

Features

- Frequency Range: 9 kHz to 30 MHz
- Fully Compliant with CISPR 16-1-2/ANSI C63.4
- Dual-Conductor Network with Universal Power Receptacle to accept any EUT Plug
- 20 Amps Current Handling Capability
- Three-Year Warranty

Description

The LI-220C Line Impedance Stabilization Network (LISN) is in full compliance with both CISPR 16-1-2 and ANSI C63.4. It provides the necessary measurement platform for performing power line conducted emissions compliance testing as required by most worldwide standards for commercial products. The LI-220C performs each of the following functions during the measurement:

- provides a defined, stable impedance across the measurement frequency range; and,
- isolates the EUT and measurement circuit from the power source, thereby minimizing its influence on the measurements; 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. The mounting plate of the LI-220C is left unpainted in order to facilitate connection to earth ground in its installation, which is essential due to high leakage current.

Versatility

The LI-220C is a dual-conductor network capable of handling currents up to 20 Amps_(AC) per line. The EUT power port is fitted with a universal, multi-configuration receptacle, which accommodates almost any EUT plug without the need for adapters. The power input port is fitted with a standard IEC C20 receptacle.

As shown in the diagrams on the right, the LI-220C can be installed into any type of power system, including DC, single-phase, dual-phase and even three-phase systems.



Transient Protection

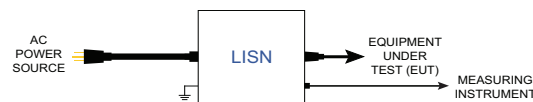
Com-Power Transient Limiters are a recommended accessory in order to protect the RF input of your measuring instrument from potentially damaging, instantaneous voltage transients. The transient limiter also reduces the possibility of overload by incorporating two 5 dB attenuation/impedance matching pads, in addition to its low-pass and high-pass filter sections which further attenuate any out-of-band emissions.

Calibration

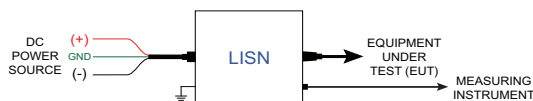
All Com-Power LISNs are individually calibrated in compliance with the relevant requirements of CISPR 16-1-2 and ANSI C63.4. Impedance, Phase, Isolation, and Insertion Loss data is supplied with each unit, along with the certificate of calibration. Recognized ISO 17025 accredited calibration is also available upon request.

Typical Connection Diagrams

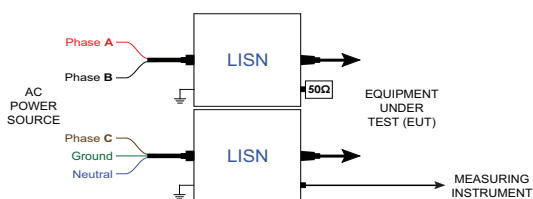
Single-phase power system connections:



DC power system connections:



Three-phase power system connections with (2) LI-220C LISNs:



