



Active Loop Antenna AL-130

Features

Wide Frequency Range - 9 kHz to 30 MHz

Battery Powered

Built in Pre-amplifier

Saturation Indicator

Two Year Warranty



Description

The AL-130 is a broadband active receiving loop antenna for electromagnetic field measurements from 9 kHz - 30 MHz. This antenna uses a 19 inch shielded loop for magnetic field (H-Field) measurements.

The AL-130 has built in active electronics that provide impedance matching, linear antenna factors and higher antenna sensitivity. The output impedance is matched to 50 Ohms, so that it can be directly connected to any spectrum analyzer without an additional matching network.

The front panel has indicators for antenna saturation and battery status. The internal lead acid batteries take about two hours to fully charge and can operate the antenna for 8 hours continuously. A charger is included with each antenna. For your convenience, the front panel also has terminals for checking the battery voltage.

Application

The loop antenna is utilized for testing to meet the various EMC requirements specified by FCC, CISPR, MIL-STD and EN. This antenna is specified for open field emissions testing below 30 MHz. It is assumed that in the far field the ratio of E and H field will remain the same as the characteristic impedance of the medium.

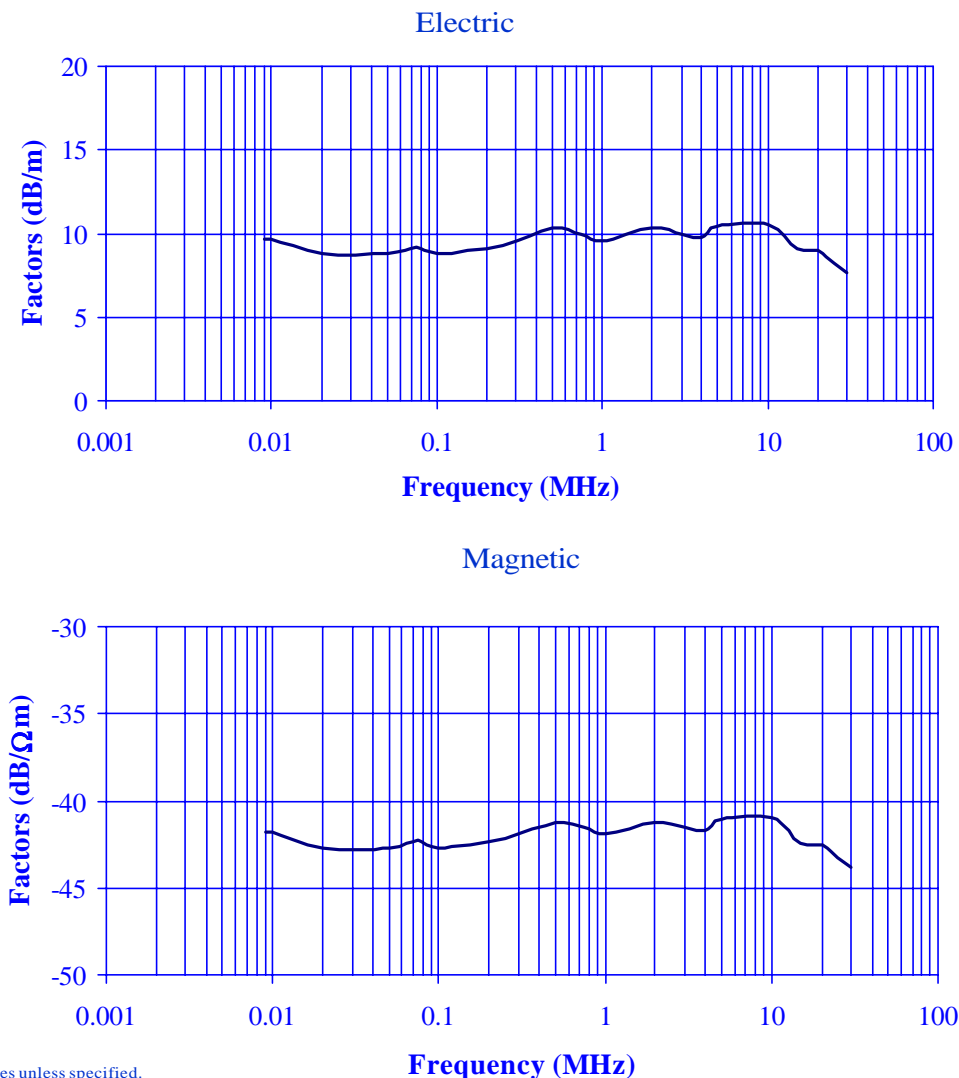
The loop antenna is positioned with its plane vertical at the specified distance from the EUT. In addition to the EUT rotation, the loop antenna also has to be rotated about its vertical and horizontal axis to maximize emissions. This procedure is described in detail in ANSI C63.4.

Monopole antennas (such as the AM-641) also operate in the same frequency range as a loop antenna, but are used for E-field measurements and require a counter poise.

Specifications

Frequency range:	9 kHz - 30 MHz
Dynamic range:	110 dB at 1 MHz
Sensitivity:	10 dB μ V/m at 1 MHz
Electric antenna factor:	13 dB at 1 MHz
1 dB compression point:	3 V/m
Output Impedance:	50 Ohm
Connector type:	BNC
Power:	2 ea. 6V rechargable sealed lead-acid battery cells
Weight:	4 lbs.
Loop diameter:	19 inches / 49 cm
Dimensions:	9" x 5" x 7" max.(Amplifier Housing)

Typical Antenna Factors



All values are typical values unless specified.
All specifications are subject to change without notice.
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