

# PCD COUPLING / DECOUPLING NETWORK

## CDN FOR DC UP TO 1400 V / 400 A FOR UP TO 6 KV SURGE TESTING



### FOR TESTS ACCORDING TO ...

- > ECE-R10
- > EN 61000-4-5
- > IEC 61000-4-12
- > IEC 61000-4-5
- > IEC 61851-21




### PCD - COUPLING/DECOUPLING NETWORKS FOR HIGH CURRENT DC LINES UP TO 1400 V

Surge pulses are applied to high voltage and high current DC lines by means of standalone coupling/decoupling networks. For such testing EM TEST offers the PCD 6 s-2-1400-400 for DC supply lines up to 1400 V and up to 400 A. According to IEC/EN 61000-4-5 the pulses are manually coupled via bridge elements with line to line (2 ohm/18 uF) or line to PE with (12 Ohm/ 9 uF)

### HIGHLIGHTS

- > Coupling/decoupling networks according to IEC/EN 61000-4-5
- > Coupling to high current DC lines with 2/12 Ohm
- > Line voltage 1400 VDC up to 400 ADC
- > Surge test voltage up to 6 kV
- > Manual coupling for differential mode or common mode
- > Supported by compact NX 5 series surge generator

### APPLICATION AREAS

-  AUTOMOTIVE
-  RENEWABLE ENERGY
-  INDUSTRY

**TECHNICAL DETAILS**

**SURGE APPLICATION**

**PCD 6 S-2-1400-400 TEST SETUP**

The EM TEST PCD 6 s-2-1400-400 coupling decoupling networks is a manual CDN for coupling Surge pulses onto high current DC power lines.

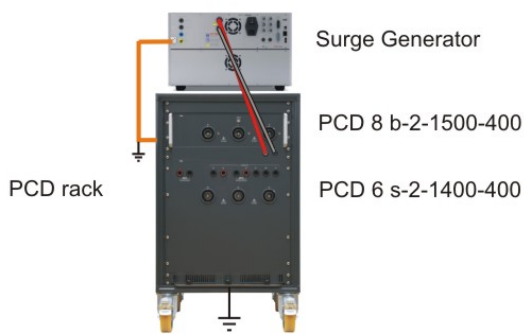
The PCD 6 s-2-1400-400 models combine three different applications;

- Differential mode: DC+ to DC-,
- Common mode: DC+ to PE,
- Common mode: DC- to PE,
- Common mode: DC+ & DC- to PE

The required coupling mode can easily be selected by means of a simple jumper.

The CNVs also include the required decoupling part consisting of decoupling inductors of 0.19 mH for each line and 100uF for PE line. To protect the AE-port, an additional protection circuit is integrated at the line input.

EM TEST offers the PCD 6 s-2-1400-400 coupling/decoupling networks for test voltages up to 6 kV and for higher line voltages/currents (up to 1400V and up to 400 A).



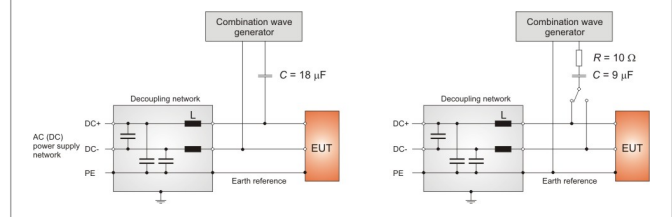
**COUPLING**

**DC COUPLING FOR SURGE**

The EM TEST CNV 504N/508N series of coupling decoupling networks are multifunctional CDNs for the application of Surge and Ringwave pulses onto signal/data lines.

Surge as per IEC 61000-4-5 Ed.3, Figure 5  
- Capacitor 18 uF with 2 ohm

Surge as per IEC 61000-4-5 Ed.3, Figure 6  
- Capacitor 9 uF with 12 ohm



## TECHNICAL DETAILS

## PCD - COUPLING/DECOUPLING NETWORKS

## 6 KV MODELS, LINE VOLTAGE MAX. 1400 VDC

PCD 6 s-2-1400-400	6 kV coupling/decoupling network max. line current 400 A
DC voltage EUT	1400 V
DC current EUT	400 A
Surge coupling	as per Fig. 5/6 of IEC 61000-4-5 Ed.3, - 18 $\mu$ F capacitor via 2 ohm, - 9 $\mu$ F capacitor via 12 ohm

## TECHNICAL DATA

## SURGE IMPULSE

Impulse voltage	0.2 -6.0 kV $\pm$ 10%
Coupling	Manual setting with bridges
coupling differential	2 ohm, 18 $\mu$ F to DC+ to DC-
coupling common mode	12 ohm, 9 $\mu$ F to DC+ to PE, DC- to PE, DC+, DC- to PE
Residual voltage	< 3000 V @ 6000 V surge, typical < 2000 V

## EUT DATA

Lines	DC+, DC-, PE
supply voltage	max. 1400 V
EUT current	max. 400 A

## OUTPUT SOCKET

Connector	Multi Contact: Socket ID/B16BV-NS-A
DC+	Code plug C1
DC-	Code plug C4
PE	Code plug C5