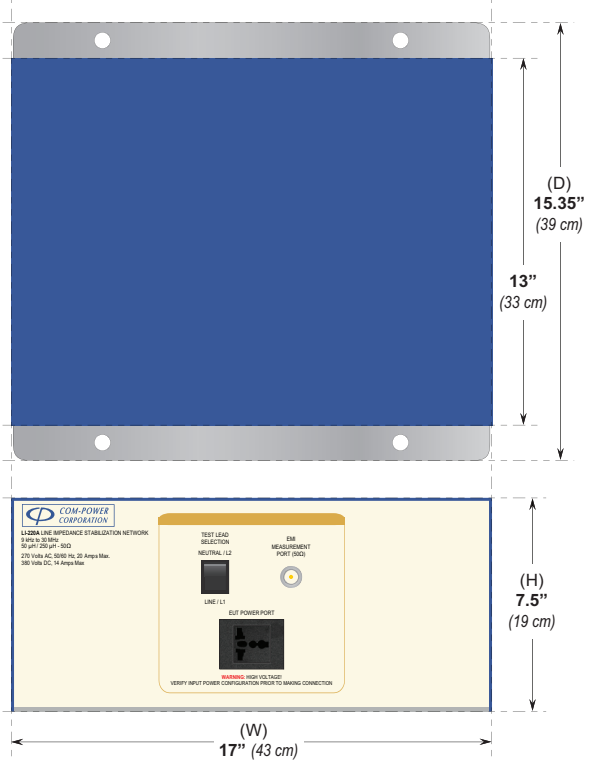
Rev. D02.17

Specifications

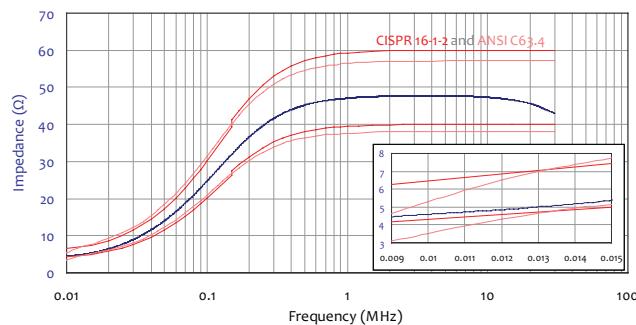
All values are typical, unless specified.
All specifications are subject to change without notice.

GENERAL	
Product Description	Line Impedance Stabilization Network (LISN)
Application	Power Line Conducted Emissions Tests
Standards	CISPR 16-1-2, ANSI C63.4
Type	50Ω / 50 μH + 5Ω (CISPR), 50 μH & 250 μH (ANSI)
Frequency Range	9 kHz to 30 MHz
Insertion Loss (Voltage Division Factor)	9 kHz - 150 kHz <6.5 dB to <0.5 dB (increasing linearly with log of freq)
	150 kHz - 30 MHz <0.5 dB
Isolation	9 kHz - 150 kHz >10 dB to >60 dB (increasing linearly with log of freq)
	150 kHz - 30 MHz >60 dB
ELECTRICAL	
Voltage Rating	270 Volts _{AC (rms)} , 380 Volts _{DC} (Line to Ground)
Current Rating	20 Amps _{AC (rms)} , 14 Amps _{DC}
INPUT/OUTPUT CONNECTORS	
EUT Power Input Port	IEC C20 Receptacle
EUT Power Output Port	Universal Multi-Configuration AC Receptacle
RF Measurement Port	50Ω - N-Type (female)
MECHANICAL	
Dimensions (H)x(W)x(D)	7.5" x 17" x 15.35" (19 x 43 x 39 cm)
Weight	20.5 lbs (9.3 kg)
ENVIRONMENTAL	
Operating Temperature	40°F to 104°F (5°C to 40°C)

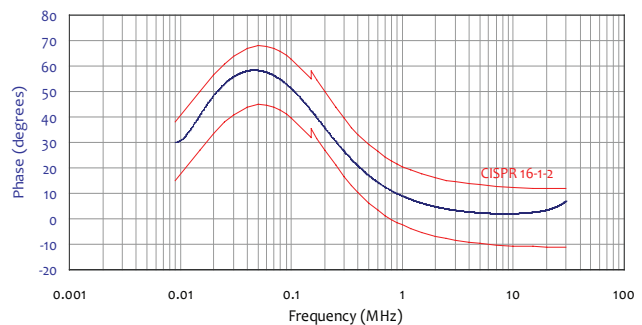
Product Dimensions



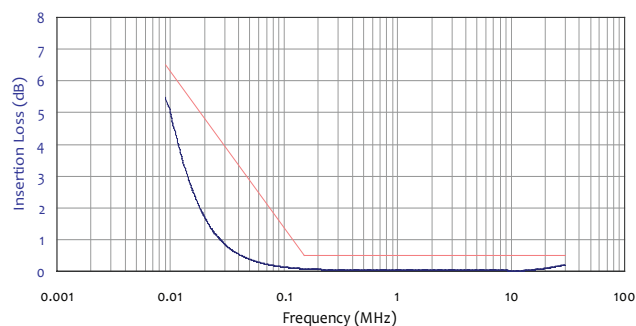
Typical Impedance Data



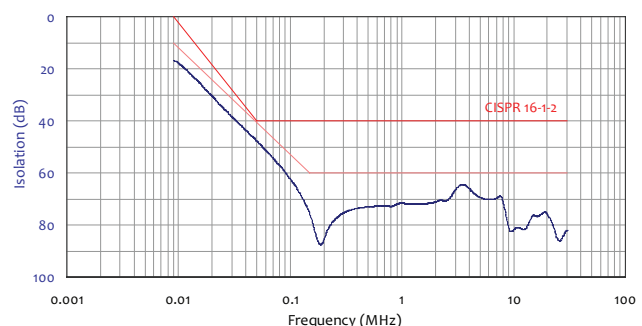
Typical Phase Data



Typical Insertion Loss



Typical Isolation Data



Rev. D2.17