



## 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 3 Lines application
- Models with 4 mm safety banana sockets

## CDN M3 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 which 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 three line and  $\leq 16$  A application starting from 10 kHz as required by NAMUR NE21 is presented.

The CDN M3 series is used to Inject common mode disturbance signal to supply lines for one line applications (with netral and PE line), for two lines applications (with only PE) or for three lines applications in the frequency range from 10 kHz to 80 MHz

Verification results is supplied with each unit. Traceable and accredited calibration according to ISO17025 is 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..

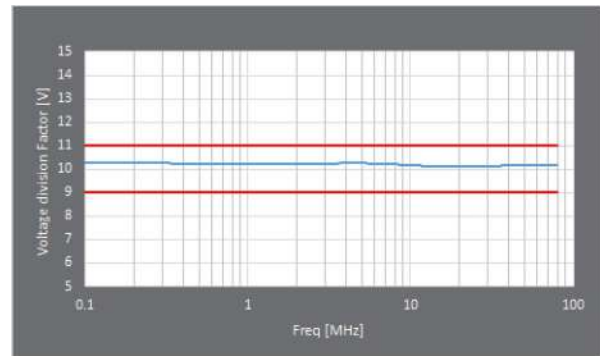
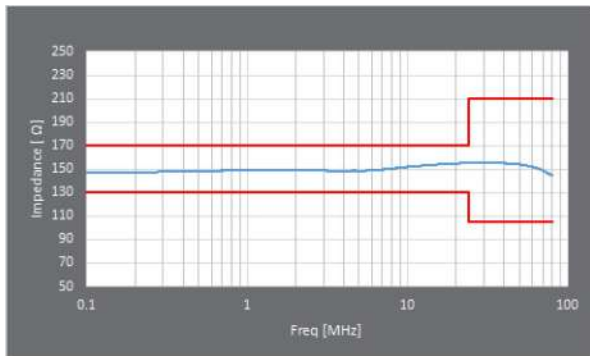
For safety, AMETEK provides a protective earth bolt attached to the bottom plate of all CDN series which can be used to connect it with ground. Furthermore, CDN series comes with a safety banana socket to avoid accidental contact with the metal socket.

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

## Electrical Specifications

	CDN M316-10	CDN M316-3L-10	CDN M332-10	CDN M332-3L-760V-10	CDN M332-760V-10
Frequency Range	10 kHz to 80 MHz				
Connector EUT Port	4 mm safety banana				
Connector AE Port					
Line Parameters	3 Line				
Application Configuration	(L+N+PE) (2L+PE)	(3L)	(L+N+PE) (2L+PE)	(3L)	(L+N+PE) (2L+PE)
AC max. voltage (L-N) / (L-L)	250 V / 433 V		300 V / 520 V	500 V / 760 V	
DC max. voltage (L-N)/ (L-L)	400 V / 800 V		400 V / 600 V	1000 V / 1000 V	
Current Max	16 A		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 24 MHz: 150 Ω ±20 Ω 24 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 M316-10	CDN M316-3L-10	CDN M332-10	CDN M332-3L-760V-10	CDN M332-760V-10
RF Port	BNC 50 Ω				
RF Voltage	< 30 V <sup>1</sup>				
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				
Decoupling of CM disturbance (RF port / AE) typ.	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 M316-10	CDN M316-3L-10	CDN M332-10	CDN M332-3L-760V-10	CDN M332-760V-10
Operating / Cooling Time	at 40°C and Max. 16A: 25 min. / 25 min. at 23°C and Max. 16A: 35 min. / 70 min.		at 32 A max: < 60 min./-		
Dimensions (WxHxD)	100 x 100 x 240 mm <sup>3</sup>		160 x 160 x 470 mm <sup>3</sup>		
Net Weight	approx. 1.5	approx. 1.5	approx. 6.5		
Operating Environment	Indoor use only				
Operating Temperature	+5°C to +40°C				
Humidity	up to 80%				

## Set Information

Set Name Order Nr.	CAL U100B 247825	A 50-N 257521	SAR M116 239915	SAR M300 242451	SAR MA31 247828
CDN M316-10S 242484	2	1	1	1	1
CDN M316-3L-10S 256765	2	1	1	-	2
CDN M332-10S 247787	2	1	1	1	1
CDN M332-760V-10S 257853	2	1	1	1	1
CDN M332-3L-760V-10S 257855	2	1	1	-	2