

Features

- Frequency Range: 9 kHz to 30 MHz
- Current Rating: 16 Amperes
- Fully Compliant with CISPR 16-1-2 (CE) and ANSI C63.4 (FCC)
- Remote Switching of Line Under Test
- Four-conductor, 50Ω , $50/250 \mu\text{H}$ + 5Ω Network for $3\varnothing$ Delta & Wye Power Configurations
- Three-Year Standard Warranty

Description

The **LI-3P-216** consists of a four-conductor, 50Ω , $50/250 \mu\text{H}$ + 5Ω Line Impedance Stabilization Network (LISN), also known as Artificial Mains V-Network (V-AMN). The **LI-3P-216** provides a reliable measurement platform for performing power line conducted emission compliance testing in accordance with the 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-216** 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 LISN has louvered side panels for cooling purposes.

The Following items are included with LISN **LI-3P-216**:

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

Optional Accessories:

- LI-3P-XXXX-ADA [Coaxial Adapter] with LI-3P-ADA_PP25A [Plug Pin]
- LI-3P-XXXX-ADA [Coaxial Adapter] with LI-3P-ADA_PS25A [Plug Socket]

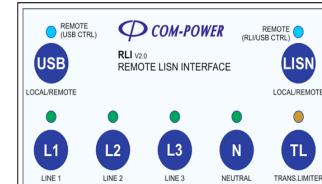


Remote or Local Operation

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 via 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 is used for protection of 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. The transient limiter can also be bypassed via the front panel or remotely using the RLI.

Calibration

The **LI-3P-216** 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	Line Impedance Stabilization Network [LISN]
Application	Power Line Conducted Emissions [Disturbance Voltages] Tests
Standards	CISPR 16-1-2 [CE], ANSI C63.4 [FCC]
LISN Type	50Ω, 50/250 μH +5Ω Four-Conductor Network
Frequency Range	9 kHz to 30 MHz
Insertion Loss - 9 kHz to 150 kHz	<17 to <11 dB (decreasing linearly with the logarithm of frequency)
Insertion Loss - 150 kHz to 30 MHz	<11 dB
Isolation - 9 kHz to 50 kHz	>0 to >40 dB (increasing linearly with the logarithm of frequency)
Isolation - 50 kHz to 30 MHz	>40 dB
INPUT POWER RATINGS FOR EQUIPMENT UNDER TEST (EUT)	
Current (maximum continuous, per line)	16 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 Front Panel and RLI V2.0 Remote LISN Interface]
INPUT/OUTPUT CONNECTORS	
Power Input Port Plug (affixed to LISN chassis)	25A Receptacle Pins CONN-RP25GR [Red], CONN-RP25GY [Yellow], CONN-RP25GBL [Blue], CONN-RP25GB [Black], CONN-RP25GG [Green]
Power Input Socket (for power input cable)	25A Plug Sockets CONN-PS25GR [Red], CONN-PS25GY [Yellow], CONN-PS25GBL [Blue], CONN-PS25GB [Black], CONN-PS25GG [Green]
Power Output Port Socket (affixed to LISN chassis)	25A Receptacle Sockets CONN-RS25GR [Red], CONN-RS25GY [Yellow], CONN-RS25GBL [Blue], CONN-RS25GB [Black], CONN-RS25GG [Green]
Power Output Port Plug (for EUT power cable)	25A Plug Pins CONN-PP25GR [Red], CONN-PP25GY [Yellow], CONN-PP25GBL [Blue], CONN-PP25GB [Black], CONN-PP25GG [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 front panel and RLI V2.0 Remote LISN Interface]
Optional Accessories	LI-3P-XXXX-ADA [Coaxial Adapter] with LI-3P-ADA_PP25A [Plug Pin] LI-3P-XXXX-ADA [Coaxial Adapter] with LI-3P-ADA_PS25A [Plug Socket]
ENVIRONMENTAL	
Operating Temperature	40°F to 104°F (5°C to 40°C)
Cooling	<ul style="list-style-type: none"> Louvered Side Panels (no forced air) <p>(4) 4" square air outlets located on the top cover (each opening protected by metallic mesh)</p>

