



CDN S Multimedia Series CDN IEC 61000-4-6

IEC/EN 61000-4-6 specifies the design and performance of a range of coupling/de-coupling 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 Multimedia connections; audio and video
- Model with starting frequency from 10 kHz as NAMUR NE 21 specifies

The CDN S Multimedia Series is used to inject common mode disturbance signal to the screen of cables that is connected to audio/video connectors in the frequency range from 150 kHz to 230 MHz. The CDN HDMI can be used for all applications that used HDMI and not limited only for video data.

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.

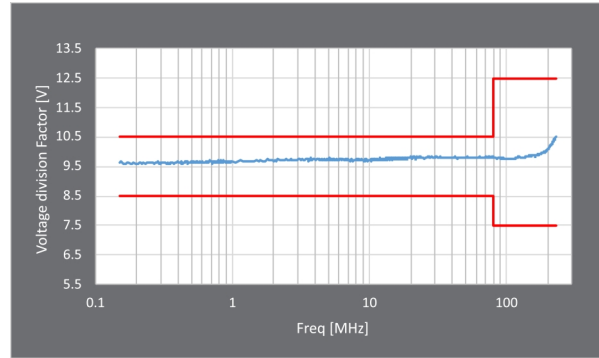
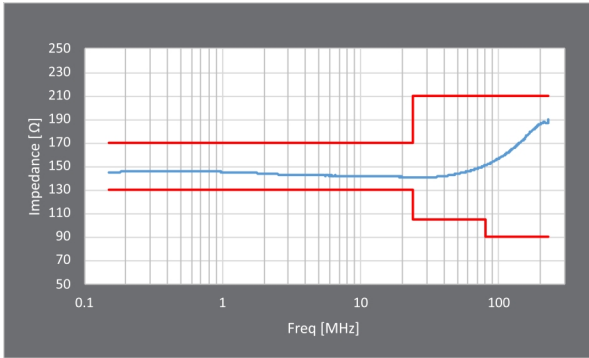
For safety, AMETEK provides a protective earth bolt attached to the bottom plate of all CDN series which can be used to connect it with ground.

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

Electrical Specifications

	CDN HDMI	CDN S200A	CDN S400
Frequency Range	150 kHz to 230 MHz		
Connector EUT Port	HDMI	3-Pin XLR	5-Pin DIN-Audio
Connector AE Port			
Line Parameters	19 screened lines	2 screened lines	4 screened lines
Application Configuration	High speed HDMI with HDCP, HEC (Ethernet), ARC and DSC	XLR-Audio ¹	DIN-Audio ²
AC max. voltage (L-GND)	100 V	150 V	34 V
DC max. voltage (L-GND)	150 V		
Current Max	according to HDMI specification	250 mA	
Test Voltage, 2 sec.	-	500 V DC	
Common Mode Impedance (EUT Port)	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 : Pin 1 to ground ² : Pin 2 to ground		

Typical Performance for Common Mode Impedance and Voltage Division Factor



RF to EUT/AE Specifications

	CDN HDMI	CDN S200A	CDN S400
RF Port	BNC 50 Ω		
RF Voltage	< 20 V		
Voltage division factor (RF input to EUT port)	150 kHz to 30 MHz: 10 dB ±1 dB 30 MHz to 230 MHz: 10 dB +3 dB/-2 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)	150 kHz: >60 dB 1.5 MHz: >60 dB 30 MHz: >50 dB 230 MHz: >40 dB		

General Specifications

	CDN HDMI	CDN S200A	CDN S400
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 HDMI	Coupling/Decoupling Network according IEC 61000-4-6 for shielded 19 lines, and from 150 kHz to 230 MHz (AE and EUT HDMI)	242545
CDN S200A	Coupling/Decoupling Network according IEC 61000-4-6 for shielded 2 lines, max 250 mA, and from 150 kHz to 230 MHz (AE XLR, EUT AXR)	257808
CDN S400	Coupling/Decoupling Network according IEC 61000-4-6 for shielded 4 lines, max 250 mA, and from 150 kHz to 230 MHz (AE and EUT DIN 5-pins socket)	231006

Set Information

Set Name Order Nr.	CAL U100M 257138	CAL U100B 247825	SAR S200M 257950	SAR S400 247838	SAR HDMIM 257957
CDN S200AS 257809	1	-	1	-	-
CDN S400S 244145	-	1	-	1	-
CDN HDMIS 242558	1	-	-	-	1

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 U100	Universal impedance measuring adapter (0 Ω)	239902
IMA U100M	Universal impedance measuring adapter (0 Ω)	257137