ISN ST08
IMPEDANCE STABILIZATION NETWORK FOR SHIELDED BALANCED PAIRS

- **For use with screened RJ45 connections**
- **Up to 8 lines/ 4 pairs**
- **Meets the requirements of CISPR 22, Ed.5.2**
- **Design given in figure D.11 of CISPR 22, Ed.5.2**
- **Can be used as CDN for IEC 61000-4-6 immunity tests**

Impedance stabilization networks (ISN) are coupling/decoupling networks according to CISPR 22 (EN 55022) for measurement of conducted common mode disturbances of information technology equipment (ITE). The ISN is placed between the equipment under test (EUT) and the auxiliary equipment (AE) or load which is necessary for the operation of the EUT. The ISN establishes the common mode termination impedance seen by the telecommunication port during measurement. This type of ISN is designed for measurements on shielded telecommunication lines which up to four balanced pairs. All internal parts fulfill the requirements of cat.6 or better and provide optimal transfer performance. The used internal cable has a symmetrical impedance of 100 Ω. The pin- arrangement of the RJ45 sockets meets the requirements of EIA/TIA 568B. Available on request is EIA/TIA 568A.

ISN ST08 meets the requirements of figure D.11 CISPR 22, Ed.5.2, 2006 and EN 55022 Sept. 2006 (IEC/CISPR 22: 2005 modified). Unlike the ISN T types for unshielded balanced lines the ISN ST08 needs no additional adapters for LCL setting.

Technical specifications

Frequency range:	150 kHz to 230 MHz
Line parameters:	4 pairs, balanced, shielded, 100 Ω impedance
Power rating (EUT- and AE Port)	
AC max. voltage:	100 V
DC max. voltage:	150 V
Current max :	1000 mA
Test voltage:	200 VDC, 2 sec
Common mode impedance (EUT Port)	
150 kHz to 30 MHz:	150 Ω ±20 Ω
30 MHz to 230 MHz:	150 Ω +60 Ω /-45 Ω
Phase angle (EUT Port) 150 kHz to 30 MHz:	0° ±20°
Coupling path (In/Out-port/EUT)	
Connection:	BNC 50 Ω
RF voltage:	<20 V
Voltage division factor (RF input to EUT port)	
150 kHz to 30 MHz:	9.5 dB ±1 dB
30 MHz to 230 MHz:	9.5 dB +4 dB /-2 dB
Transmission bandwidth (wanted signal) EUT/AE B3 dB: *	> 250 MHz sin.
Decoupling of common mode disturbances (EUT / AE)	
150 kHz to 1.5 MHz:	≥60 dB
1.5 MHz to 30 MHz:	≥60 dB
*) all balanced parameters are in relation to a symmetrical load of 100 Ω	

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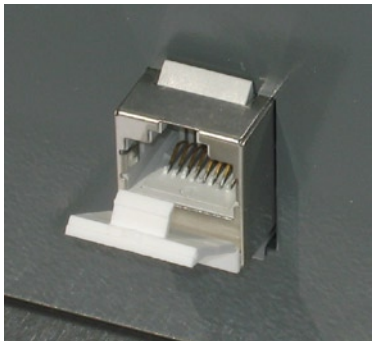

ISN ST08 view to RJ45 connection

Mechanical specifications

Size (W x H x D):	245 mm x 100 mm x 100 mm
Weight:	approx. 1.5 kg

Additional application

The described ISN ST08 is appropriate for immunity tests of IEC 61000-4-6. Optional available are the parts for the level setting (test set-up calibration) CAL U100 (150 Ω /50 Ω adapter) and SAR T800 (common mode adapter for RJ45).

Delivery information

Part number	Description
248650	ISN ST08 ISN for screened eight lines with RJ45 connector
97-248650	ISN Sxxx-TC Traceable calibration (ISO17025), order only with ISN ST08 or ISN S501

Options recommended for immunity test IEC 61000-4-6

Part number	Description
239901	CAL U100 Universal calibration unit (150 Ω /50 Ω adapter)
242439	SAR T800 Calibration adapter part for ISNs with RJ45 connector (common mode adapter)

Teseq GmbH
Landsberger Str. 255 · 12623 Berlin · Germany
T +49 30 56 59 88 35 F +49 30 56 59 88 34
desales@teseq.com **www.teseq.com**

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