



# CDNE M310-USJP COUPLING DECOUPLING NETWORK FOR EMISSION MEASUREMENT



- Frequency range 30 to 300 MHz
- 125 V, 10 Amps, M3 version for Japan and US socket
- Conform with CISPR 15 ed.9, CISPR 16-1-2 and CISPR 16-2-1
- Outperforms the requirements of the CDN method of older CISPR 15 versions
- Excellent performance

CISPR 15 edition 9 offers different methods for the measurement of radio disturbance characteristics of electrical lighting equipment. One of these is the CDNE method. This method specifies the use of a coupling / decoupling network for emission measurement (CDNE) to measure disturbance voltages in the 30 to 300 MHz frequency range. This method enables EUTs to be connected directly to the CDNE, allowing a single conducted emission measurement to replace a lengthy radiated emission test.

The Teseq CDNEs are compliant with the actual versions of CISPR 16-1-2, CISPR 16-2-1 and CISPR 15 edition 9.

Using a CDNE instead of CDN offers improved measurement reproducibility due to standard's requirements for more restrictive limits of asymmetrical impedance, phase angle, symmetrical impedance and internal attenuation.

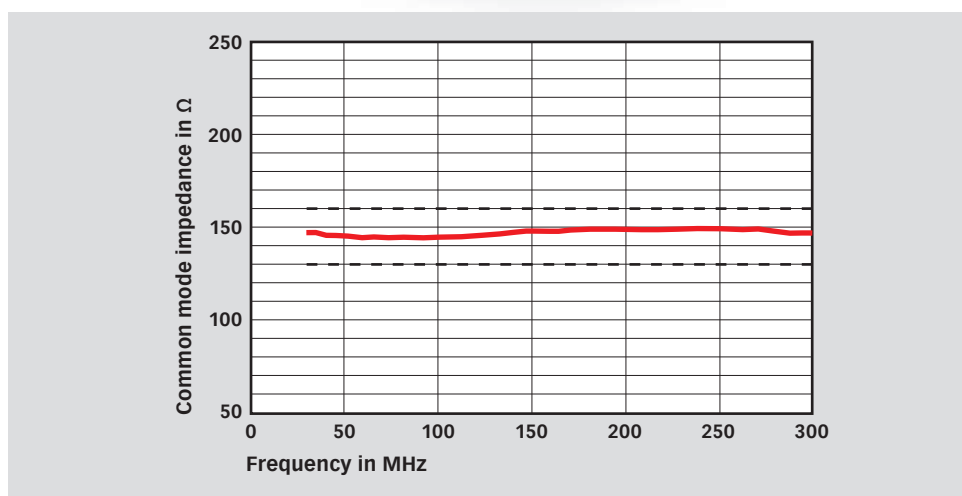
CISPR 15 edition 9 requires the termination of the mains supply cable of the EUT with a CDNE positioned on the reference-ground plane for the OATS, SAC or FAR measurement method. The receiver port of the CDNE is terminated with a 50 Ω impedance.

