CNV 501/503X - SERIES
SURGE COUPLING/DECOUPLING NETWORKS

FOR TESTS ACCORDING TO ...

- ANSI/IEEE C62.41
- EN 61000-4-5
- EN 61000-6-1
- EN 61000-6-2
- EN 61543
- IEC 60060
- IEC 60601-1-2
- 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 SURGE

The coupling/decoupling networks of the CNV 501/503x series, are used to couple Surge pulses onto single phase or three-phase (4-wire or 5-wire supply lines) mains supply systems for voltages up to 690 V. Within the range of EM TEST coupling/decoupling networks we offer different models for voltages up to 5 kV, 7 kV, 8 kV, 10 kV and 12 kV with DUT currents of 16 A, 32 A, 63 A and 100 A (higher current ratings on request) for the various test requirements and equipment configuration.

HIGHLIGHTS

- Surge coupling/decoupling network as per EN/IEC 61000-4-5 and ANSI/IEEE C62.41
- Fully automatic setting of coupling modes by the corresponding test generator up to 12kV
- Automatic selection of the required source impedance
- LEDs indicating active coupling

APPLICATION AREAS

- INDUSTRY
- MEDICAL
- BROADCAST
- TELECOM
- RESIDENTIAL

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### TECHNICAL DETAILS

**CNV 501S4, SINGLE PHASE, 10 kV**
- Single phase CDN: acc. to EN/IEC 61000-4-5 Ed.3
- Surge voltage up to 10 kV
- EUT supply: 250 V, 16 A AC
  - 30 V, 16 A DC
- Dimensions: Size: 19" / 6 HU
  - Weight: approx. 26 kg

**CNV 501S4.1, SINGLE PHASE, 10 kV**
- Single phase CDN: acc. to EN/IEC 61000-4-5 Ed.3 and ANSI/IEEE C62.41
- Surge voltage up to 10 kV
- EUT supply: 250 V, 16 A AC
  - 30 V, 16 A DC
- Dimensions: Size: 19" / 6 HU
  - Weight: approx. 27 kg

**CNV 501S6, SINGLE PHASE, 12 kV**
- Single phase CDN: acc. to EN/IEC 61000-4-5 Ed.3
- Surge voltage up to 12 kV
- EUT supply: 250 V, 16 A AC
  - 30 V, 16 A DC
- Dimensions: Size: 19" / 6 HU
  - Weight: approx. 32 kg

**CNV 501S7, SINGLE PHASE, 12 kV**
- Single phase CDN: acc. to EN/IEC 61000-4-5 Ed.3
- Surge voltage up to 12 kV
- EUT supply: 250 V, 32 A AC
  - 30 V, 16 A DC
- Dimensions: Size: 19" / 6 HU
  - Weight: approx. 35 kg

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**THREE-PHASE SURGE COUPLING/DECOUPLING NETWORKS FOR MAINS SUPPLY LINES**

**CNV 503S1, THREE PHASE, 5 kV**
- Three-phase CDN: acc. to EN/IEC 61000-4-5 Ed.3
- Surge voltage up to 5 kV
- EUT supply: 3x480 V, 32 A AC
- Dimensions: Size: 19" / 6 HU
  - Weight: approx. 26 kg

**CNV 503S2, THREE PHASE, 5 kV**
- Three-phase CDN: acc. to EN/IEC 61000-4-5 Ed.3
- Surge voltage up to 5 kV
- EUT supply: 3x480 V, 63 A AC
- Dimensions: Size: 19" / height depending on the size of the rack
  - Additional 19" / 34HU rack required
  - Weight: approx. 100 kg

**CNV 503S3, THREE PHASE, 5 kV**
- Three-phase CDN: acc. to EN/IEC 61000-4-5 Ed.3
- Surge voltage up to 5 kV
- EUT supply: 3x480 V, 100 A AC
- Dimensions: Size: 19" / height depending on the size of the rack
  - Additional 19" / 34HU rack required
  - Weight: approx. 100 kg
## TECHNICAL DETAILS