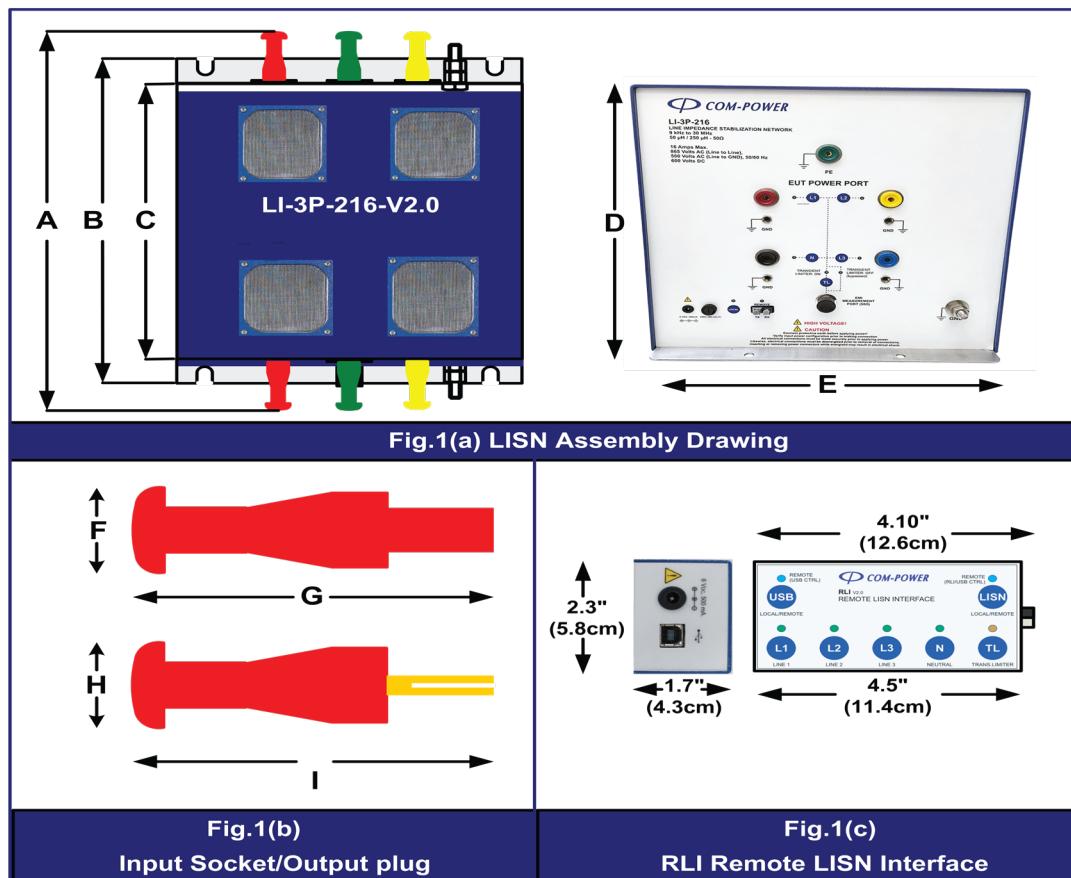
Product Dimensions

All values are typical, unless specified.
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DIMENSIONS & WEIGHT

