Line Impedance Stabilization Networks / Artificial Mains Network
CISPR25 / ISO7637, Single line, 50A to 1600A

LISN (Artifical Mains Network) is a low-pass filter typically placed between an AC or DC power source and the EUT (Equipment Under Test) to create a known impedance as per complying standard for the measurement of conducted emission. It also isolates the unwanted RF signals from the power source with pre-filter included. It provides a Radio frequency (RF) noise measurement port.

In addition LISN is used to predict conducted emission for diagnostic, pre-compliance and compliance testing.

Scientific designs and manufactures models in compliance with CISPR 16-1-2/25, EN, FCC (ANSI C63.4) , ETS, VCCI and VDE, MIL461E/F standards and automotive for measurements in commonly used Standards.

These single line LISNs are used in automotive industries and test labs for measurement of interface voltages in vehicles. EVs, Ships, Aircrafts etc. The characteristic impedance is designed as per CISPR16/ 25 of these LISNs is (5µH + 1Ω) || 50Ω

These LISN also can be used in immunity test by bulk current injection and transients as per ISO7637-2 standards. To test, input capacitor 1 uF is switched off at the rear panel.

A Transient limiter is highly recommended to use with LISN at the front end of EMI Rx or Spectrum Analyzer to protect measuring instrument from transients.

Technical Specifications

Model	SMLIN50-1A	SMLIN100-1A	SMLIN200-1A	SMLIN400-1A	SMLIN800-1A	SMLIN1600-1A
Frequency Range	100 kHz – 150 MHz					
Maximum Load Current						
Continuous Current	50 A	100 A	200 A	400 A	800 A	1600 A
Peak Current (15 min)	70 A	150 A	300 A	600 A	1000 A	2000 A
Maximum Input Voltage						
DC	600 V					
AC	300 V @ 50/60 Hz 130 V @ 400 Hz, 250 V @ 400 Hz (Optional)				300 V @ 50/60 Hz	
AMN Impedance	(5 µH + 1 Ω) || 50 Ω ± 10%					
DC Resistance mains to EUT	< 10 mΩ	< 5 mΩ			< 1 mΩ	
Impedance @ 50Hz	< 10 mΩ	< 5 mΩ			< 2 mΩ	
Impedance @ 400Hz	< 20 mΩ	< 15 mΩ			NA	
Standard Reference	CISPR16-1-2/25, MIL461E/F, ISO 7637-2 Transients, BCI Testing					
RF Output Connector	N Type (F) Connector					
Input Capacitor	Switch selectable input Capacitor 1 uF , to switch off, as per ISO7637-2 Standard					
Mains Input & Output Terminals (EUT)	Wing Terminal, Optional : Supercon				Copper Bus with M12 mounting holes	

Standard Accessories:

- 50Ω, 2W Termination
- N to N Cable 2 m
- N to BNC Adapter
- Manufacturer's Calibration Certificate

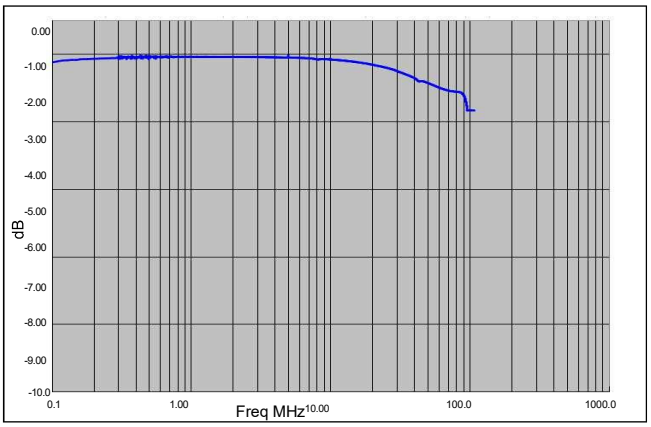
Optional Accessories:

- 50Ω, 50W Termination
- Transient Limiter : -10dB
- Transient Limiter : -20dB
- Calibration Report traceable to ISO 17025

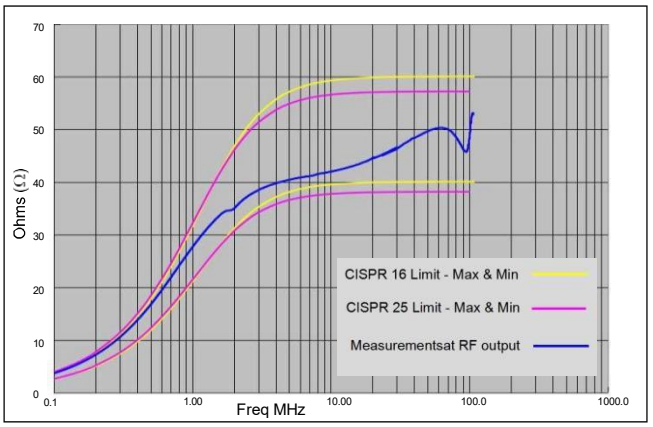
(Subject to Change)

Characteristic of LISN / AMN

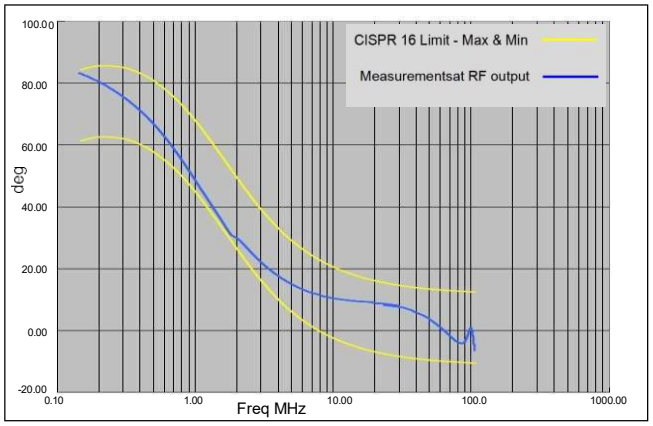
Voltage division factor (Attenuation)
EUT to RF Connector



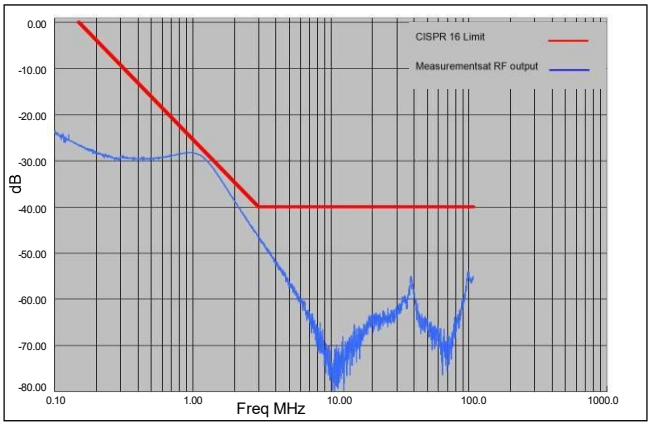
Impedance curve Terminal EUT RF
connector terminated



Phase curve Terminal EUT RF
connector terminated



Isolation curve Terminal EUT RF
connector terminated



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