



MAIN FEATURES

- Coupling networks designed for IEC/EN 61000-4-6
- CDN M series for mains applications
- Models with frequency range 150 kHz to 230 MHz
- for 3 Lines application
- Models with 4 mm safety banana sockets
- with maximum current of 16 A

CDN M3, ≤16 A from 150 kHz 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 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 16 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 230 MHz. The CDN M310B is special design with european outlet that fit with three lines appliances. It is convenient to test typical three lines home appliances.

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.

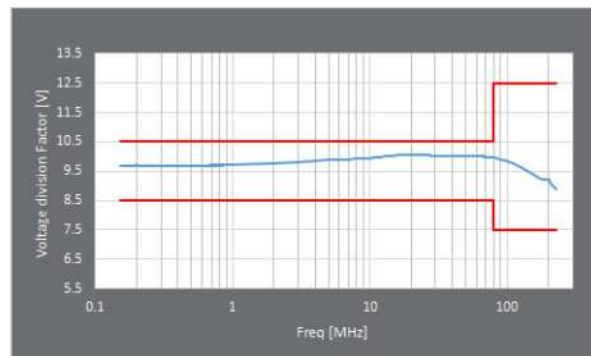
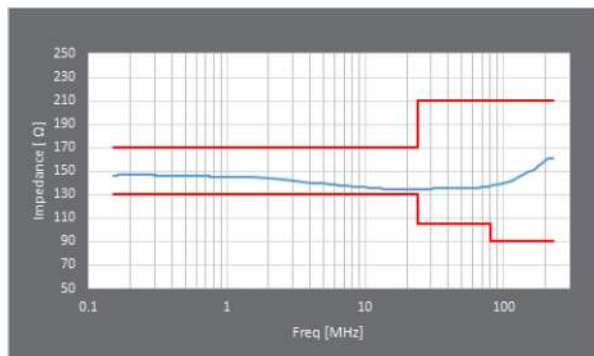
For safety, AMETEK provides a protective earth bolt attached to the bottom plate of all CDN series which can be used to connect it with ground. Furthermore, CDN series comes with a safety banana socket to avoid accidental contact with the metal socket.

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

Electrical Specifications

	CDN M310B	CDN M316B	CDN M316	CDN M316-3L	CDN M316-1000V
Frequency Range	150 kHz to 230 MHz				
Connector EUT Port	Schuko, CEE 7/4	4 mm safety banana			
Connector AE Port	IEC 60320 C14	IEC 60320 C20			
Line Parameters	3 power lines				
Application Configuration	(L+N+PE)	(L+N+PE) (2L+PE)		(L+L+L)	(L+N+PE) (2L+PE)
AC max. voltage (L-N) / (L-L)	250 V / 433 V				500 V / 1000 V
DC max. voltage (L-N)/ (L-L)	400 V / 800 V				1000 V / 2000 V
Current Max	10 A	16 A			
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 80 MHz to 230 MHz: 150 Ω ±60 Ω				

Typical Performance for Common Mode Impedance and Voltage Division Factor



RF to EUT/AE Specifications

	CDN M310B	CDN M316B	CDN M316	CDN M316-3L	CDN M316-1000V
RF Port	BNC 50 Ω				
RF Voltage	< 30 V ¹				
Voltage division factor (RF input to EUT port)	150 kHz to 80 MHz: 9.5 dB ±1 dB 80 MHz to 230 MHz: 9.5 dB +3 dB / -2 dB				10 dB ±1 dB 10 dB ±2 dB
Insertion loss (EUT / AE)	f < 400 Hz: <0.1 dB				
Decoupling of CM disturbance (RF port / AE) typ.	150 kHz: >30 dB 1.5 MHz: >60 dB 30 MHz: >40 dB 230 MHz: >20 dB				150 kHz: >25 dB 1.5 MHz: >60 dB 30 MHz: >40 dB 230 MHz: >10 dB
Footnote	1. refers to 50 V test level in 300 Ω				

General Specifications

	CDN M310B	CDN M316B	CDN M316	CDN M316-3L	CDN M316-1000V
Operating / Cooling Time	-	at 40°C and Max. 16A: 25 min. / 25 min. at 23°C and Max. 16A: 35 min. / 70 min.			
Dimensions (WxHxD)	100 x 100 x 240 mm ³				
Net Weight	approx. 1.5 kg				
Operating Environment	Indoor use only				
Operating Temperature	+5°C to +40°C				
Humidity	up to 80%				

Set Information

	CAL U100B 247825	CAL U100M 257138	A 50-N 257521	SAR M116 239915	SAR M300 242451	SAR M310M 257956	TRA M21B 242457	TRA M36B 242460	SAR MA31 247828
CDN M310BS 244116	-	1	-	-	-	1	1	-	-
CDN M316S 244114	2	-	1	1	1	-	-	-	1
CDN M316-3LS 243069	2	-	1	1	-	-	-	-	2
CDN M316BS 244115	1	-	-	-	-	-	-	1	1
CDN M316-1000VS 256669	2	-	1	1	1	-	-	-	1