### THREE-PHASE SURGE COUPLING/DECOUPLING NETWORKS FOR MAINS SUPPLY LINES

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Surge voltage</th>
<th>EUT supply</th>
<th>Dimensions</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CNV 503B5, THREE PHASE, 7 KV</strong></td>
<td>Three-phase CDN acc. to EN/IEC 61000-4-5 Ed.3 and ANSI/IEEE C62.41 Surge voltage up to 7 kV</td>
<td>7 kV</td>
<td>3x480 V, 16 A AC</td>
<td>Size: 19&quot; / 6 HU</td>
<td>approx. 25 kg</td>
</tr>
<tr>
<td><strong>CNV 503B7, THREE PHASE, 7 KV</strong></td>
<td>Three-phase CDN acc. to EN/IEC 61000-4-5 Ed.3 and ANSI/IEEE C62.41 Surge voltage up to 7 kV</td>
<td>7 kV</td>
<td>3x480 V, 32 A AC</td>
<td>Size: 19&quot; / 6 HU</td>
<td>approx. 35 kg</td>
</tr>
<tr>
<td><strong>CNV 503B8, THREE PHASE, 7 KV</strong></td>
<td>Three-phase CDN acc. to EN/IEC 61000-4-5 Ed.3 and ANSI/IEEE C62.41 Surge voltage up to 7 kV</td>
<td>7 kV</td>
<td>3x480 V, 63 A AC</td>
<td>Size: 19&quot; / height depending on the size of the rack Additional 19&quot; / 34HU rack required</td>
<td>approx. 100 kg</td>
</tr>
<tr>
<td><strong>CNV 503B9, THREE PHASE, 7 KV</strong></td>
<td>Three-phase CDN acc. to EN/IEC 61000-4-5 Ed.3 and ANSI/IEEE C62.41 Surge voltage up to 7 kV</td>
<td>7 kV</td>
<td>3x480 V, 100 A AC</td>
<td>Size: 19&quot; / height depending on the size of the rack Additional 19&quot; / 34HU rack required</td>
<td>approx. 100 kg</td>
</tr>
</tbody>
</table>

### THREE-PHASE SURGE COUPLING/DECOUPLING NETWORKS FOR MAINS SUPPLY LINES

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<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Surge voltage</th>
<th>EUT supply</th>
<th>Dimensions</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CNV 503S5, THREE PHASE, 8 KV</strong></td>
<td>Three-phase CDN acc. to EN/IEC 61000-4-5 Ed.3 Surge voltage up to 8 kV</td>
<td>8 kV</td>
<td>3x480 V, 32 A AC</td>
<td>Size: 19&quot; / 6 HU</td>
<td>approx. 40 kg</td>
</tr>
<tr>
<td><strong>CNV 503S6, THREE PHASE, 8 KV</strong></td>
<td>Three-phase CDN acc. to EN/IEC 61000-4-5 Ed.3 Surge voltage up to 8 kV</td>
<td>8 kV</td>
<td>3x480 V, 63 A AC</td>
<td>Size: 19&quot; / height depending on the size of the rack Additional 19&quot; / 34HU rack required</td>
<td>approx. 100 kg</td>
</tr>
<tr>
<td><strong>CNV 503S7, THREE PHASE, 8 KV</strong></td>
<td>Three-phase CDN acc. to EN/IEC 61000-4-5 Ed.3 Surge voltage up to 8 kV</td>
<td>8 kV</td>
<td>3x480 V, 100 A AC</td>
<td>Size: 19&quot; / height depending on the size of the rack Additional 19&quot; / 34HU rack required</td>
<td>approx. 100 kg</td>
</tr>
</tbody>
</table>

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### Technical Details

#### Three-phase Surge Coupling/Decoupling Networks for Mains Supply Lines

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>EUT supply</th>
<th>Dimensions</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CNV 503S9, Three Phase, 10 kV</strong></td>
<td>Three-phase CDN acc. to EN/IEC 61000-4-5 Ed.3, Surge voltage up to 10 kV</td>
<td>3x480 V, 16 A AC</td>
<td>Size: 19” / 6 HU</td>
<td>approx. 30 kg</td>
</tr>
<tr>
<td><strong>CNV 503S10, Three Phase, 10 kV</strong></td>
<td>Three-phase CDN acc. to EN/IEC 61000-4-5 Ed.3, Surge voltage up to 10 kV</td>
<td>3x480 V, 32 A AC</td>
<td>Size: 19” / 6 HU</td>
<td>approx. 40 kg</td>
</tr>
<tr>
<td><strong>CNV 503S10.1, Three Phase, 10 kV</strong></td>
<td>Three-phase CDN acc. to EN/IEC 61000-4-5 Ed.3 and ANSI/IEEE C62.41, Surge voltage up to 10 kV; in combination with VCS 500N10.3</td>
<td>3x480 V, 32 A AC</td>
<td>Size: 19” / 6 HU</td>
<td>approx. 42 kg</td>
</tr>
<tr>
<td><strong>CNV 503S10.2, Three Phase, 10 kV</strong></td>
<td>Three-phase CDN acc. to EN/IEC 61000-4-5 Ed.3, Surge voltage up to 10 kV; in combination with VCS 500N10 and VCS 500N10T</td>
<td>3x480 V AC(p-p), 32 A; 270 V DC (L-N), 32 A</td>
<td>Size: 19” / 6 HU</td>
<td>38.5 kg</td>
</tr>
<tr>
<td><strong>CNV 503S10.3, Three Phase, 10 kV</strong></td>
<td>Three-phase CDN acc. to EN/IEC 61000-4-5 Ed.3, Surge voltage up to 10 kV; in combination with VCS 500N10</td>
<td>3x480 V AC(p-p), 32 A; 270 V DC (L-N), 32 A</td>
<td>Without TEST ON function</td>
<td>approx. 30 kg</td>
</tr>
<tr>
<td><strong>CNV 503S11, Three Phase, 10 kV</strong></td>
<td>Three-phase CDN acc. to EN/IEC 61000-4-5 Ed.3, Surge voltage up to 10 kV</td>
<td>3x480 V, 63 A AC</td>
<td>Size: 19” / height depending on the size of the rack</td>
<td>approx. 100 kg</td>
</tr>
<tr>
<td><strong>CNV 503S12, Three Phase, 10 kV</strong></td>
<td>Three-phase CDN acc. to EN/IEC 61000-4-5 Ed.3, Surge voltage up to 10 kV</td>
<td>3x480 V, 100 A AC</td>
<td>Size: 19” / height depending on the size of the rack</td>
<td>approx. 100 kg</td>
</tr>
</tbody>
</table>
## TECHNICAL DETAILS

