



model number: CDN M2/M3-16

Coupling Decoupling Network



DESCRIPTION:

The CDN M2/M3-16 is a part of the coupling decoupling network series for conducted common mode immunity testing according to IEC 61000-4-6. The CDN M2/M3-16 16A complies to IEC 61000-4-6 Annex D.2 and is suitable for immunity testing on unscreened a.c. and d.c. power supply lines (mains lines).

SPECIFICATIONS:

Frequency Range	150 kHz 230 MHz
Common mode impedance	150 kHz – 24 MHz: 150 Ω ± 20 Ω 24 MHz – 80 MHz: 150 Ω + 60 Ω/-45 Ω 80 MHz – 230 MHz: 150 ± 60 Ω
Max. RF-test voltage (emf)	30 V
RF-input-power	6 W (continuous)
RF-input-connector	50 Ω BNC (female)
Voltage division factor RF-input – EuT-port	9.5 dB 150 kHz – 80 MHz: ± 1dB 80 MHz – 230 MHz: +3 dB / - 2 dB
Input voltage EuT (AE)	250 VAC 400 VDC
Housing material	Aluminium
Housing dimensions	216 x 105 x 108 mm
Weight	ca. 1400 g
Connector	BNC
EuT, AE connectors	4 mm safety banana female
Included accessories 3 pin shorting bar 2 pin shorting bar	(2 pcs of each type included by default) CA 3/4 CA 2/4

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The CDN M2/M3-16 is intended to inject common mode disturbance signals to power supply or mains lines (unscreened) in the frequency range from 150 kHz to 230 MHz. The circuitry schematics are shown in fig. 3 and fig.4.

By switching this CDN can be used as CDN M2 (for L and N or for DC+ and DC-) or alternatively as CDN M2/M3-16 (L, N, PE). All CDNs comply to the requirements of IEC 61000-4-6. Each CDN comes with individually measured data and a calibration certificate for the common mode impedance and the voltage division factor.

A variety of calibration adapters and other accessories are available as options.



The capacitors at the AE-side are equipped with 2 M Ω discharging resistors.

Corresponding terminals are always located in opposite position and can be recognized by the terminal color. They can be used for any phase, except for PE! The PE-terminal with its yellow-green color is connected to the metal housing at the AE-side.

The connection to ground can be accomplished using the ground plane of the CDN. Additionally there is an M4 thread located at the AE side to ground as well as a 4 mm socket to connect the device to ground. The CDN is equipped with 4 mounting notches of 6 mm width at the baseplate.

To improve the operational safety the mains voltage-carrying connections are carried out as security sockets. We recommend to use special 4 mm security plugs if you plan to design your own adapters. Those connectors can be purchased optionally.





FIG. 1: TYP. EUT COMMON MODE IMPEDANCE



FIG. 2: TYP. VOLTAGE DIVISION FACTOR RF-PORT TO EUT PORT



FIG. 3: PRINCIPAL CIRCUITRY CDN M2/M3-16, SWITCH POSITION M3



FIG. 4: PRINCIPAL CIRCUITRY CDN M2/M3-16, SWITCH POSITION M2



