



Multi-line LISNs

LIN-115, LI-210, LI-215

Features

Wide frequency range: 10 kHz - 30 MHz

Coils matched to application

Air core coils

Individually calibrated



Model LIN-115

Description

The Line Impedance Stabilization Networks (LISNs) models LIN-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.

The LIN-115 has built in transient limiter. An optional Transient limiter (model LI-930) is available for models LI-210 and LI-215 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.