

## Features

- Frequency Range: 1 MHz to 1 GHz
- Designed for Tempest Testing
- Dual-Conductor Network with Coaxial N-type Connectors at EUT Port
- Coaxial N-type to Universal Power Receptacle Adapter Available
- 10 Amps Current Handling Capability
- Three-Year Warranty

## Description

The LIP-1000 Line Impedance Stabilization Network (LISN) is designed specifically for Tempest testing. It provides the necessary measurement platform for performing power line conducted emissions compliance testing.

The LIP-1000 performs each of the following functions during the measurement:

- provides a defined, stable impedance across the measurement frequency range;
- isolates the EUT and measurement circuit from the power source, thereby minimizing its influence on the measurements;
- provides isolation between the power lines to minimize cross-coupling, and;
- couples the disturbance voltages to the coaxial measurement port for connection to the measuring instrument.

This LISN uses air-core inductors to prevent saturation and permeability variation. Its mounting plate is left unpainted in order to facilitate connection to earth ground in its installation, which is essential due to high leakage current.

The LIP-1000 is a dual-conductor network capable of handling currents up to 10 amperes per line. The EUT power port is fitted with coaxial N-type connectors. The LISN is supplied with an adapter that plugs into the coaxial EUT port connectors and provides a universal, multi-configuration receptacle, which accommodates almost any EUT plug without the need for additional adapters. The power input port of the LISN is fitted with a standard IEC C13 receptacle.

As shown in the diagrams on the right, the LIP-1000 can be utilized with any type of power system, including DC, single-phase, split-phase and three-phase systems (using two LIP-1000 LISNs).

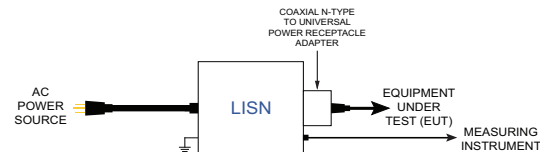


## Calibration

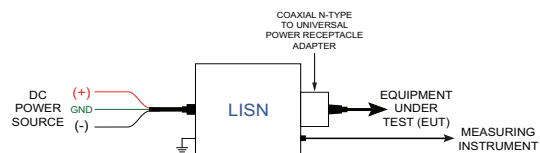
All Com-Power LISNs are individually calibrated in compliance with their relevant requirements. Impedance, Insertion Loss, Isolation (mains port to EUT port, as well as line to line) data is supplied with each LIP-1000 unit, along with the certificate of calibration. Recognized ISO 17025 accredited calibration is also available upon request.

## Typical Connection Diagrams

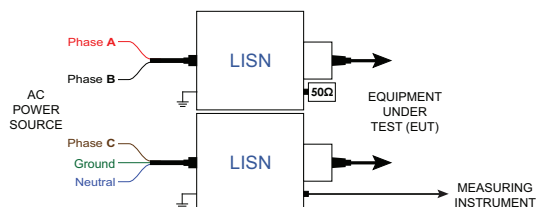
### Single-phase or split-phase power system connections:



### DC power system connections:



### 3-phase power system connections using (2) LIP-1000 LISNs:

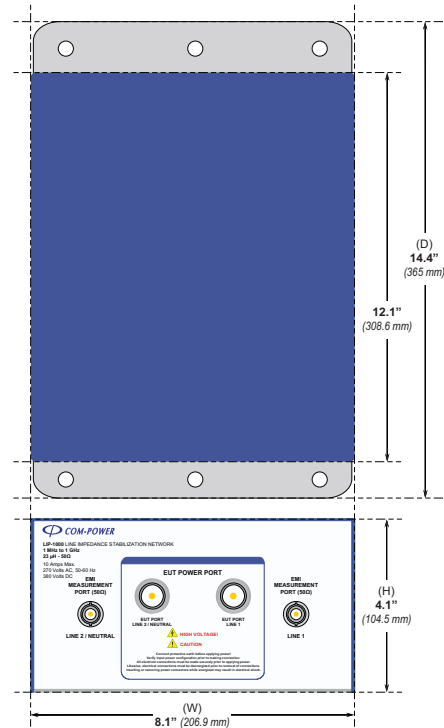


### Specifications

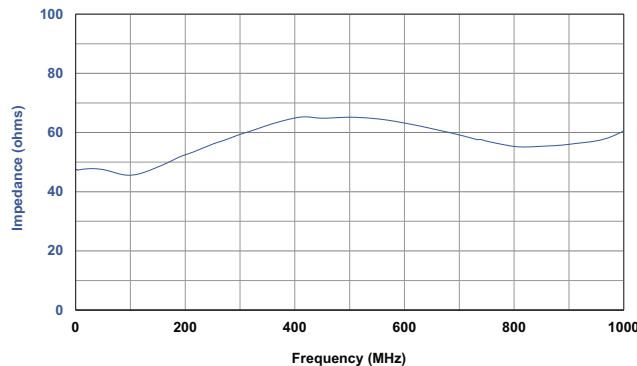
All values are typical, unless specified.  
All specifications are subject to change without notice.

