CDN T8
COUPLING / DECOUPLING NETWORK (CDN) FOR UNSHIELDED BALANCED PAIRS

- **For use with one, two, three, or four unscreened balanced pairs**
- **Designed for IEC/EN 61000-4-6 and CISPR 35 broadband impulsive noise tests**
- **1000BaseT and PoE application**
- **RJ11 and RJ45 sockets**

IEC/EN 61000-4-6 specifies the design and performance of a range of coupling/decoupling networks (CDNs). Each CDN is specific to the type of cable and the intended signal carried on the cable. 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).

The CDN T8 is designed for tests on up to four unshielded single balanced pairs. It consists of one basic network (CDN T800) with D-Sub-25- connectors and two adapter sets (ADR Txxx) for RJ11 and RJ45. An adapter set (ADR Txxx) has two similar connecting adapters for the EUT- and AE- port. The ADR T800 gives the connection to RJ45 sockets with pin-arrangements of EIA/TIA T568A respectively T568B. The adapter set ADR T811 offers the pin-arrangements for RJ11. The pin-arrangement is shown on the next page.

Technical specifications

Frequency range:	150 kHz to 80 MHz
Line parameters:	1 up to 4 pair(s)
Power rating (EUT- and AE Port)	
AC max. voltage (line to ground):	63 V
DC max. voltage (line to ground):	100 V
Current max :	400 mA (line), 800 mA (pair)
Test voltage:	200 VDC, 2 sec
Common mode impedance (EUT port)	
150 kHz to 26 MHz:	150 Ω ±20 Ω
26 MHz to 80 MHz:	150 Ω +60 Ω / -45 Ω
Coupling path (In/Out port/EUT)	
Connection:	BNC 50 Ω
RF voltage:	<15 V
Voltage division factor (RF input to EUT port)	
150 kHz to 80 MHz:	9.5 dB ±1 dB
Transmission bandwidth (wanted signal) EUT/AE B3 dB:*	> 100 MHz sin.
Crosstalk (EUT / AE) 1 MHz to 100 MHz:	≥61 dB to ≥21 dB
Longitudinal conversion loss (LCL), (EUT port)	
150 kHz:	>75 dB
1.5 MHz:	>75 dB
30 MHz:	>60 dB
Decoupling of CM disturbance (RF port / AE)	
150 kHz:	>35 dB
1.5 MHz:	>55 dB
30 MHz:	>55 dB
80 MHz:	>45 dB
*) all balanced parameters are in relation to a symmetrical load of 100 Ω	

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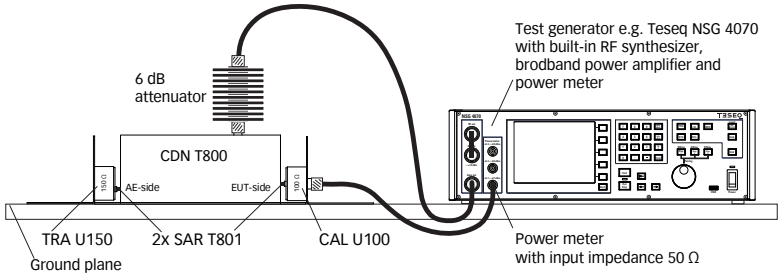
CDN T8 with ADR T800 adapter set

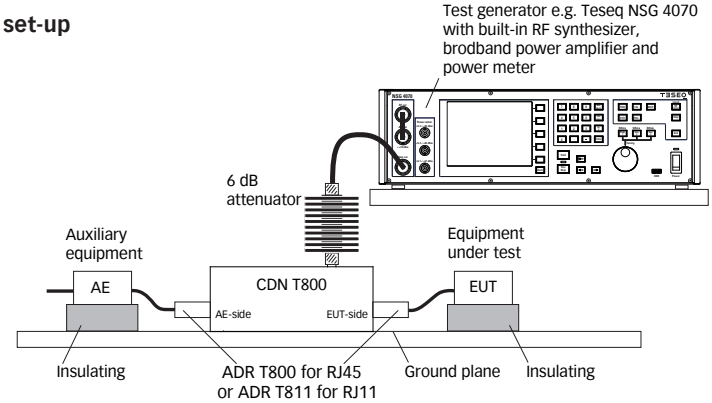
Application

		Pair 1/	Pair 2/	Pair 3/	Pair 4/
ADR T800 (Pin-arrangement for EIA/TIA T568B)		Pin 4,5	Pin 1,2	Pin 3,6	Pin 7,8
Token ring, ISDN basic rate access / S0	RJ45	X		X	
ISDN primary rate access (2Mbps)	RJ45	X	X		
10BaseT, 100BaseTX	RJ45		X	X	
100BaseT4, 100Base VG-AnyLan, 1000BaseT	RJ45	X	X	X	X
ATM, FDDI, TP-PMD	RJ45		X		X
IBM 3270	RJ45		X		
		Pair 1/	Pair 2/	Pair 3/	
ADR T811		Pin 3,4	Pin 2,5	Pin 1,6	
German Telecom, US standard	RJ11-6	X	X	X	

Test set-up calibration



EUT test set-up



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Mechanical specifications

Size (W x H x D) (basic network):	105 x 65 x 110 mm³
(basic network with adapters):	105 x 65 x 190 mm³
Weight:	approx. 550 g

Delivery information

Part number	Description
244156	CDN T8 80 MHz, with RJ 11 (ADR T811) and RJ 45 (ADR T800) adapter sets in suitcase, suitable for 1 Gbps and PoE application
244157	CDN T8S 80 MHz, with RJ 11 (ADR T811), RJ 45 (ADR T800) adapter sets and calibration adapter (CAL U100, TRA U150 and 2x SAR T801) in suitcase, suitable for 1 Gbps and PoE application
97-241924	CDN Txxx-TC Traceable calibration (ISO17025) for IEC 61000-4-6 requirements, order only with device CDN T2xx, T4, T4xx and T8 type
239901	CAL U100 Universal calibration unit (150 Ω /50 Ω adapter)
242430	SAR T801* Common mode adapter for Sub-D
239903	TRA U150 Universal termination resistor 150 Ω AE side
*) The test set-up required 2x SAR T801	

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82-244156 E04 July 2009