

EMC-TLA32 Loop Antenna 100KHz-30MHz

Fully measurement of magnetic field strength in the frequency range 9kHz to 30MHz

The EMC-TLA32 Triple-loops antenna or Van Veen/Bergervoet Loop Antenna as defined on CISPR 16-1-4 consists of three orthogonal loops enclosing a platform where the EUT is positioned.

The antenna has been developed specifically to meet the requirements of CISPR 15 for the testing of luminaries in the frequency range of 9kHz to 30MHz.

EMC-TLA32 is a complete 3-axis antenna with a switchable unit to select each 2m diameter loop in turn with the lowest point 0,5m above ground fitted with a current transducers in fully screened housings. Ambient interference is strongly suppressed in open area measurements. Optional available accessories are the calibration kit and the EUT support.

Key Features

- Full compliance to CISPR 15 and CISPR 16-1-4 requirements
- Triple independent 2m diameter loops
- Manual switching unit for loop selection
- Fully calibrated
- Can be used with any EMI receiver or spectrum analyzer
- Ten minutes to assembly and disassembly
- Easy to store
- Calibration kit available (optional) EMC TLA32-CAL
- EUT support available (optional)
- Engineered and completely manufactured in Italy and Brazil.
- Ruggedized fully insulated construction. Protective wood treatment with yacht marine flat paint.
- Excellent performances and quality at reasonable costs.



Triple-Loop antenna



Mounting Kit



Coaxial switch



Technical Specifications

Design: Fully compliance with CISPR 15 and CISPR 16-1-4 standards

Frequency range: 9kHz÷30MHz

Loops: Triple independent 2m diameter loops, switchable among X, Y, Z

Output: 50 Ohm, N female connector

Dimensions: 2,6 x 2,1 x 2,1 m (height Z / width X / width Y)

Switchbox: R.f. manual switch to select 1 of 3 loops

Control: Manually via rotary switch, Optional: remote control via a 9-pin sub-d-connector, 4 LEDs to monitor the state.

Attenuation of selected path: <0,5dB 9k-30MHz

Leakage from other paths: >45 dB 9 k-30 MHz

Construction: Metal box with 4 N-connectors and remote control connector. 4 LEDs.

Box is mounted on a wooden column supporting the loops.

Current transformer: Precision toroidal transformer, frequency range 9 kHz-100 MHz in a metal box with N-connectors. Ferrite absorbers in 3 coaxial cables.

Calibration-Dipole (Balun) EMC TLA32-CAL

Principle: Coaxial constant current loop for calibration of the EMC TLA-32 according to EN 55015/B.4.

Theory and Applications

According to EN 55015 / 4.4 the magnetic field strength of fluorescent lighting devices has to be measured, if the operating frequency is above 100 Hz. The measurement is done with a triple loop antenna as shown above. The Unit under Test is positioned under operating conditions in the centre of the triple loop antenna. To measure the magnetic field strength without turning, there are loops in X-,Y- and Z direction.

A current transformer converts the loop current into an appropriate voltage. Ferrite chokes reduce braid current on the coaxial cables which would cause wrong measurement. The switchbox gives access to one of the three loops via local or remote control (optional). The R.F.-output is connected to the input of an interference measuring receiver.

The calibration balun EMC TLA32-CAL substitutes the E.U.T. during calibration. A signal generator may be used as source for the balun. An ideal instrument for measurement and calibration is an interference measuring receiver or spectrum analyzer with a tracking generator, which is also best choice for measuring the insertion loss of luminaires.

Ordering Informations

Basic set: Mod. **EMC-TLA32:** 3 loops with current transformers, wooden structure and fixing clamps with, manual switchbox selector included with 3 coaxial cables and ferrite chokes.

Optional: Switchbox with remote control.

Optional: Calibration dipole (balun) Mod. **EMC TLA32-CAL**

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