GENERAL	
Product Description	TEMPEST Line Impedance Stabilization Network (LISN)
Application	Power Line Conducted Emissions Tests
Standard(s)	Tempest
Type	50Ω / 23 μH
Frequency Range	1 MHz to 1 GHz
Impedance	50Ω (+30Ω/-20Ω)
Insertion Loss	< 2.5 dB
Isolation (Mains Port to EUT Port)	>40 dB
Isolation (Between Lines)	>40 dB
ELECTRICAL	
Max. Voltage Rating (Line to Ground)	270 Volts <sub>AC(rms)</sub> (50-60 Hz), 380 Volts <sub>DC</sub>
Max. Current Rating	10 Amperes (continuous)
INPUT/OUTPUT CONNECTORS	
Mains Power Input Port	IEC C13 Receptacle
EUT Power Output Ports	Coaxial N-type Connectors
RF Measurement Ports	BNC (female)
MECHANICAL	
Dimensions (H)x(W)x(D)	4.1" x 8.1" x 14.4" (104.5 x 206.9 x 365 mm)
Weight	5.5 lbs. (2.5 kg)
ENVIRONMENTAL	
Operating Temperature	40°F to 104°F (5°C to 40°C)

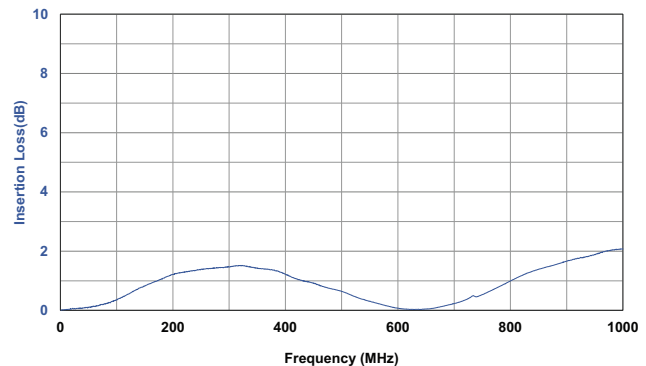
### Product Dimensions



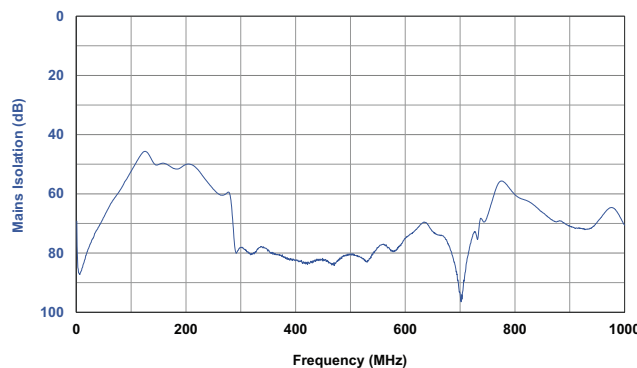
### Typical Impedance Data



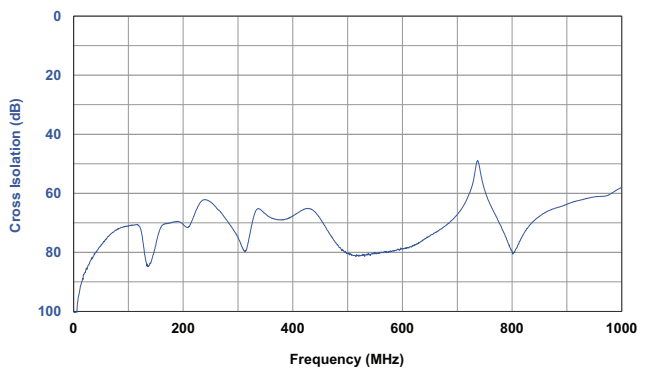
### Typical Insertion Loss Data



### Typical Mains Isolation (Mains Port to EUT Port)



### Typical Cross Isolation Data (Between Lines)



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