



CDN M2/3 From 150 kHz Series

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 a configuration switch for two or three 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
- Switchable for 2 or 3 Lines application
- Models with 4 mm safety banana sockets

The CDN M016 is used to Inject common mode disturbance signal to supply lines for AC two or three line applications in the frequency range from 150 kHz to 230 MHz. The convenient design with switch allow the user to use one CDN for two different configurations.

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.

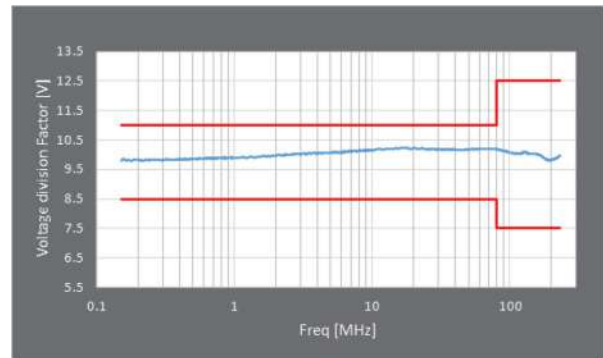
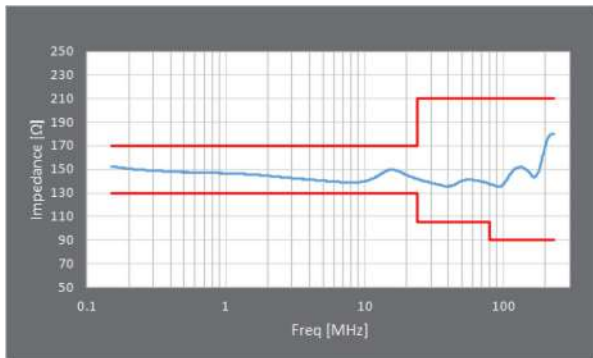
For safety, AMETEK provides a protective earth bolt attached to the bottom plate of all CDN series which can be used to connect it with ground. Furthermore, CDN series comes with a safety banana socket to avoid accidental contact with the metal socket.

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

Electrical Specifications

	CDN M016
Frequency Range	150 kHz to 230 MHz
Connector EUT Port	4 mm safety banana
Connector AE Port	
Line Parameters	Switchable 2 or 3 power lines
Application Configuration	(L+N) or (L+N+PE)
AC max. voltage (L-N) / (L-L)	250 V / 433 V
DC max. voltage (L-N)/ (L-L)	400 V / 800 V
Current Max	16 A
Test Voltage, 2 sec.	3.1 kVDC
Common Mode Impedance (EUT Port)	150 kHz to 24 MHz: 150 Ω \pm 20 Ω 24 MHz to 80 MHz: 150 Ω +60 Ω / -45 Ω 80 MHz to 230 MHz: 150 Ω \pm 60 Ω

Typical Performance for Common Mode Impedance and Voltage Division Factor



RF to EUT/AE Specifications

	CDN M016
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 +1.5 dB/-1 dB 80 MHz to 230 MHz: 9.5 dB +3 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
Footnote	1. refers to 50 V test level in 300 Ω

General Specifications

	CDN M016
Operating / Cooling Time	at 40°C & 16 A: 25 min. / 25 min. at 23°C & 16 A: 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 U100M 25713B	A50-N 257521	SAR M116 239915	SAR MA31 247828	SAR M300 242451
CDN M016S 244117	2	1	1	1	2