

LISN

LINE IMPEDANCE STABILISATION NETWORKS

A complete range for commercial, automotive and military applications.

- From single line up to 4 line.
- 16 Amps to 500 Amps.
- CISPR16, CISPR25, Def Stan, Mil Spec and specialist types supplied.
- All LISNs supplied fully compliant and calibrated.
- All commercial types include transient limiter and feature 0dB insertion loss.



When measuring EMC emissions conducted from the Equipment-under-test (EUT) most standards specify a LISN (or artificial mains V-network) to couple the RF from the cable and to provide a repeatable impedance at the measured frequencies. All Laplace LISNs fully comply with the relevant standards and feature a rigorous, individual calibration with hardcopy of results issued by a UK test laboratory.

Photograph shows a CISPR16, single phase, 16 amp LISN. (LISN16A1P).

Comprehensive The Laplace range of LISNs covers an exceptionally wide scope, covering all applications from commercial and industrial to military, aerospace and satellite

Compliance All Laplace LISNs are fully compliant with the appropriate standard and are shipped complete with calibration data.

Protection All standard CISPR16 LISNs are fitted with a transient limiter and include a separate pre-amplifier to give a 0dB insertion loss.

Convenience Commercial LISNs are fitted with standard mains outlets. Country-specific types can be specified at time of ordering. Single pole jack sockets are normally also included so that individual conductors can be connected.

LAPLACE INSTRUMENTS LTD



LISNs Line Impedance Stabilisation Networks

General

Laplace LISNs can be split into five groups:

- CISPR16, Commercial, up to 32 Amps.
- CISPR16, Commercial, 63 up to 200 Amps.*
- CISPR25, Automotive, up to 100 Amps.*
- Military requirements, UK and US standards.*
- Special types, eg for space satellite testing.**

Note: * See separate data sheet

** Contact Laplace for specific requirements

Common specifications

RF output: 50ohm BNC socket for each line.
 EUT line connections: Single pole shrouded sockets, 4mm up to 63A, 6mm for 100A and above. Additionally, for 16A type, domestic mains outlet fitted. Specify UK, US, Schuko (Euro) or As/NZ type when ordering.
 Termination impedance: Internal.
 Ground bond: Stud terminal on front panel.
 Artificial hand: All CISPR16 LISNs fitted (220pF || 510Ω)
 Operating temperature: -5°C to +40 °C
 Transient protection level: 150dBuV
 Earth leakage current: 80mA

Overview of standard range

Model	Standard	Current rating	Phases	Transient limiter fitted	Size	Frequency range
LISN16A1P	CISPR16	16	L, N	yes	A	150KHz—30MHz
LISN32A1P	CISPR16	32	L, N	yes	B	150KHz—30MHz
LISN63A1P	CISPR16	63	L, N	yes	B	150KHz—30MHz
LISN100A1P	CISPR16	100	L, N	yes	B	150KHz—30MHz
LISN32A3P	CISPR16	32	L1,L2,L3,N	yes	C	150KHz—30MHz
LISN63A3P	CISPR16	63	L1,L2,L3,N	yes	C	150KHz—30MHz
LISN100A3P	CISPR16	100	L1,L2,L3,N	yes	C	150KHz—30MHz
LISN200A1P	CISPR16	200	L1, N	yes	D	150KHz—30MHz
LISN200A3P	CISPR16	200	L1,L2,L3,N	yes	D	150KHz—30MHz
LISNC25/100A	CISPR25	100A	1	no	E	100KHz—100MHz
LISNC25/500A	CISPR25	500A	1	no	F	100KHz—100MHz
LISN59-41/100A	DefStan59-41	100A	1	no	E	20Hz—400MHz
LISN461E/100A	Mil 461E	100A	1	no	E	

Specification for CISPR16 LISNs - up to 32 amps.

	LISN16A1P	LISN32A1P	LISN32A3P
Cont. amps (per ph)	16 amps	32 amps	32 amps
Input connection	2m flying lead	4mm sockets	4mm sockets
Output connectors	Mains socket + 4mm sockets	4mm sockets	4mm sockets
Power frequency	DC to 400Hz		
RF out selection	Separate BNCs	Selector switch	
Max voltage Ref. to ground	275v rms	275v rms	275v rms
Insertion loss, Pre-amp bypassed	30dB	30dB	30dB
Network	50Ω 50μH		
Impedance	To CISPR16, figure 7b, ±20%		
Construction	Alloy case with base flanges	Modular instrument case	
Pre-amp gain	30dB, ±1.5dB	30dB, ±1.5dB	
Pre-amp location	External	Internal	
Frequency range	9KHz—30MHz		
Noise figure	Better than 5dB		
Max signal level.	+80dBuV		
Saturated signal level	+120dBuV		
Power	12v dc from included mains power supply.		

Mechanical data (Sizes in mm)

Case	A	B	C	D	E	F
Width	180	483	483		180	180
Length	300	422	522		500	500
Height	80	6u	9u		90	120
Weight	3.5kg					

Available from

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