



MAIN FEATURES

- For use with one, two, three, or four unscreened balanced pairs
- Refers schematic circuit example in CISPR 22/32 Figure D.3/G.3
- Intended for connection to cable category 3 and 5
- 1000BaseT and PoE application
- Changeable pin-arrangements with RJ11 and RJ45

ISN T8 Series

ISN CISPR 22 and CISPR 32

Impedance stabilization networks (ISN, or with CISPR 16-1-2 called AAN: asymmetric artificial network) are defined for measuring of conducted common mode disturbances at information technology equipment (ITE) as required in CISPR 22 and CISPR 32. The ISN is placed between the equipment under test (EUT) and auxiliary equipment (AE) or load which are necessary for the operation of the EUT. The ISN establishes the common-mode termination impedance for the EUT's telecommunications port during measurement and emulates the unsymmetrical contribution (longitudinal conversion loss, LCL) of the connected line. Different ISNs are available in relation to the line category, line numbers and pin-arrangement.

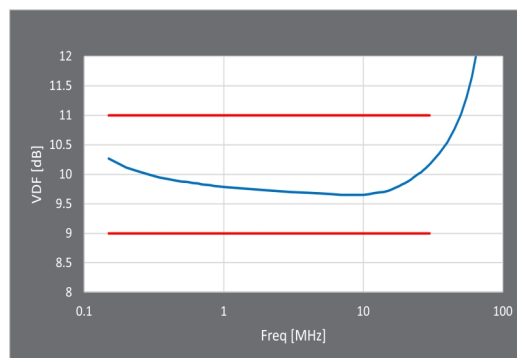
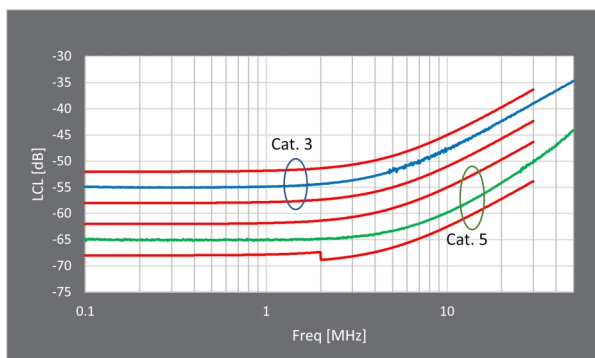
The ISN T8 is designed for measurements on up to four unscreened single balanced pairs and consists of one basic network (ISN T800) with D-sub 25 connectors and special adapter sets. A set of adapters consists of two pieces of LCL adapters to arrange the lines and realize longitudinal conversion loss (LCL)- requirements for the EUT-side in relation to the use cable category (cat. 3, cat. 5) and one piece of connection adapter arranges the lines for the AE-side. AMETEK CTS offers two different adapter sets – ADS T800 and ADS T8x0. ADS T800 gives the connection to RJ45 sockets with pin-arrangements of EIA / TIA T568A respectively T568B. The adapter set ADS T8x0 offers changeable pin-arrangements via 1 mm banana connectors for each pin combination of RJ11 / RJ45.

Verification results is provided with each unit. Traceable and accredited calibration according to ISO17025 are available upon request. The ISN can be ordered alone or with the CAS ISN which includes the necessary adapters for verification. Please refer to the CAS ISN datasheet.

Electrical Specifications

	ISN T8
Frequency Range	150 kHz to 30 MHz
Connector EUT Port	D-Sub 25 pins
Connector AE Port	
Line Parameters	1 up to 4 pair(s)
Application Configuration	different applications
AC max. voltage (L-GND)	63 V
DC max. voltage (L-GND)	100 V
Current Max	600 mA (line), 1200 mA (pair)
Test Voltage, 2 sec.	200 VDC
Common Mode Impedance (EUT Port)	150 kHz to 30 MHz: 150 Ω $\pm$ 20 Ω
Phase angle (EUT Port)	0° $\pm$ 20°

Typical Performance for LCL and Voltage Division Factor



RF to EUT/AE Specifications

	ISN T8
RF Port	BNC 50 Ω
RF Voltage	< 15 V
Voltage division factor (RF input to EUT port)	150 kHz to 30 MHz: 10 dB $\pm$ 1 dB
Transmission bandwidth EUT / AE:	>100 MHz sin. ¹
Crosstalk (EUT and AE port)	1 MHz to 100 MHz: $\geq$ 61 dB to $\geq$ 21 dB
LCL (EUT)	Cat. 3 150 kHz to 2 MHz: 55 dB $\pm$ 3 dB 2 MHz to 30 MHz: >39.3 dB $\pm$ 3 dB Cat. 5 150 kHz to 2 MHz: 65 $\pm$ 3 dB 2 MHz to 30 MHz: >>49.3 dB +4.5 dB/-3dB
CM decoupling (AE to EUT)	150 kHz: $\geq$ 35 dB 1.5 MHz: $\geq$ 55 dB 30 MHz: $\geq$ 55 dB
Footnote	¹ : All balanced parameters are in relation to a symmetrical load of 100 Ω .

General Specifications

	ISN T8
Net Weight	approx. 550 g

Application & adapter

Connector	Applications	Pair 1		Pair 2		Pair 3		Pair 4	
D-Sub 25/1 mm	Token ring, ISDN basic rate access / S0	4	5			3	6		
D-Sub 25/1 mm	ISDN primary rate access (2Mbps)	4	5	1	2				
D-Sub 25/1 mm	10BaseT, 100BaseTX			1	2	3	6		
D-Sub 25/1 mm	100BaseT4, 100Base VG-AnyLan, 1000BaseT	4	5	1	2	3	6	7	8
D-Sub 25/1 mm	ATM, FDDI, TP-PMD			1	2			7	8
D-Sub 25/1 mm	Dt. Telekom, UP0, AS400	4	5						
D-Sub 25/1 mm	IBM 3270			1	2				

Available Models

Product	Description	Item #
ISN T8	ISN basic network for up to eight balance lines with adapter sets ADS T800 and ADS T8X0, Cable Cat.3 and 5, in suitcase	248550

Accessories Information

Product	Description	Item #
ISN T2A-TC	Traceable calibration (ISO17025), order only with device ISN T2A type	97-248714
CDN-T2xxA-TC	Traceable calibration (ISO17025), order only with ISN T246A or ISN T2X0A	97-248713
CAS ISN	Calibration kit for ISN T8 and ISN T2A, measuring parameters: CM impedance, phase angle, voltage division factor and LCL, traceable calibration and certificate included	248580
CAS ISN-EXT-T2	Adapter parts for calibration of ISN T2A with RJ11 and RJ45, requires CAS ISN	248632
CAL U100B	Universal calibration unit (150 Ω / 50 Ω adapter)	247825
CAL U100M	Universal calibration unit (150 Ω / 50 Ω adapter)	257138
CAL U100X-TC	Traceable calibration (ISO17025), order only with CAL U100x device	97-247825
CAL U100XDAkkS	DAkkS accredited calibration (ISO17025), order only with CAL U100x device	98-247825
SAR T801	Common mode adapter for Sub-D	242430
A 50-N	Termination 50 Ω , N type, male, 1 Watt, 2.5 GHz	257521