

## EMC-TLA32 Loop Antenna 9KHz-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 (electric field) is strongly suppressed in open area measurements.

### Key Features

- Full compliance to CISPR 15 and CISPR 16-1-4 requirements
- **Antennas:** Triple independent 2m diameter loops
- Fully calibrated \*
- **Sensors:** Matched inductively coupled.
- **Selector:** Loop selection by patch panel switch.
- **Output:** 50ohm BNC
- 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
- **Tripod** support for EWUT available (optional)
- Ruggedized fully insulated construction ,Engineered and completely manufactured in Italy and Brazil.
- Protective wood treatment with yacht marine flat paint.
- **Dimensions:** 2,6 x 2,1 x 2,1 m (height Z / width X / width Y)
- **LOW COST:** with Excellent performances and quality



Triple-Loop antenna



Calibration Dipole



### 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

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

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

**Current transformer:** Precision toroidal transformer, frequency range 9 kHz-100 MHz in a metal box with Coax connectors. Ferrite absorbers beads 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 Equipment Under Test is positioned in operating conditions at 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 currents on the coaxial cables which would cause wrong measurement. The switch box 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 or spectrum analyzer.

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 the 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. Mod. EMC-SWA

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

**Optional:** Insulated Tripod Mod. EMC-TR



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