### Technical specifications

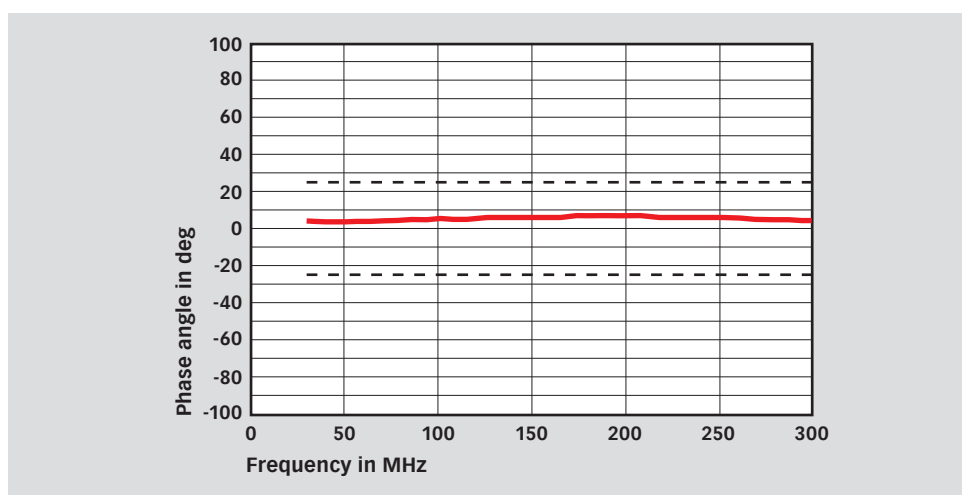
Frequency range:	30 to 300 MHz
Power rating (EUT- and AE port)	
AC max. voltage (line to ground):	125 V
AC max. voltage (line to line):	125 V
DC max. voltage:	125 V
Current max:	10 A
Test voltage:	2000 V AC, 2 s
Mains sockets (EUT- / AE port):	NEMA 5-15 / IEC 320 C14
Common mode impedance (EUT port):	150 Ω +10 / -20 Ω
Phase angle (EUT port):	0° ±25°
Differential mode impedance (EUT port):	100 Ω ±20 Ω
Coupling path (EUT / RF port)	
Connection (RF port):	BNC, 50 Ω
RF voltage (generated from EUT):	<10 V
Transducer factor / Voltage division factor (EUT / RF port)	
incl. internal 10 dB attenuator:	20 dB ±1.5 dB
Insertion Loss (EUT / AE port), f <400 Hz:	>0.1 dB
Decoupling of CM disturbance (RF port / AE):	>30 dB

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Typical common mode impedance (EUT)

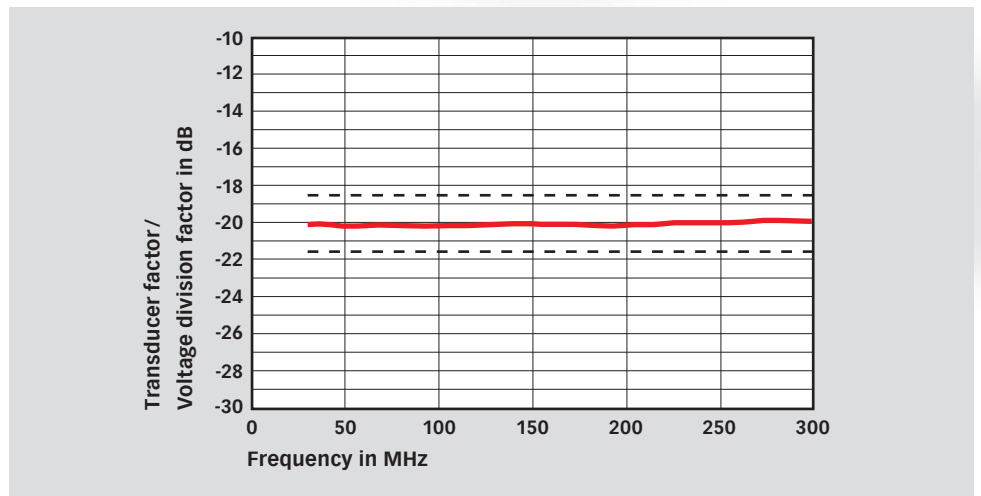


Typical common mode phase angle (EUT)

