 6 HU Weight: approx. 25kg

CNI 503B S1, 7KV	
Three-phase CDN	according to EN/IEC 61000-4-4, EN/IEC 61000-4-5 and ANSI/IEEE C62.41 for Burst up to 5.5kV Surge up to 7kV
EUT supply	3x690V, 16A AC
Dimensions	Size: 19" / 6 HU Weight: approx. 27kg

CNI 503B7, 7KV	
Three-phase CDN	according to EN/IEC 61000-4-4, EN/IEC 61000-4-5 and ANSI/IEEE C62.41 for Burst up to 5.5kV Surge up to 7kV
EUT supply	3x480V, 32A AC
Dimensions	Size: 19" / 6 HU Weight: approx. 35kg

CNI 503B7.3, 7KV	
Three-phase CDN	according to EN/IEC 61000-4-4, EN/IEC 61000-4-5 and ANSI/IEEE C62.41 for Burst up to 5.5kV Surge up to 7kV
EUT supply	3x480V, 32A AC 1,000V, 32A DC
Dimensions	Size: 19" / 6 HU *) Weight: approx. 35kg
*) requires rack mounting	

TECHNICAL DETAILS
CNI 503B7.5, 7KV

Three-phase CDN	according to EN/IEC 61000-4-4, EN/IEC 61000-4-5 and ANSI/IEEE C62.41 for Burst up to 5.5kV with connector for external warning lamp
EUT supply	3x690V, 32A AC 1,000V, 32A DC
Dimensions	Size: 19" / 6 HU *) Weight: approx. 35kg
	*) requires rack mounting

CNI 503B S2, 7KV

Three-phase CDN	according to EN/IEC 61000-4-4, EN/IEC 61000-4-5 and ANSI/IEEE C62.41 for Burst up to 5.5kV Surge up to 7kV
EUT supply	3x690V, 32A AC
Dimensions	Size: 19" / 6 HU Weight: approx. 37kg

CNI 503B8, 7KV

Three-phase CDN	according to EN/IEC 61000-4-4, EN/IEC 61000-4-5 and ANSI/IEEE C62.41 for Burst up to 5.5kV Surge up to 7kV
EUT supply	3x480V, 63A AC
Dimensions	Size: 19" / height depending on the size of the rack Weight: approx. 100kg

CNI 503B S3, 7KV

Three-phase CDN	according to EN/IEC 61000-4-4, EN/IEC 61000-4-5 and ANSI/IEEE C62.41 for Burst up to 5.5kV Surge up to 7kV
EUT supply	3x690V, 63A AC
Dimensions	Size: 19" / height depending on the size of the rack Weight: approx. 100kg

CNI 503B9, 7KV

Three-phase CDN	according to EN/IEC 61000-4-4, EN/IEC 61000-4-5 and ANSI/IEEE C62.41 for Burst up to 5.5kV Surge up to 7kV
EUT supply	3x480V, 100A AC
Dimensions	Size: 19" / height depending on the size of the rack Weight: approx. 100kg

CNI 503B9.2, 7KV

Three-phase CDN	according to EN/IEC 61000-4-4, EN/IEC 61000-4-5 and ANSI/IEEE C62.41 for Burst up to 5.5kV Surge up to 7kV
EUT supply	3x480V, 100A AC 1,000V, 100A DC
Dimensions	Size: 19" / height depending on the size of the rack Weight: approx. 100kg

CNI 503B9.4, 7KV

Three-phase CDN	according to EN/IEC 61000-4-4, EN/IEC 61000-4-5 and ANSI/IEEE C62.41 for Burst up to 5.5kV Surge up to 7kV with connector for external warning lamp
EUT supply	3x690V, 100A AC 1,000V, 100A DC
Dimensions	Size: 19" / height depending on the size of the rack Weight: approx. 100kg

CNI 503B S4, 7KV

Three-phase CDN	according to EN/IEC 61000-4-4, EN/IEC 61000-4-5 and ANSI/IEEE C62.41 for Burst up to 5.5kV Surge up to 7kV
EUT supply	3x690V, 100A AC
Dimensions	Size: 19" / height depending on the size of the rack Weight: approx. 100kg

TECHNICAL DETAILS

TECHNICAL DETAILS (8KV MODELS)

CNI 503A10, 8KV	
Three-phase CDN	according to EN/IEC 61000-4-4 and EN/IEC 61000-4-5 for Burst up to 7kV Surge up to 8kV
EUT supply	3x480V, 16A AC
Dimensions	Size: 19" / 6 HU Weight: approx. 30kg

CNI 503A12, 8KV	
Three-phase CDN	according to EN/IEC 61000-4-4 and EN/IEC 61000-4-5 for Burst up to 7kV Surge up to 8kV
EUT supply	3x480V, 32A AC
Dimensions	Size: 19" / 6 HU Weight: approx. 40kg

CNI 503A13, 8KV	
Three-phase CDN	according to EN/IEC 61000-4-4 and EN/IEC 61000-4-5 for Burst up to 7kV Surge up to 8kV
EUT supply	3x480V, 63A AC
Dimensions	Size: 19" / height depending on the size of the rack Weight: approx. 100kg

