



CDN D-Sub Series CDN IEC 61000-4-6

IEC/EN 61000-4-6 specifies the design and performance of a range of coupling/decoupling networks (CDNs). Each CDN is specific to the type of cable and the intended signal carried on the cable. AMETEK CTS with its brand TESEQ offers an extensive range of CDNs that fully comply with the requirements of the standard and provide a simple and reliable method of injecting RF energy into the equipment under test (EUT). In this datasheet, CDN used with screened data communication cables applications starting from 10 kHz, as required by NAMUR NE21, as well as from 150 kHz is presented.

MAIN FEATURES

- Coupling networks designed for IEC/EN 61000-4-6
- S series for screened line applications
- CDN Series for D-Sub specific applications
- Model with starting frequency from 10 kHz as NAMUR NE 21 specifies

The CDN S D-Sub Series is used to inject common mode disturbance signal to the screen of cables that uses D-Sub connectors. There are two frequency range: from 10 kHz to 80 MHz and from 150 kHz to 230 MHz.

Verification results are provided with each unit. Traceable and accredited calibration according to ISO17025 are available upon request. The CDN can be ordered alone or as a kit, which includes the necessary adapters for verification. please refer to the set order information for more details.

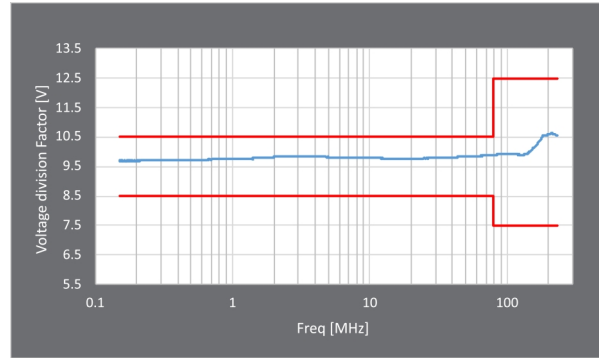
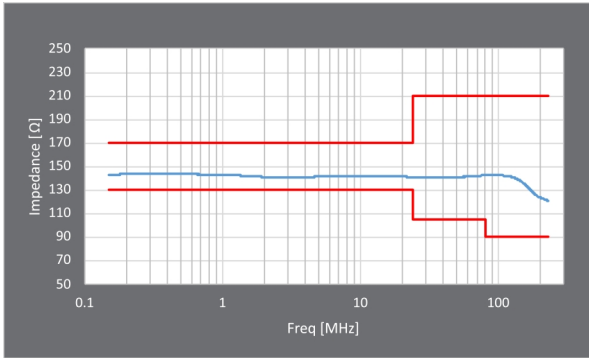
For safety, AMETEK provides a protective earth bolt attached to the bottom plate of all CDN series which can be used to connect it with ground.

Typical performance with limit lines for common mode impedance and voltage division factor can be found in this datasheet.

Electrical Specifications

	CDN S900-10	CDN S250-10	CDN S900	CDN S900m	CDN S150	CDN S250
Frequency Range	10 kHz to 80 MHz		150 kHz to 230 MHz			
Connector EUT Port	D-Sub 9 pins	D-Sub 25 pins	D-Sub 9 pins	D-Sub 9 pins (m)	D-Sub 15 pins	D-Sub 25 pins
Connector AE Port						
Line Parameters	9 screened lines ¹	25 screened lines	9 screened lines ¹		15 screened lines	25 screened lines
Application Configuration	Data line up to Number of wires					
AC max. voltage (L-GND)	150 V					
DC max. voltage (L-GND)						
Current Max	250 mA					
Test Voltage, 2 sec.	500 V DC					
Common Mode Impedance (EUT Port)	10 kHz to 24 MHz: 150 Ω ±20 Ω 24 MHz to 80 MHz: 150 Ω +60 Ω/-45 Ω		150 kHz to 24 MHz: 150 Ω ±20 Ω 24 MHz to 80 MHz: 150 Ω +60 Ω/-45 Ω 80 MHz to 230 MHz: 150 Ω ±60 Ω			
Footnote	¹ : Compatible to RS 232 application					

Typical Performance for Common Mode Impedance and Voltage Division Factor



RF to EUT/AE Specifications

	CDN S900-10	CDN S250-10	CDN S900	CDN S900m	CDN S150	CDN S250
RF Port	BNC 50 Ω					
RF Voltage	< 20 V					
Voltage division factor (RF input to EUT port)	10 kHz to 80 MHz: 10 dB ±1 dB		150 kHz to 80 MHz: 9.5 dB ±1 dB 80 MHz to 230 MHz: 9.5 dB +3 dB/-2 dB			
Transmission bandwidth EUT / AE:	> 20 kHz sin.					
CM decoupling (RF to AE)	10 kHz to 80 MHz: >60 dB		150 kHz: >60 dB 1.5 MHz: >60 dB 30 MHz: >50 dB 230 MHz: >40 dB			

General Specifications

	CDN S900-10	CDN S250-10	CDN S900	CDN S900m	CDN S150	CDN S250
Net Weight	approx. 1.5 kg					
Operating Environment	Indoor use only					
Operating Temperature	+5°C to +40°C					
Humidity	up to 80%					

Available Models

Product	Description	Item #
CDN S900-10	Coupling/Decoupling Network according IEC 61000-4-6 for shielded 9 lines, max 250 mA, and from 10 kHz to 80 MHz. (AE and EUT D-Sub 9)	242478
CDN S250-10	Coupling/Decoupling Network according IEC 61000-4-6 for shielded 25 lines, max 250 mA, and from 10 kHz to 80 MHz. (AE and EUT D-Sub 25)	242480
CDN S900	Coupling/Decoupling Network according IEC 61000-4-6 for shielded 9 lines, max 250 mA, and from 150 kHz to 230 MHz. (AE and EUT D-Sub 9 male)	256766
CDN S900m	Coupling/Decoupling Network according IEC 61000-4-6 for shielded 9 lines, max 250 mA, and from 150 kHz to 230 MHz. (AE and EUT D-Sub 9 male)	
CDN S150	Coupling/Decoupling Network according IEC 61000-4-6 for shielded 15 lines, max 250 mA, and from 150 kHz to 230 MHz. (AE and EUT D-Sub 15)	231008
CDN S250	Coupling/Decoupling Network according IEC 61000-4-6 for shielded 25 lines, max 250 mA, and from 150 kHz to 230 MHz. (AE and EUT D-Sub 25)	231009

Set Information

Set Name Order Nr.	CAL U100M 257138	SAR SUB9M 257951	SAR SUB9fsM 261188	SAR SUB15M 257952	SAR SUB25M 257953
CDN S900-10S 242485	1	1	-	-	-
CDN S250-10S 242488	1	-	-	-	1
CDN S900S 244146	1	1	-	-	-
CDN S900mS 256767	1	-	1	-	-
CDN S150S 244147	1	-	-	1	-
CDN S250S 244148	1	-	-	-	1

Accessories Information

Product	Description	Item #
CDN-TC	Traceable calibration (ISO17025) for IEC 61000-4-6 requirements, order only with device CDN M, AF or S type	97-231024
CDN-DAkkS	DAkkS accredited calibration (ISO17025) for impedance and VDF in the frequency range of the CDN	98-231024
CAL U100X-TC	Traceable calibration (ISO17025), order only with CAL U100x device	97-247825
CAL U100XDAkkS	DAkkS accredited calibration (ISO17025), order only with CAL U100x device	98-247825
IMA U100M	Universal impedance measuring adapter (0 Ω)	257137