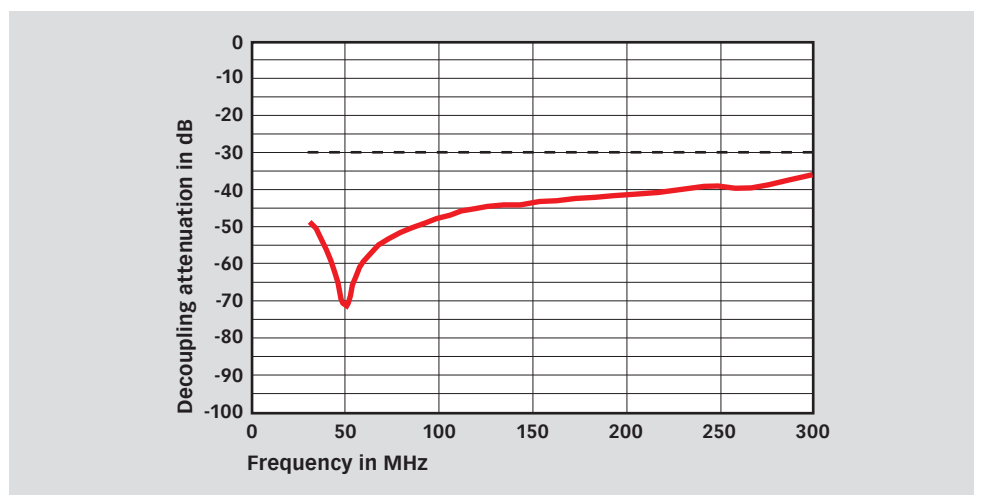


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Typical transducer factor/voltage division factor (RF Out port/EUT)

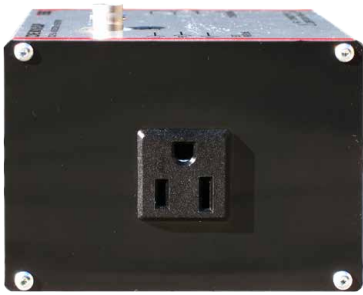


Typical decoupling of CM disturbance (RF Out port/AE)



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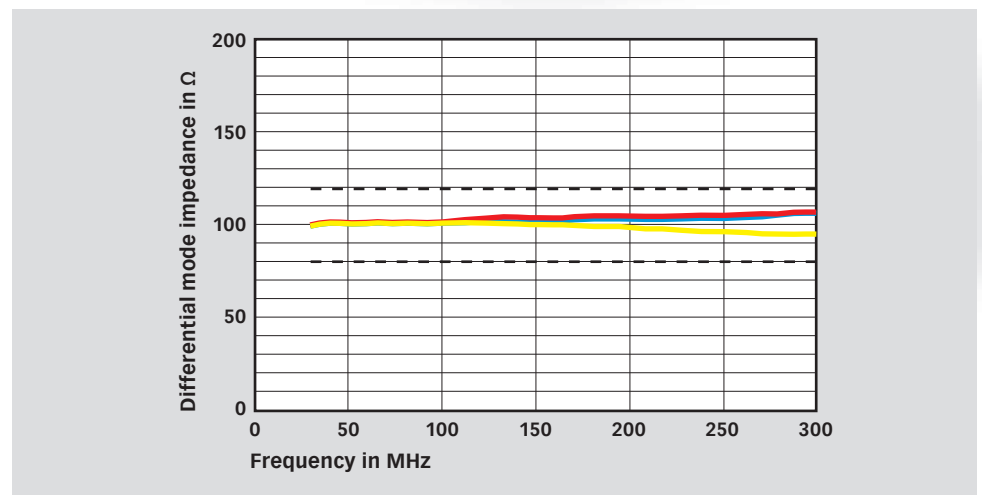


CDNE M310-USJP, view to the EUT port



CDNE M310-USJP, view to the AE port

Typical differential mode impedance (— L-N, — L-PE, — N-PE)



### Mechanical specifications

Size (W x H x D) in mm:	105 x 75 x 125
Weight:	approx. 700 g

### Model no. and options

Part number	Description
256758	CDNE M310-USJP CDNE M3, 10 A, 30 to 300 MHz, connector US/JP, L, N, PE, Coupling Decoupling Network for Emissions measurement, conform with CISPR 16-1-2 and CISPR 15
97-244230	CDNE-TC Traceable calibration (ISO17025), order only with the device

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