



CDN M4, ≤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 four line applications with maximum of 16 A starting from 150 kHz as required by IEC/EN 61000-4-6 is presented.

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 4 Lines application
- Models with 4 mm safety banana sockets
- with maximum current of 16 A

The CDN M4 series is used to Inject common mode disturbance signal to supply lines for two line applications (with neutral and PE line) or for three lines applications (with either PE or N lines) in the frequency range from 150 kHz to 230 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.

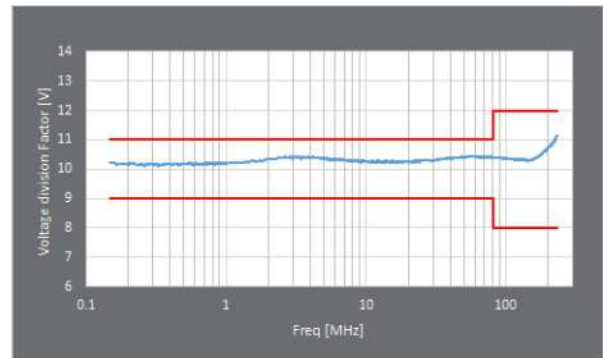
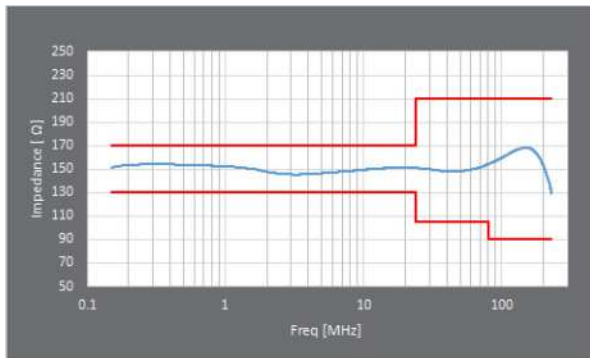
For safety, AMETEK provides a protective earth bolt attached to the bottom plate of all CDN series which can be used to connect it with ground. Furthermore, CDN series comes with a safety banana socket to avoid accidental contact with the metal socket.

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

Electrical Specifications

	CDN M416A	CDN M416A-3LN
Frequency Range	150 kHz to 230 MHz	
Connector EUT Port	4 mm safety banana	
Connector AE Port		
Line Parameters	4 power lines	
Application Configuration	(2L+N+PE) (3L+PE)	(3L+N)
AC max. voltage (L-N) / (L-L)	300 V / 520 V	
DC max. voltage (L-N)/ (L-L)	400 V / 600 V	
Current Max	16 A	
Test Voltage, 2 sec.	3.1 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 M416A	CDN M416A-3LN
RF Port	BNC 50 Ω	
RF Voltage	< 30 V ¹	
Voltage division factor (RF input to EUT port)	150 kHz to 80 MHz: 10 dB \pm 1 dB 80 MHz to 230 MHz: 10 dB \pm 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	
Footnote	1. refers to 50 V test level in 300 Ω	

General Specifications

	CDN M416A	CDN M416A-3LN
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	A 50-N 257521	SAR M116 239915	SAR M400 247832	SAR MA41 247831
CDN M410AS 244118	2	1	1	1	1
CDN M416A-3LNS 244167	2	1	1	-	2