

L3-500

Three-phase plus neutral V-Network
9 kHz to 30 MHz, 500 A for AC and DC powered EUT



Main Features

- 9 kHz to 30 MHz frequency range
- Up to 300 A (continuous); 500 A (20 min.) rated output current
- Suitable for DC to 60 Hz power lines
- Built-in, selectable 250 μ H coil (choke)
- Meets the requirements of several standards including CISPR 16-1-2, VDE 0876, FCC part 15, MIL-STD 461F
- Fan air cooling
- Available in single-phase unit (see data sheet L1-500)
- Powering the EUT
- EUT termination to a standardized impedance with respect to ground
- Couples the measuring receiver to the disturbance generated by the EUT
- Decouples the measuring receiver from unwanted RF signals from the power line

Artificial networks or Line Impedance Stabilization Networks (LISNs) are ancillary devices for the repeatable, accurate measurement of the disturbance voltage that EUT (equipment under test) may inject into the power mains.

This is accomplished through the use of reference impedance values and phase responses across the frequency range of the test.

L3-500 is suitable for measurement on AC 3-phase power circuits from DC to 60 Hz.

The equivalent V-Network circuit of $50 \Omega // (5 \Omega + 50 \mu\text{H})$ with 250 μH choke is fully compliant with common standards.

PMM LISNs feature robust and stable mechanical construction, high quality electric components, easy and perfect grounding and solid input-output power connections. They can be used in conjunction with any EMI receiver or spectrum analyzer and are built to provide safe, repeatable and accurate measurements.

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SPECIFICATIONS

Frequency range	9 kHz to 30 MHz
Maximum rated output current	500 A (20 min., starting the test at max 25°C LISN internal temperature) 300 A (continuous)
Maximum operating voltage (L/PE) (N/PE)	400 Vac 565 Vdc
(L1/L2) (L2/L3) (L1/L3) (L/N)	690 Vac 975 Vdc
Main supply frequency range	DC to 60 Hz
Equivalent circuit	50 Ω // [5 Ω + 50 μH] with 250 μH Choke or Bypass
RF output	One BNC female per line
EUT, main power and ground connections	M14 Bolts
Rated temperature	-10 °C to +40 °C
Storage temperature	-25 °C to +75 °C
Overall dimensions (W x H x D)	555 x 930 x 830 mm
Weight	248 kg

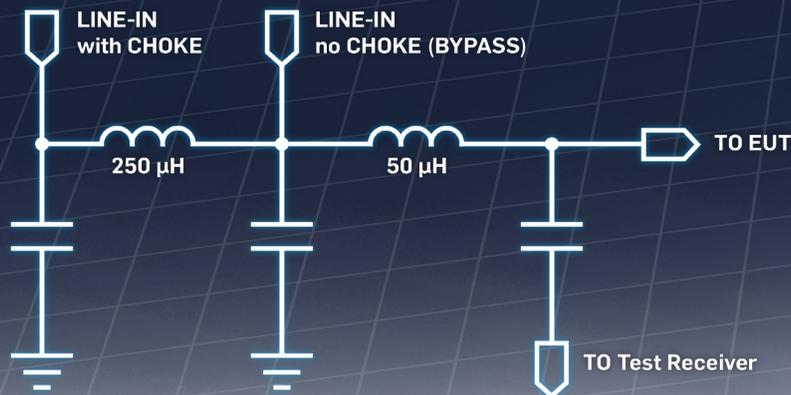
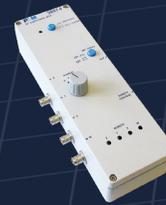
- As a safety precaution, due to the ground protection relays, properly rated insulating transformers must be installed between the power mains and the LISN inputs.
- Noise levels may require the installation of properly rated mains filters to reduce unwanted signals.

Ordering information:

L3-500 three-phase plus neutral V-Network 9 kHz to 30 MHz, 500 A for AC and DC powered EUTs
Includes: 4 pcs. power supply cables, RF cable, 3 pcs. RF, BNC 50 Ω terminations, 4 pcs. contactors connectors, user's manual, calibration certificate

Optional accessories:

SBRF4 RF switching box
Automatic (in conjunction with PMM receivers) and manual switching of up to four single-path AMNs. Internal 50 Ohm terminations and switchable 150 kHz high-pass filter. Low insertion loss.
Max. operating frequency: 108 MHz



L3-500 equivalent circuit

Related products

Receivers

- 7010/01: EMI Receiver 9 kHz to 1 GHz
- 7010/02: EMI Receiver 9 kHz to 30 MHz
- 7010/03: EMI Receiver 9 kHz to 3 GHz
- ER8000/00 EMI Receiver 9 kHz to 30 MHz
- ER8000/01 EMI Receiver 9 kHz to 3 GHz
- ER9000/00 EMI Receiver 10 Hz to 30 MHz
- ER9000/01 EMI Receiver 10 Hz to 3 GHz
- 9010F: EMI Receiver 10 Hz to 30 MHz
- 9010/03P: EMI Receiver 10 Hz to 300 MHz
- 9010/30P: EMI Receiver 10 Hz to 3 GHz
- 9010/60P: EMI Receiver 10 Hz to 6 GHz

LISNs

- L2-16B: single phase AMN, 16 A
- L3-32: 4 lines, 3-phase AMN, 32 A
- L3-64: 4 lines, 3-phase AMN, 63 A
- L3-64/690: 4 lines, 3-phase AMN, 63 A
- L3-100: 4 lines, 3-phase AMN, 100 A
- L1-150M: single-path, 50 Ohm AMN, 150 A
- L1-150M1: single-path, 50 Ohm AMN, 150 A
- L1-500: single phase AMN, 500 A

RFI Filters

- FIL-L2-16F: single phase RFI filter, 16 A
- FIL-L2-24M: single phase RFI filter, 24 A
- FIL-L3-32M: 3-phase+neutral RFI filter, 32 A
- FIL-L3-70M: 3-phase+neutral RFI filter, 70 A