



CDN M5 From 10 kHz 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 unscreened supply (mains) with five-line applications starting from 10 kHz as required by NAMUR NE21 is presented.

The CDN M5 series is used to inject common mode disturbance signal to supply lines for three-line applications (with neutral and PE line) in the frequency range from 10 kHz to 80 MHz.

Verification results are supplied 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. Furthermore, CDN series comes with a safety banana socket to avoid accidental contact with the metal socket.

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

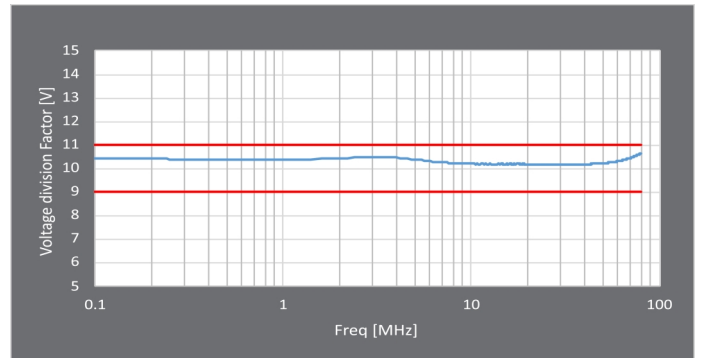
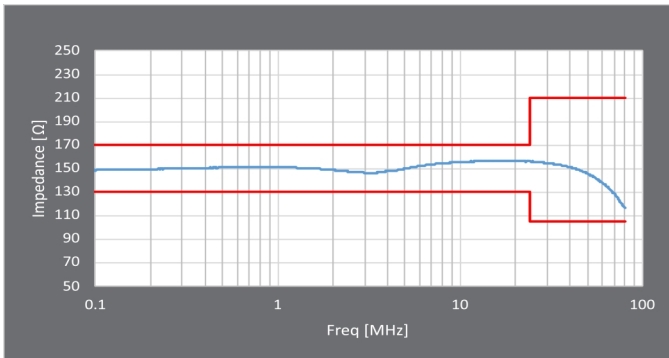
MAIN FEATURES

- Coupling networks designed for IEC/EN 61000-4-6
- CDN M series for mains applications
- Start frequency is from 10 kHz as NAMUR NE 21 specifies
- for 5 Lines application
- Models with 4 mm safety banana sockets

Electrical Specifications

	CDN M532-10	CDN M532-760V-10
Frequency Range	10 kHz to 80 MHz	
Connector EUT Port	4 mm safety banana	
Connector AE Port		
Line Parameters	5 lines	
Application Configuration	(3L+N+PE)	
AC max. voltage (L-N) / (L-L)	300 V / 520 V	500 V / 760 V
DC max. voltage (L-N) / (L-L)	400 V / 600 V	1000 V / 1000 V
Current Max	32 A (60 min)	
Test Voltage, 2 sec.	3.1 kVDC, 2 sec	4.7 kVDC, 2 sec
Common Mode Impedance (EUT Port)	10 kHz to 26 MHz: 150 Ω ±20 Ω 26 MHz to 80 MHz: 150 Ω +60 Ω / -45 Ω	

Typical Performance for Common Mode Impedance and Voltage Division Factor



RF to EUT/AE Specifications

	CDN M532-10	CDN M532-760V-10
RF Port	BNC 50 Ω	
RF Voltage	< 30 V ¹	
Voltage division factor (RF input to EUT port)	10 dB ±1 dB	10 dB +1 dB /-2 dB
Insertion loss (EUT / AE)	f < 400 Hz: <0.1 dB	
CM decoupling (RF to AE)	10 kHz: >10 dB 150 kHz: >35 dB 26 MHz: >45 dB 80 MHz: >25 dB	
Footnote	¹ : refers to 50 V test level in 300 Ω	

General Specifications

	CDN M532-10	CDN M532-760V-10
Operating / Cooling Time	at 32 A max: < 60 min./-	
Net Weight	approx. 6.5	
Operating Environment	Indoor use only	
Operating Temperature	+5°C to +40°C	
Humidity	up to 80%	

Available Models

Product	Description	Item #
CDN M532-10	Coupling/Decoupling Network according IEC 61000-4-6 for Main 5 lines (3xL, N, PE), 32 A, and from 10 kHz to 80 MHz. (AE and EUT Banana)	244296
CDN M532-760V-10	Coupling/Decoupling Network according IEC 61000-4-6 for Main 5 lines (3xL, N, PE), 32 A, 760 VAC and from 10 kHz to 80 MHz. (AE and EUT Banana)	257860

Set Information

Set Name Order Nr.	CAL U100B 247825	A 50-N 257521	SAR M116 239915	SAR M500 247833	SAR MA51 243873
CDN M532-10S 247784	2	1	1	1	1
CDN M532-760V-10S 257861	2	1	1	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