COM-POWER

Three-Phase Line Impedance Stabilization Network

LI-3P-132 V2.0

Features

- **Frequency Range: 150 kHz to 30 MHz**
- **Current Rating: 32 Amperes**
- **Fully Compliant with CISPR 16-1-2(CE) and ANSI C63.4(FCC)**
- **Remote Switching of Line Under Test**
- **Four-conductor, 50Ω, 50 µH Networks appropriate for 3Ø Delta and Wye Power Configurations**
- **Three-Year Standard Warranty**

Description

*The **LI-3P-132** is a four-conductor, 50Ω/ 50 µH, Line Impedance Stabilization Network (LISN). Its maximum current handling capability is 16 amperes. The **LI-3P-132** provides a measurement platform for performing power line conducted emission compliance testing in accordance with international commercial EMI/ EMC requirements, such as FCC (U.S.), CE (Europe), AS/NZS (Australia/New Zealand), VCCI (Japan), ISED Canada, etc.*

The LISN performs each of the following functions during the measurement.

- *Provides a defined, stable power line impedance across its frequency range for the Equipment Under Test (EUT);*
- *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, which connects to the measuring instrument.*

*The **LI-3P-132** uses air-core inductors to prevent saturation and permeability variation. The mounting plate is left unpainted in order to facilitate connection to earth ground in its installation, which is essential due to high leakage currents. The side panels of the LISN are also louvered for cooling purposes.*

The following items are included with LISN LI-3P-132:

- *(5) Socket Plug Connectors for Power Input Cable*
- *(5) Plug Pin Input Connectors for EUT Power Cable*
- ***RLI V2.0** Remote LISN Interface Unit*
- *Fiber Optic Cable (10 meters)*
- *(2) AC Power Adapters [6 VDC, 500 mA, unregulated]*

Optional Accessories:

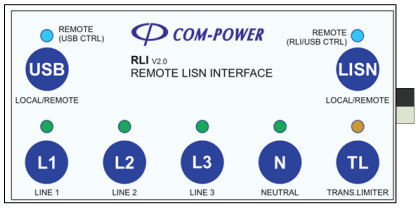
- ***LIA-COAX-E** Coaxial Adapter with Plug Pins for LISN EUT Port*
- ***LIA-COAX-M** Coaxial Adapter with Plug Sockets for LISN Mains Port*

Remote or Local Operation

*Remote switching of the line under test (L1, L2, L3, N) is performed using the **RLI V2.0** Remote LISN Interface, which controls the LISN via fiber optic connection.*

In addition to the remote method, the line under test can also be selected using the respective membrane buttons for the four lines located on the front panel of the LISN.

Using either switching method, the lines which are not selected are internally terminated into 50Ω, while the selected line is terminated by the 50Ω input impedance of the measuring instrument.



Transient Protection

*The built-in **Transient Limiter** protects the RF input of your measuring instrument from potentially damaging, instantaneous voltage transients. The transient limiter also reduces the possibility of overload by incorporating low-pass and high-pass filters to reduce out-of-band emissions.*