## GENERAL

## DECOUPLING

Decoupling inductance	0.19 mH, each line, 100 $\mu$ H, PE
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## PCD 6 S-2-1400-400, DIMENSION AND WEIGHTS

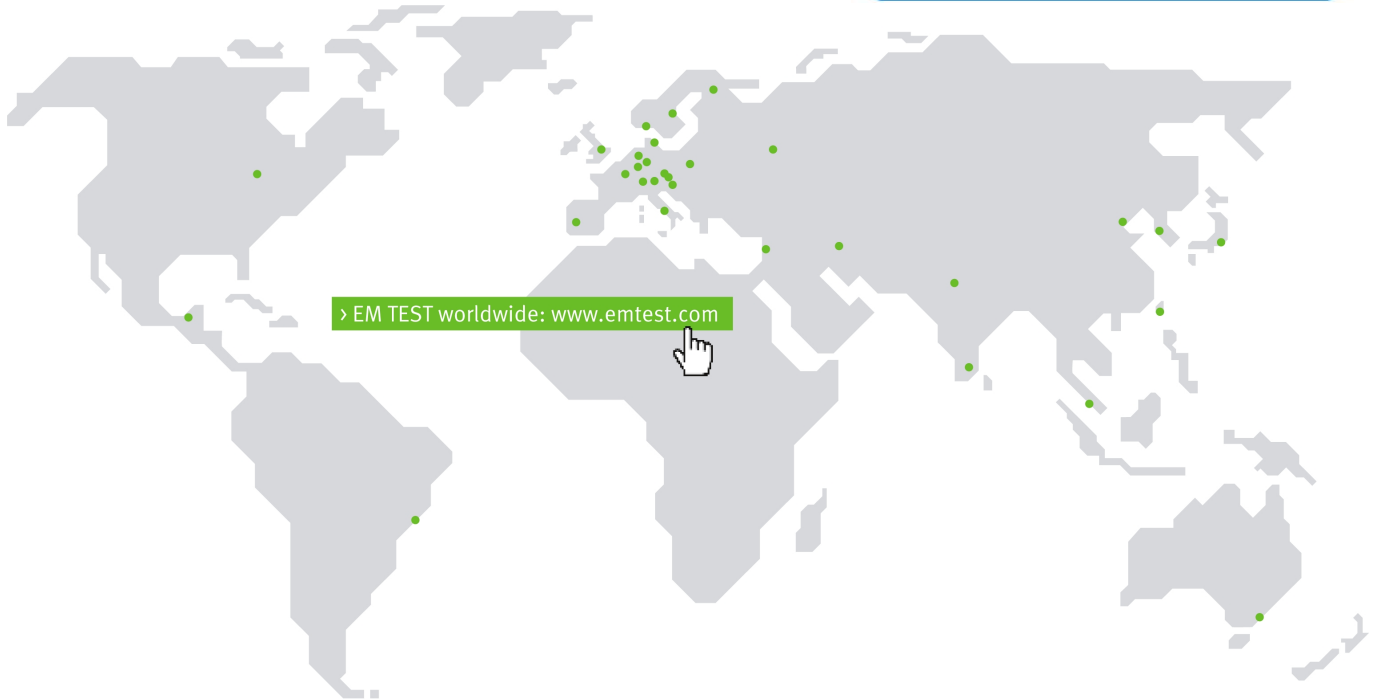
Rack	16 HU, 19"
dimension (LxWxH)	553 mm x 600 mm x 920 mm
Weight	103.0 kg

## ENVIRONMENT

Temperature	10 °C to 40 °C
Humidity	10 % to 80 %, non condensing
Atmospheric pressure	86 kPa (860 mbar) to 106 kPa (1,060 mbar)

# COMPETENCE WHEREVER YOU ARE

**Accelonix BV**  
Luchthavenweg 18b • NL-5657 EB •  
Eindhoven • The Netherlands •  
T: +31 40 750 1650 • E: info@accelonix.nl



## 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](http://www.emtest.ch) › E-mail: [sales.emtest@ametek.com](mailto:sales.emtest@ametek.com)

### Germany

AMETEK CTS Germany GmbH › Lünener Straße 211 › 59174 Kamen › Deutschland  
Phone +49 (0)2307/26070-0 › Fax +49 (0)2307/17050  
Internet: [www.emtest.com](http://www.emtest.com) › E-mail: [info.cts@ametek.de](mailto:info.cts@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](http://www.emtest.fr) › E-mail: [info@emtest.fr](mailto: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](http://www.emtest.com/pl) › E-mail: [infopolska.emtest@ametek.com](mailto:infopolska.emtest@ametek.com)

### USA / Canada

AMETEK Compliance Test Solutions › 52 Mayfield Ave. › Edison › NJ 08837  
Phone +1 (732) 417-0501  
Internet: [www.emtest.com](http://www.emtest.com) › E-mail: [sales.emtest@ametek.com](mailto: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](http://www.emtest.com) › E-mail: [info@emtest.com.cn](mailto: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](http://www.emtest.co.kr) › E-mail: [sales@emtest.co.kr](mailto:sales@emtest.co.kr)

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.