HIGH POWER LISN

Line Impedance Stabilisation Networks

THE FULLY COMPLIANT ACCESSORY FOR CONDUCTED EMISSIONS TESTING

- **63A and 100A continuous ratings.**
- **Single and three phase.**
- **Transient limiter included.**
- **Internal pre-amplifier provides 0dB insertion loss.**

LISNs are used to measure the RF conducted back down the mains lead (and other cables) from the unit under test (UUT). Many standards refer to a LISN as an artificial mains V-network of 50ohm/50µH as specified by CISPR16. All standard Laplace LISNs are fully compliant with this requirement in all respects for the frequency band B, 150KHz to 30MHz.

These LISNs have the advantage of a built-in pre-amplifier to provide an overall insertion loss of 0dB, thus avoiding the need for additional low noise amplifiers when measuring low level interference sources.

Each LISN includes an effective voltage transient limiter to protect any sensitive analyser or receiver against high energy spikes. Note that these LISNs may be used on low voltage and/or DC connections provided that the current rating is not exceeded.

COMPLIANCE

These LISNs are fully compliant in all respects with CISPR16, band B

PROTECTION

A transient limiter is fitted as standard, protecting the sensitive input of spectrum analysers and receivers from the inevitable high power 'glitches' that are present on all mains supplies.

FLEXIBILITY

The internal 30dB pre-amplifier may be by-passed in situations where high level RF signals are present, making the need to amplify unnecessary.

LAPLACE INSTRUMENTS

SPECIFICATION

Through path: 2 wire plus earth or 4 wire plus earth (3 phase)
Power input connectors: 6mm shrouded single pole connectors. Mating halves supplied.
Power output connectors: 6mm shrouded single pole connectors. Mating halves supplied.
Maximum voltage: Line to line: 450 V rms,
Line to earth: 264 V rms
Maximum current: 63A and 100A DC or RMS. Overcurrent capability to 2x continuous for short term.
Line frequency range: DC to 400Hz

Impedance network:
Type: 50Ω+50µH to CISPR16, clause 11.3, Fig. 7b.
Isolation: RF low pass filter to CISPR16, clause 11.7.
Coupling capacitor: 0.1uF.
Input impedance variation: ±20%, 9KHz – 30MHz to CISPR specification.

Measurement circuit:
Connectors: BNC on front panel.
Direct output: 30dB insertion loss.
Limiter threshold: 150dBµV
Attenuator accuracy: 0.3dB
Frequency response: 0.3dB to 30MHz
2.0dB to 100MHz
Pre-amplifier:
Gain: 30dB ±0.5dB
Saturated output level: 120dBµV
Input/Output impedance: 50Ω
Connection: Input and output via front panel BNCs.
Source selection: Front panel push buttons with LED indication.

Remote control:
Rear panel connector for TTL input to select source. Remote panel with rotary switch included.

General
Operating environment: -5°C to +40°C, 20% to 80% RH
Storage environment -40°C to +65°C, 20% to 90% RH
Size: Case C: 483mm x 6u x 422mm
Case D: 483mm x 9u x 522mm
Power: 110v or 230v 50/60Hz for pre-amp and selector circuitry
Power connector: IEC socket.
Safety: A LISN is required by CISPR specifications to contain high value capacitors between the live circuits and earth. These capacitors cause high value ripple currents to flow to earth. For safe operation, the LISN must be securely bonded to earth before power is applied. In all other respects, these LISNs comply with IEC61010.
EMC compliance: Complies with EN55081-1 and EN55082-1

Model Numbers

LISNs							
Model number	Current Rating (Amps)	Phases	Insertion loss (dB)	Internal Transient limiter	Internal RF Amp	Size	Standard Ref.
LISN-63A1P	63	L,N	0, 30	✓	✓	C	CISPR16
LISN-100A1P	100	L,N	0, 30	✓	✓	C	CISPR16
LISN-63A3P	63	L1,L2,L3,N	0, 30	✓	✓	D	CISPR16
LISN-100A3P	100	L1,L2,L3,N	0, 30	✓	✓	D	CISPR16

CREDENCE TECHNOLOGIES, INC.
3601-A Caldwell Drive, Soquel, CA 95073
Tel: 831-459-7488 Fax: 831-427-3513
E-mail: info@credencetech.com
Web: www.credencetech.com