### THREE-PHASE SURGE COUPLING/DECOUPLING NETWORKS FOR MAINS SUPPLY LINES

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>EUT supply</th>
<th>Dimensions</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNV 503S14</td>
<td>Three-phase CDN acc. to EN/IEC 61000-4-5 Ed.3 and ANSI/IEEE C62.41</td>
<td>3x480 V, 16 A AC</td>
<td>Size: 19” / height depending on the size of the rack</td>
<td>approx. 100 kg</td>
</tr>
<tr>
<td></td>
<td>Surge voltage up to 12 kV</td>
<td></td>
<td>Additional 19” / 34HU rack required</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Weight: approx. 100 kg</td>
<td></td>
</tr>
<tr>
<td>CNV 503S15</td>
<td>Three-phase CDN acc. to EN/IEC 61000-4-5 Ed.3 and ANSI/IEEE C62.41</td>
<td>3x480 V, 32 A AC</td>
<td>Size: 19” / height depending on the size of the rack</td>
<td>approx. 100 kg</td>
</tr>
<tr>
<td></td>
<td>Surge voltage up to 12 kV</td>
<td></td>
<td>Additional 19” / 34HU rack required</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Weight: approx. 100 kg</td>
<td></td>
</tr>
<tr>
<td>CNV 503S21</td>
<td>Three-phase CDN acc. to EN/IEC 61000-4-5 Ed.3</td>
<td>3x690 V, 32 A AC</td>
<td>Size: 19” / height depending on the size of the rack</td>
<td>approx. 100 kg</td>
</tr>
<tr>
<td></td>
<td>Surge voltage up to 12 kV</td>
<td></td>
<td>Additional 19” / 34HU rack required</td>
<td></td>
</tr>
</tbody>
</table>

### GENERAL DATA

#### COUPLING MODES

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEC 61000-4-5</td>
<td>Line to Line with a 2ohm source impedance</td>
</tr>
<tr>
<td></td>
<td>Line(s) to PE with a 12ohm source impedance</td>
</tr>
<tr>
<td>ANSI/IEEE C62.41</td>
<td>Line to line with a 2ohm source impedance</td>
</tr>
<tr>
<td></td>
<td>line(s) to PE with 2ohm source impedance (only for models that support this capability)</td>
</tr>
</tbody>
</table>

#### OTHER MODELS

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

CONTACT EM TEST DIRECTLY

**Switzerland**
AMETEK CTS GmbH > Sternenhofstraße 15 > 4153 Reinach > Switzerland
Phone +41 (0)61 204 41 11 > Fax +41 (0)61 204 41 00
Internet: www.ametek-cts.com > E-mail: sales.conducted.cts@ametek.com

**Germany**
AMETEK CTS Europe GmbH > Customer Care Center EMEA > Lünener Straße 211 > 59174 Kamen > Germany
Phone +49 (0) 2307 26070-0 > Fax +49 (0) 2307 17050
Internet: www.ametek-cts.com > E-mail: info.cts.de@ametek.com

**Poland**
AMETEK CTS Europe GmbH > Biuro w Polsce > ul. Twarda 44 > 00-831 Warsaw > Poland
Phone +48 (0) 518 643 12
Internet: www.ametek-cts.com > E-mail: Infopolska.cts@ametek.com

**USA / Canada**
AMETEK CTS US > 52 Mayfield Ave > Edison > NJ 08837 > USA
Phone +1 732 417 0501
Internet: www.ametek-cts.com > E-mail: usasales.cts@ametek.com

**P.R. China**
AMETEK Commercial Enterprise (Shanghai) Co. Ltd. > Beijing Branch
Western Section, 2nd floor Jing Dong Fang Building (B10) > Chaoyang District > Beijing, China, 100015
Phone +86 10 8526 2111 > Fax +86 (0)10 82 67 62 38
Internet: www.ametek-cts.com > E-mail: chinasales@ametek.com

**Republic of Korea**
EM TEST Korea Limited > #605 > 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

**Singapore**
AMETEK Singapore Pte. Ltd > No. 43 Changi South Avenue 2 > 04-01 Singapore 48164
Internet: www.ametek-cts.com > E-mail: singaporesales.cts@ametek.com

**Great Britain**
AMETEK GB > 5 Ashville Way > Molly Millars Lane > Wokingham > Berkshire RG41 2 PL > Great Britain
Phone +44 845 074 0660
Internet: www.ametek-cts.com

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