



## Multi-line LISNs

LI-115, LI-210, LI-215

### Features

**Wide frequency range:** 10 kHz - 30 MHz

**Coils matched to application**

**Air core coils**

**Individually calibrated**



Model LI-115

### Description

The Line Impedance Stabilization Networks (LISNs) models LI-115, LI-210 and LI-215 are utilized during single phase conducted emissions testing per FCC, CISPR and European norms. These LISNs meet the impedance requirements called out in these specifications.

Single phase power applications requires two LISNs. These models offer the convenience of having two LISNs in a single enclosure. The power source may be either AC or DC with current ratings up to 15 A (please see specifications on the back). The line to be tested can be selected using the switch located on the front panel. The aluminum enclosure minimizes radio frequency interference which can compromise test results.

All LISNs manufactured by Com-Power use air-core coils to prevent saturation and permeability variation. Therefore, they provide stable performance over time. The bottom mounting plate of the LISN is conductive, so that it can be electrically bonded to the ground plane during the test.

An optional Transient limiter (model HZ-560) is available from Com-Power to protect the Spectrum Analyzer input during the test.

### Application

The LISN provides input power line impedance to the equipment under test (EUT) that is constant and independent of the line impedance of the external power source during conducted emissions testing.

In addition to providing constant power line impedance, the LISN functions as a low pass filter for the power to equipment under test. It prevents any radio frequency noise on the external power line from reaching the equipment under test (EUT).

Other functions of the LISN include; providing 50 Ohm connection to the spectrum analyzer to measure EMI voltage generated by the EUT and blocking measurement of EMI voltage emanated by other equipment connected to the external power source.

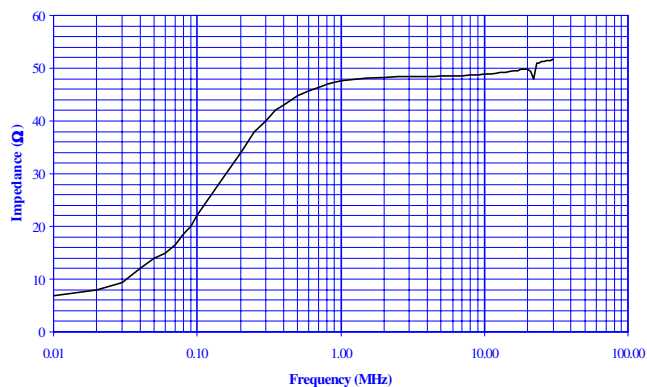
The insertion loss of the LISN may be significant at low frequencies. Therefore, at frequencies below 400 kHz, the insertion loss correction factor must be added back to the spectrum analyzer reading. The LISNs frequency vs insertion loss characteristic table for each line is shipped with each unit for this purpose. The impedance data shipped with each LISN is not used in measurement calculations. However, periodic calibration of the LISN impedance is necessary to ensure accurate conducted emissions measurements.



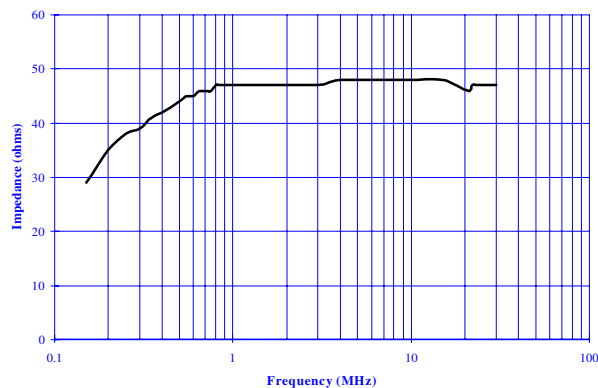
## Specifications

Model	LI-115	LI-210	LI-215
Frequency range	150 kHz - 30 MHz	10 kHz - 30 MHz	10 kHz - 30 MHz
Lines + Ground	2	2	2
Max. Current	15 Amps	10 Amps	15 Amps
Max. Voltage	125 V AC line to ground	125 V AC line to ground	125 V AC line to ground
Inductance	50 mH	50 $\mu$ H / 250 $\mu$ H	50 $\mu$ H / 250 $\mu$ H
Inductor type	Air core	Air core	Air core
Output Impedance	50 Ohms	50 Ohms	50 Ohms
RF Output Connector	N female	N female	N female
Power source frequency	DC - 60 Hz	DC - 60 Hz	DC - 60 Hz
Power in connector	IEC Power Inlet	IEC Power Inlet	IEC Power Inlet
Power out connector	NEMA	NEMA	NEMA
Weight	14 lbs / 6.8 kg	7 lbs / 3.1 kg	20 lbs / 9 kg
Size (L x W x H)	14 x 7 x 7 inches 35.5 x 17.8 x 17.8 cm	15 x 10 x 10 inches 38 x 25.4 x 25.4 cm	14 x 7 x 7 inches 35.5 x 17.8 x 17.8 cm

## Impedance characteristics



LI-210 or LI-215



LI-115

Specification subject to change without notice.  
All values are typical unless specified.