CNI 503A14, 8KV	
Three-phase CDN	according to EN/IEC 61000-4-4 and EN/IEC 61000-4-5 for Burst up to 7kV Surge up to 8kV
EUT supply	3x480V, 100A AC
Dimensions	Size: 19" / height depending on the size of the rack Weight: approx. 100kg

TECHNICAL DETAILS (10KV MODELS)

CNI 503A16, 10KV	
Three-phase CDN	according to EN/IEC 61000-4-4 and EN/IEC 61000-4-5 for Burst up to 7kV Surge up to 10kV
EUT supply	3x480V, 16A AC
Dimensions	Size: 19" / 6 HU Weight: approx. 30kg

CNI 503A18, 10KV	
Three-phase CDN	according to EN/IEC 61000-4-4 and EN/IEC 61000-4-5 for Burst up to 7kV Surge up to 10kV
EUT supply	3x480V, 32A AC
Dimensions	Size: 19" / 6 HU Weight: approx. 40kg

CNI 503A19, 10KV	
Three-phase CDN	according to EN/IEC 61000-4-4 and EN/IEC 61000-4-5 for Burst up to 7kV Surge up to 10kV
EUT supply	3x480V, 63A AC
Dimensions	Size: 19" / height depending on the size of the rack Weight: approx. 100kg

CNI 503A20, 10KV	
Three-phase CDN	according to EN/IEC 61000-4-4 and EN/IEC 61000-4-5 for Burst up to 7kV Surge up to 10kV
EUT supply	3x480V, 100A AC
Dimensions	Size: 19" / height depending on the size of the rack Weight: approx. 100kg

TECHNICAL DETAILS

GENERAL DATA

COUPLING MODES

IEC 61000-4-4	Line(s) to Reference Ground; all combinations
IEC 61000-4-5	Line to Line with a 2ohm source impedance Line(s) to PE with a 12ohm source impedance
ANSI/IEEE C62.4	(supporting models only) Surge coupling with a 2ohm source impedance for all lines

OPTIONS

Note:	All CNI 503x models for currents of 63A and 100A are designed for rack mounting. The rack is offered based on the desired configuration. The following racks are available:
MRAC 16 IEC	Mini rack 19", 16HU for CNI 503x only
MRAC 20 IEC	Mini rack 19", 20HU for CNI 503x only
MRAC 25 IEC	Mini rack 19", 25HU for CNI 503x and one generator 3HU (e.g. UCS 500N5)
MRAC 34 IEC	Rack 19", 34HU for CNI 503x and one generator 6HU (e.g. UCS 500N7) or several standalone generators
MRAC 38 IEC	Rack 19", 38HU for CNI 503x and one generator 6HU (e.g. UCS 500N7) or several standalone generators

OTHER MODELS

	Other models available on request for mains supply voltages up to 1,000V and current exceeding 100A
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COMPETENCE WHEREVER YOU ARE



CONTACT EM TEST DIRECTLY

Switzerland

EM TEST (Switzerland) GmbH > Sternenhofstraße 15 > 4153 Reinach > Switzerland
 Phone +41 (0)61/7179191 > Fax +41 (0)61/7179199
 Internet: www.emtest.ch > E-mail: sales.emtest@ametek.com

Germany

EM TEST GmbH > Lünener Straße 211 > 59174 Kamen > Deutschland
 Phone +49 (0)2307/26070-0 > Fax +49 (0)2307/17050
 Internet: www.emtest.com > E-mail: info.emtest@ametek.de

France

EM TEST FRANCE > Le Trident - Parc des Collines > Immeuble B1 - Etage 3 > 36, rue Paul Cézanne > 68200 Mulhouse > France
 Phone +33 (0)389 31 23 50 > Fax +33 (0)389 31 23 55
 Internet: www.emtest.fr > E-mail: info@emtest.fr

Poland

EM TEST Polska > ul. Ogrodowa 31/35, 00-893 Warszawa > Polska
 Phone +48 (0)518 64 35 12
 Internet: www.emtest.com/pl > E-mail: info_polska.emtest@ametek.de

USA / Canada

EM TEST USA > 9250 Brown Deer Road > San Diego > CA 92121
 Phone +1 (858) 699 1685 > Fax +1 (858) 458 0267
 Internet: www.emtest.com > E-mail: sales.emtest@ametek.com

P.R. China

E & S Test Technology Limited > Rm 913, Leftbank > No. 68 Bei Si Huan Xi Lu > Haidian District > Beijing 100080 > P.R. China
 Phone +86 (0)10 82 67 60 27 > Fax +86 (0)10 82 67 62 38
 Internet: www.emtest.com > E-mail: info@emtest.com.cn

Republic of Korea

EM TEST Korea Limited > #405 > WooYeon Plaza > #986-8 > YoungDeok-dong > Giheung-gu > Yongin-si > Gyeonggi-do > Korea
 Phone +82 (31) 216 8616 > Fax +82 (31) 216 8616
 Internet: www.emtest.co.kr > E-mail: sales@emtest.co.kr

Information about scope of delivery, visual design and technical data correspond with the state of development at time of release. Technical data subject to change without further notice.