Features

Frequency Range - 150 kHz - 80 MHz

Meets EN 61000-4-6 requirements

Current Rating: up to 25 Amps

Individual Calibration

Two Year Warranty

Models
CDN-M125, M225, M325, M425, M525

Description

The M series powerline Coupling / Decoupling Networks (CDN) are for testing from 150 kHz - 80 MHz according to the EN 61000-4-6 standard for immunity to conducted disturbance induced by radio frequency fields. The standard M series CDNs are available with 25 amperes current rating.

The coupling network delivers injected common mode current disturbance signals through the power line conductors to the equipment under test (EUT). The decoupling networks are used to ensure that the disturbing signals injected on the powerline of the EUT by the coupling networks do not interfere with any of the auxiliary equipment connected to the EUT. Each CDN contains integrated direct capacitive coupling along with a high impedance choke for inductive decoupling.

All CDNs are individually calibrated to meet the impedance requirement of EN 61000-4-6. However, test level calibration must be performed on site to determine the minimum required test signal needed to achieve the required voltage levels specified by EN 61000-4-6. The appropriate calibration accessories for conducting the test is available from Com-Power.

Application

During the test, the CDN is connected to the powerline cables between the equipment under test (EUT) and auxiliary equipment (AE). The number of conductors in the cable will determine which CDN to use for the test.

The M125 CDN is used to couple common mode and modulated signals onto single power line systems. This CDN is ideal for electronic systems that uses the chassis as the DC return. The M225 CDN is for systems with two wire power conductor cables without an earth terminals and the M325 is for single phase two line cables with the an earth ground conductor. The M425 is used for three phase systems. The M525 CDN is used for three phase systems with neutral and protected earth ground conductors. All CDNs are also fitted with safety sockets for connecting the devices under test.

CDN selection table

Model	Current Rating (Amps)	Number of Lines	Application
CDN-M125	25	1	Single line
CDN-M225	25	2	Single phase + netural
CDN-M325	25	3	Single phase + netural + earth
CDN-M425	25	4	Three phase + earth
CDN-M525	25	5	Three phase + netural + earth

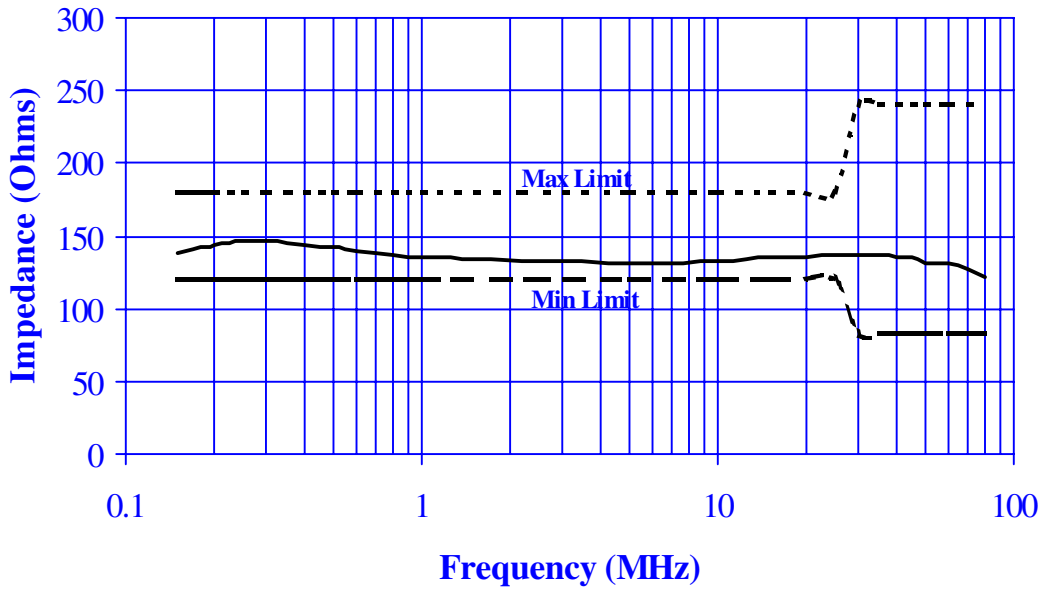
Specifications

Frequency Range:	150 kHz - 80 MHz
Voltage rating:	480 V AC 600 V DC
Current rating:	25 Amperes
Common mode impedance:	150 kHz - 26 MHz: 150 Ohms ± 20 Ohms 26 MHz - 80 MHz: 150 Ohms + 60 Ohms and - 45.5 Ohms
Maximum RF voltage input:	40 V max
Voltage attenuation (RF/EUT):	9 dB to 12 dB
Insertion loss EUT/AE:	30 dB min from 150 kHz to 2 MHz 50 dB min from 2 MHz to 80 MHz
Coupling factor:	0.3 dB max up to 3 kHz
Decoupling attenuation (RF/AE):	50 dB min, 150 kHz - 80 MHz
AE & EUT connector type:	4 mm Safety Sockets
RF (Disturbance coupling) connector:	BNC (f) 50 Ohm
Dimensions (inches):	6 x 6 x 12.5 (all models)
Weight (all model):	5 lbs. max.

Test level calibration components selection table:

Model	Calibration Adapter Input (AE)	Calibration Adapter Output (EUT)	Common Mode Adapters for Input (AE)	Common Mode Adapters for Output (EUT)
CDN-M125	ADA-M125	ADA-M125	ADA-515 & TEP-050	ADA-515
CDN-M225	ADA-M225	ADA-M225	ADA-515 & TEP-050	ADA-515
CDN-M325	ADA-M325	ADA-M325	ADA-515 & TEP-050	ADA-515
CDN-M425	ADA-M425	ADA-M425	ADA-515 & TEP-050	ADA-515
CDN-M525	ADA-M525	ADA-M525	ADA-515 & TEP-050	ADA-515

Typical impedance graph for all models compared to the EN 61000-4-6 requirements



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All specifications are subject to change without notice.