Calibration

*The **LI-3P-116** is 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.*

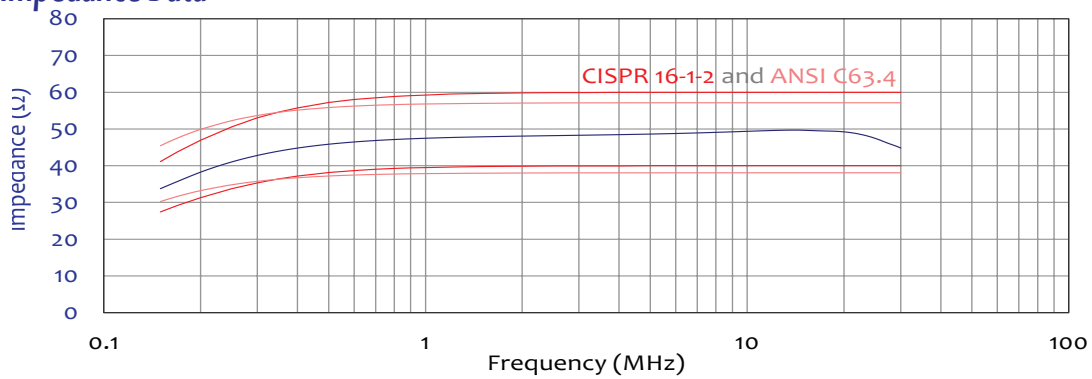
Specifications

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

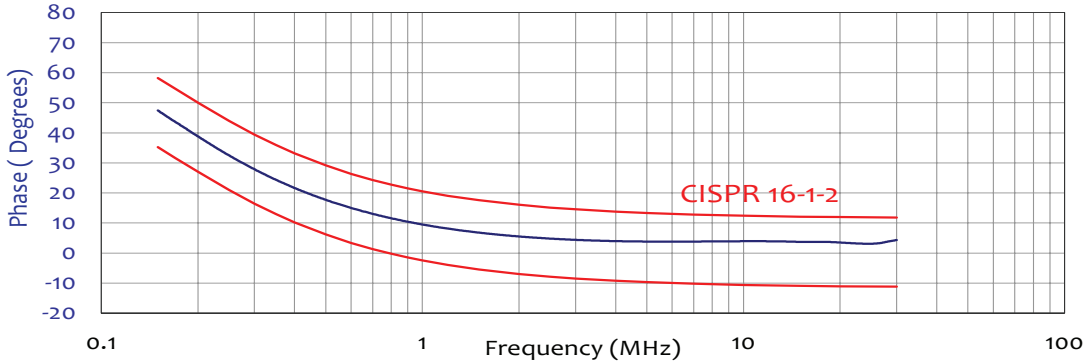
GENERAL	
Product Description	**Three-Phase Line Impedance Stabilization Network** *[LISN]*
Model	**LI-3P-132 V2.0**
Application	**Power Line Conducted Emissions** *[Disturbance Voltages]* **Tests**
Standards	**CISPR 16-1-2** *[CE]*, **ANSI C63.4** *[FCC]*
Type	**50Ω, 50 µH, Four-Conductor Network**
Frequency Range	**150 kHz to 30 MHz**
Insertion Loss (Voltage Division Factor)	**<11 dB**
Isolation	**>40 dB**
INPUT POWER RATINGS FOR EQUIPMENT UNDER TEST (EUT)	
Current (maximum continuous, per line)	**32 Amperes**
AC Voltage (maximum)	**865 $Volts_{rms}$** [line to line], **500 $Volts_{rms}$** [line to ground]
DC Voltage (maximum)	**600 Volts DC**
ELECTRICAL	
Remote Interface Power Inputs	**6 Volts DC** *[unregulated]*, **500 mA** *[LISN and RLI V2.0 Remote LISN Interface]*
INPUT/OUTPUT CONNECTORS	
Power Input Port Plug (affixed to LISN chassis)	**50A Receptacle Pins** **CONN-RP50GR** *[Red]*, **CONN-RP50GY** *[Yellow]*, **CONN-RP50GBL** *[Blue]*, **CONN-RP50GB** *[Black]*, **CONN-RP50GG** *[Green]*
Power Input Sockets (for power input cable)	**50A Plug Sockets** **CONN-PS50GR** *[Red]*, **CONN-PS50GY** *[Yellow]*, **CONN-PS50GBL** *[Blue]*, **CONN-PS50GB** *[Black]*, **CONN-PS50GG** *[Green]*
Power Output Port Sockets (affixed to LISN chassis)	**50A Receptacle Sockets** **CONN-RS50GR** *[Red]*, **CONN-RS50GY** *[Yellow]*, **CONN-RS50GBL** *[Blue]*, **CONN-RS50GB** *[Black]*, **CONN-RS50GG** *[Green]*
Power Output Port Plug (for EUT power cable)	**50A Plug Pins** **CONN-PP50GR** *[Red]*, **CONN-PP50GY** *[Yellow]*, **CONN-PP50GBL** *[Blue]*, **CONN-PP50GB** *[Black]*, **CONN-PP50GG** *[Green]*
RF Measurement Port	**50Ω - N-Type** [female]
Fiber Optic Ports	**Avago Duplex Latching POF Jack** *[LISN and RLI V2.0 Remote LISN Interface]*
Remote Interface Power Input Ports	**5.5/2.1 mm Power Jack** *[LISN and RLI V2.0 Remote LISN Interface]*
Optional Accessories	**LIA-COAX-E** *Coaxial Adapter with Plug Pins for LISN EUT Port* **LIA-COAX-M** *Coaxial Adapter with Plug Sockets for LISN Mains Port*
ENVIRONMENTAL	
Cooling	**Louvered Side Panels, Forced Air by (2) user-controlled, internal fans**
MECHANICAL	
LISN Dimensions (H) x (W) x (D)	**14.25" x 14.60" x 16.88"** *[362 x 371 x 429 mm]*
LISN Weight	**41 lbs.** *[18.6 kg]*
Shipping Dimensions (H) x (W) x (D)	**23.86" x 21.30" x 26.86"** *[606 x 541 x 682 mm]*
Shipping Weight	**95 lbs.** *[43.10 kg]*

Performance Data

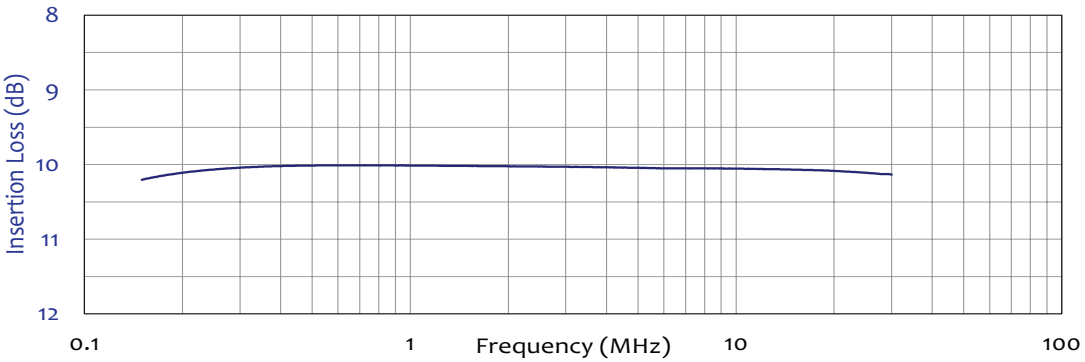
Typical Impedance Data



Typical Phase Data



Typical Insertion Loss



Typical Isolation Data