

# L1-500

Single phase 9 kHz to 30 MHz, 500 A for AC and DC powered EUT



## Provided Features

- Powering the EUT
- EUT termination to a standardized impedance respect to the reference ground
- Coupling the measuring receiver to the disturbance generated by the EUT
- Decoupling the measuring receiver from unwanted RF signals from the power line

## 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  $\mu$ 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
- Stackable in up to four units in wheeled rack (see data sheet L3-500)

The AMN - Artificial Mains Network, also known as LISN - Line Impedance Stabilization Network - is the ancillary device intended for repeatable and accurate measurement of the disturbance voltage that an EUT (Equipment Under Test) may inject into the power line or mains.

This is obtained by providing well known impedance value and phase response across the frequency range of the test.

L1-500 is suitable for measurement on power circuits from DC to 60 Hz.

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

PMM Artificial Mains Networks provide robust and stable mechanical construction, high quality electric components, easy and perfect grounding, solid input-output power connections. They can be used in conjunction with any EMI receiver or spectrum analyzer and offer features required for 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 test at max 25 °C LISN internal temperature)<br>300 A (continuous) |
| Maximum operating voltage (L/N) (L/PE) | 400 Vac; 565 Vdc                                                                            |
| Power line frequency range             | DC - 60 Hz                                                                                  |
| Equivalent circuit                     | 50 $\Omega$ // [5 $\Omega$ + 50 $\mu$ H]<br>with 250 $\mu$ H Choke or Bypass                |
| RF output                              | BNC female                                                                                  |
| EUT, power line, ground connectors     | M14 bolts                                                                                   |
| Operating temperature                  | -10 °C to +40 °C                                                                            |
| Storage temperature                    | -25 °C to +75 °C                                                                            |
| Dimensions (W x H x D) Weight          | (510 x 175 x 830 mm) 55 kg                                                                  |
| Services AC supply                     | 230 V - 50/60 Hz, 50 VA                                                                     |
| Air cooling fans                       | 2 x 120 mm                                                                                  |
| LED indicators                         | Power, fan, overheating, AC present                                                         |
| Contactors                             | 250 V AC/DC - 10 A max                                                                      |

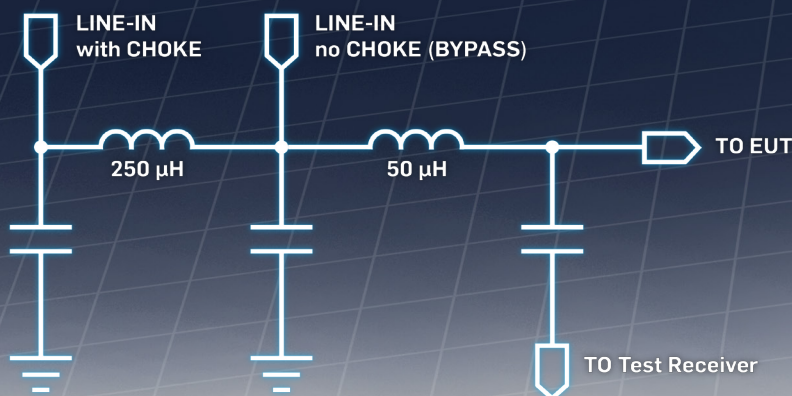
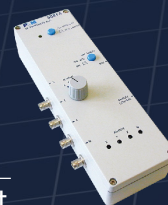
- Electrical safety and presence of ground protection relays do require the installation of properly rated insulating transformer(s) between mains power line and AMN line inputs.
- High mains noise may require the installation of properly rated mains filters to reduce the level of unwanted signals.

## Ordering Information:

L1-500 single phase 9 kHz to 30 MHz, 500 A for AC and DC powered EUTs

## Optional accessories:

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



L1-500 equivalent circuit

## Related Products

### Receivers

- 7010/00: EMI receiver 150 kHz to 1 GHz
- 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
- 9010: EMI receiver 10 Hz to 30 MHz
- 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

### LISN

- 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
- L3-500: 4 lines, 3-phase AMN, 500 A
- L2-D: Delta LISN for telecom, 2 A, 150  $\Omega$

### 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



A BRAND OF



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