



MAIN FEATURES

- Coupling networks designed for IEC/EN 61000-4-6
- CDN M series for mains applications
- Models with frequency range 150 kHz to 80 MHz
- for 3 Lines application
- Models with terminal block
- with maximum current of 100 A

CDN M3, 100 A from 150 kHz 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 applications with maximum of 100 A starting from 150 kHz as required by IEC/EN 61000-4-6 is presented.

The CDN M3 series is used to Inject common mode disturbance signal to supply lines for one line applications (with neutral and PE line), for two lines applications (with only PE) or for three lines applications in the frequency range from 150 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.

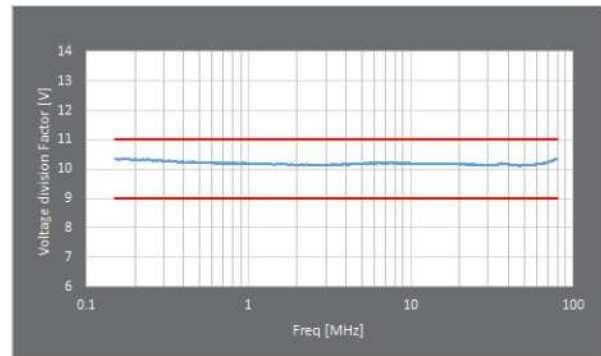
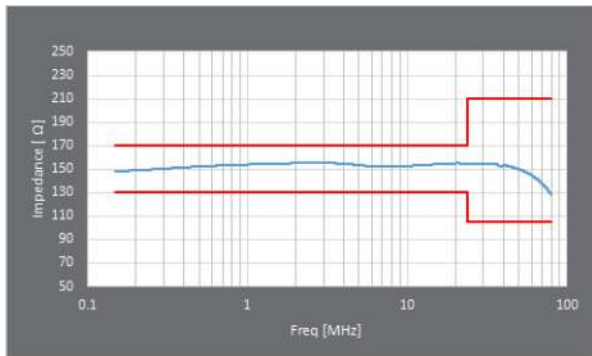
For safety, AMETEK provides a protective earth bolt attached to the bottom plate of all CDN series which can be used to connect it with ground.

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

Electrical Specifications

	CDN M3-100	CDN M3-100-3L	CDN M3-100-3L-750V	CDN M3-100-750V
Frequency Range	150 kHz to 80 MHz			
Connector EUT Port	Terminal block			
Connector AE Port				
Line Parameters	3 power lines			
Application Configuration	(L+N+PE) (2L+PE)	(3L)		(L+N+PE) (2L+PE)
AC max. voltage (L-N) / (L-L)	300 V / 520 V		750 V / 750 V according EN 60998-1 and 600 V / 600 V according UL 1059	
DC max. voltage (L-N)/ (L-L)	400 V / 600 V		1000 V / 1000 V according EN 60998-1 and 850 V / 850 V according UL 1059	
Current Max	100 A (max. 60 min)			
Test Voltage, 2 sec.	3.1 kVDC		4.7 kVDC	
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			

Typical Performance for Common Mode Impedance and Voltage Division Factor



RF to EUT/AE Specifications

	CDN M3-100	CDN M3-100-3L	CDN M3-100-3L-750V	CDN M3-100-750V
RF Port	BNC 50 Ω			
RF Voltage	< 30 V ¹			
Voltage division factor (RF input to EUT port)	10 dB ±1 dB			
Insertion loss (EUT / AE)	f < 400 Hz: <0.1 dB			
Decoupling of CM disturbance (RF port / AE) typ.	150 kHz: >20 dB 1.5 MHz: >50 dB 30 MHz: >40 dB 80 MHz: >20 dB			
Footnote	1. refers to 50 V test level in 300 Ω			

General Specifications

	CDN M3-100	CDN M3-100-3L	CDN M3-100-3L-750V	CDN M3-100-750V
Dimensions (WxHxD)	200 x 200 x 470 mm ³			
Net Weight	approx. 10 kg			
Operating Environment	Indoor use only			
Operating Temperature	+5°C to +40°C			
Humidity	up to 80%			

Set Information

	CAL U100M 257138	A 50-N 257521	SAR M116 239915	SAR M300M 257148	SAR MA31M 257141
CDN M3-100S 257153	2	1	1	1	1
CDN M3-100-3LS 257155	2	1	1	-	2
CDN M3-100-750VS 257165	2	1	1	1	1
CDN M3-100-3L-750VS 257167	2	1	1	-	2