

CDND IEC/EN 61000-4-31

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The CDND M316-16B is a specialized coupling/decoupling network specifically engineered to comply with the requirements of IEC/EN 61000-4-31. This standard details testing and measurement techniques for assessing broadband conducted disturbance immunity on AC mains ports, targeting disturbances within the frequency range of 150 kHz to 80 MHz. By adhering to these guidelines, the network ensures that devices operate reliably under such electromagnetic conditions.

This device facilitates the injection of both common-mode and differential-mode signals into the equipment under test (EUT). It provides a longitudinal conversion loss (LCL) of 16 dB, which guarantees accurate and dependable signal application for immunity testing. This functionality is vital for verifying the resilience of devices against broadband conducted disturbances, thereby meeting EMC compliance standards.

The CDND M316-16B is highly versatile and can be utilized in applications with or without a protective earth connection, making it suitable for various testing environments. It ensures efficient and repeatable testing, yielding consistent results that assist manufacturers in assessing and enhancing the electromagnetic immunity of their products. This solution is crucial for fulfilling the stringent requirements of IEC/EN 61000-4-31 in both laboratory and production settings.

Each unit comes with verification results. Additionally, traceable calibration according to ISO 17025 is available upon request. The CDND can be ordered individually or with the CAS, which includes the necessary adapters for verification. For further details, please refer to the dedicated datasheet for CAS CDND31.

Typical performance characteristics, including limit lines for common and differential mode impedance, can also be found in this datasheet.

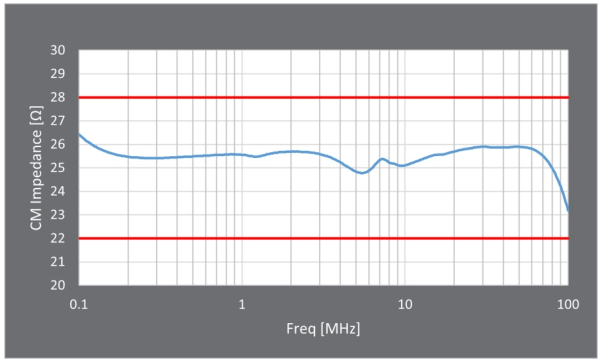
MAIN FEATURES

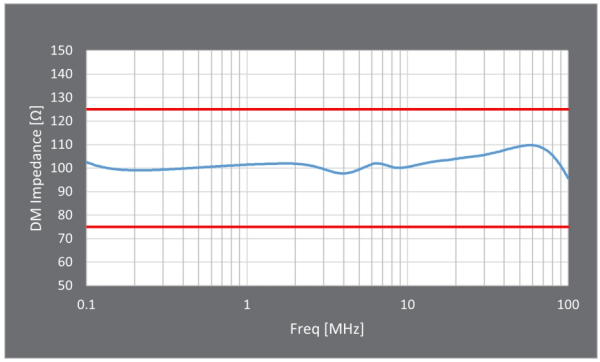
- **Coupling network designed for IEC/EN 61000-4-31**
- **Frequency range 150 kHz to 80 MHz**
- **With 4 mm safety banana sockets**
- **For M2 and M3 applications**
- **100 mΩ shunt**

Electrical Specifications

	CDND M316-16B
Frequency Range	150 kHz to 80 MHz
Connector EUT Port	4 mm safety banana
Connector AE Port	
Max. Voltage AC mains	250 V @ 50 Hz
Maximum Current AC mains	16 A
Impedance EUT port (CM)	(25 Ω ±3 Ω), (0° ±25°)[1]
Impedance EUT port (DM)	(100 Ω ±25 Ω), (0° ±25°)[2]
Footnote	[1]: L+N to PE [2]: L to N

Common and Differential Mode impedace





RF to EUT/AE Specifications

	CDND M316-16B
RF Port	BNC 50 Ω (f)
RF Level	45 W/Hz (−32.5 dBm/Hz)[1]
Insertion loss (RF input to EUT) (DM)	3 dB ±1 dB
Isolation (AC mains port – EUT port)	>15 dB
LCL (EUT)	16 dB ±3 dB[2]
Footnote	[1]: noise signal with bandwidth from 150 kHz to 80 MHz for 15 min. [2]: With RF = 50 Ω and AC mains = 100 Ω (L to N)

General Specifications

	CDND M316-16B
Dimensions (W x H x D)	200 x 200 x 470 mm[3]
Net Weight	12.5 kg
Operating Environment	Indoor use only
Operating Temperature	+5°C to +30°C
Humidity	up to 80%

Order and Accessories Information

Product	Description	Item #
CDND M316-16B	Coupling Decoupling Network for differential mode according to IEC 61000-4-31, type M2/M3, 16 A, banana.	257807
CDND M316-16-TC	Traceable calibration (ISO17025) for IEC 61000-4-31 requirements, order only with the unit	97-247756
CAS CDND31	Calibration kit for CDND M316-16, incl. 2x MB 100-20 (Balun 50 Ω/100 Ω), BMB 1000 (Balanced Measuring Bridge) and adapters, delivered in storage case, traceable calibration included.	257802