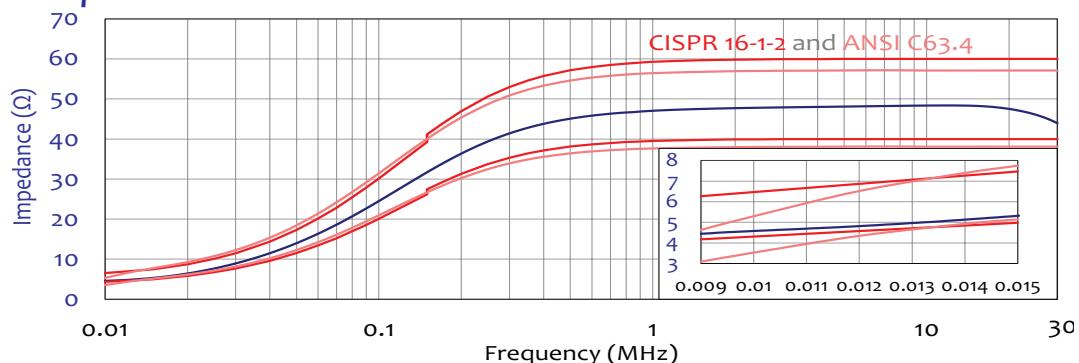
Figure 1(a)- Dimension A	22.77" (57.86 cm)
Figure 1(a)- Dimension B	20.92" (53.16 cm)
Figure 1(a)- Dimension C	18.88" (47.96cm)
Figure 1(a)- Dimension D	14.25" (36.2 cm)
Figure 1(a)- Dimension E	14.58" (37.05 cm)
Figure 1(b)- Dimension F	0.97" (2.47 cm)
Figure 1(b)- Dimension G	2.84" (7.23cm)
Figure 1(b)- Dimension H	0.97" (2.47cm)
Figure 1(b)- Dimension I	2.75" (7.0 cm)
Weight	55.56 lbs. (25.20 kg)
Weight with Shipment Box	113.32 lbs. (51.40 kg)
Shipment Box Size	28.19" x 21.70" x 27.25" (72 x 55 x 69 cm)

Figure 1 - Product Dimensions

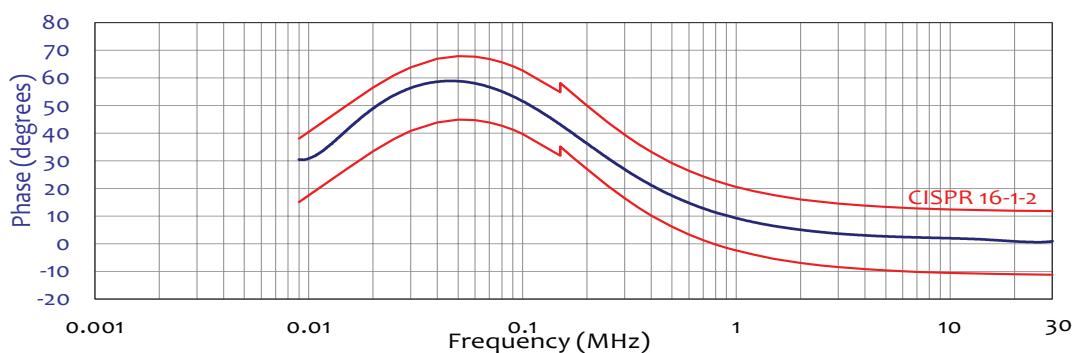


Product Reference Data

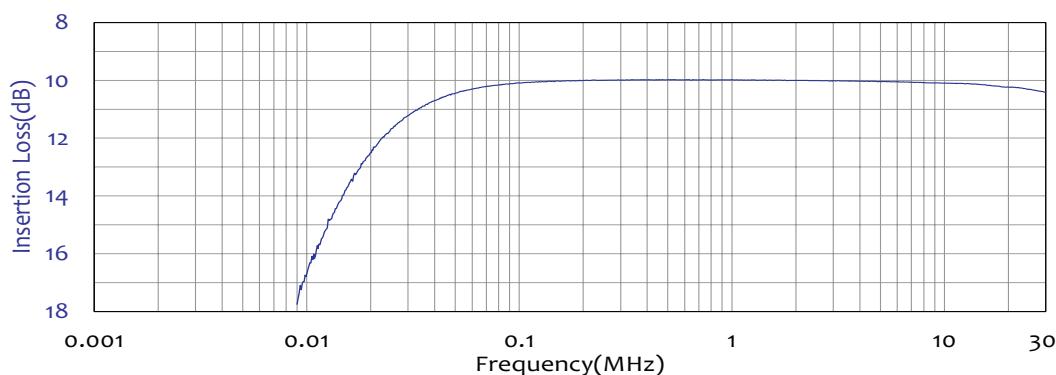
Typical Impedance Data



Typical Phase Data



Typical Insertion Loss



Typical Isolation Data

