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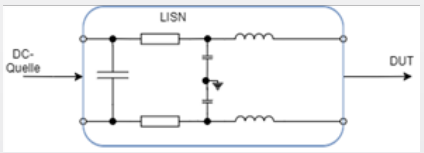
All about e-mobility

High Voltage On-board System Emulator LISN500

Emulation of the on-board electrical system impedance

The LISN500 (Line Impedance Stabilization Network) is a network for emulating the DC impedance of the vehicle on-board electrical system. The network is used to perform measurements on components with high-voltage DC supply on test benches under replicable conditions. The LISN500 fulfils the requirements of the standards for electrically powered road vehicles ISO21498, MBN11123 and comparable standards.



Main features

- The resistance values can be changed by jumpers between 2 x 25 mΩ, 2 x 50 mΩ, 2 x 75 mΩ und 2 x 100 mΩ.
- Decoupling capacitor at the DC input
- Water cooling
- Active discharge of the decoupling capacitor, controlled by the test bench via CAN or emergency stop
- Measurement of internal heat sink and water temperatures with limit value monitoring
- Display for showing status messages and the measured temperatures
- Galvanically isolated CAN interface for reading out temperatures, error messages and controlling the discharge

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Technical data:

Maximum DC current:	500 A max. 15 Min
Continuous current:	max. 300 Aeff
DC voltage:	max. 1000 V
Superimposed AC voltage:	max. 100 Vpp
Impedance:	2x Ri + Lv + Cy Ri adjustable via jumpers: 25 / 50 / 75 / 100 mΩ Lv = 1 µH Cy = 1 µF Decoupling-C: 11 mF
Stray inductance:	< 200 nH
Ambient temperature:	5 – 40 °C, non-condensing humidity
Auxiliary supply:	230 V (max. 500 VA)

Dimensions and cooling water connection:

Enclosure (W x D x H):	600 x 820 x 2200 mm incl. castors
Weight:	approx. 350 kg
Cooling water requirement:	Min. 30 l/min at 25 °C flow temperature; Water/glycol (25%)

Impedance characteristic: