

AREA MONITOR

NHT3D-BXO

NHT3D-LBO



MICRORAD

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NHT3D-LBO

GENERAL DESCRIPTION

The NHT3D-BXO and NHT3D-LBO area monitors are systems for continuous monitoring of the electromagnetic field, capable of remotely transmitting the signals detected through a fiber optic connection.
The typical application field of the NHT3D-BXO unit is the continuous control of the pulse signal emitted by radars in the X band, while that of the NHT3D-LBO is the continuous control of RF signals up to 6.5 GHz.
The area monitors incorporate a triaxial orthogonal sensor specifically designed for emissions measurement. For the NHT3D-BXO model, the acquisition system is characterized by a speed of 500 nsec and a dynamic of 54 dB without change of scale.
The data connection is fiber optic with a maximum distance of 40 meters without a repeater.
The area monitor is equipped with a system for connecting a bracket for pole or wall, and is characterized by an IP65 protection degree which makes it suitable for all climatic situations between -10 and 50 °C.
The measurement system is complete with RaMon measurement software that allows, in connection with the optical fiber, to display the RMS and Peak value of the electromagnetic field.
The SW also allows to analyze, by manual markers, the following characteristics of the pulse signal:

- Pulse width
- Duty cycle
- Repetition time

The area monitor operates with a DC power supply voltage of 24 Vdc with consumption < 150 mA and is characterized by a galvanic isolation of 1500 V.
The dimensions and the weight make it usable in all conditions.

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PARAMETER	NHT3D-BXO CHARACTERISTICS
Sensor Type	Triaxial
Measurement	RMS / Peak
Frequency Band	8,5 – 9,7 GHz
Frequency Response	+/- 2 dB (8,5 - 9,7 GHz)
Linearity	+/- 0,5 dB (50 - 4.500 V/m)
Sensitivity	20 V/m @ 9 GHz
Isotropic response	+/- 0,8dB @ 9 GHz
Pulse Response	2 μsec
Accuracy	500 nsec
Temperature Range	-10 °C / + 50°C
Protection Degree	IP65
Power Supply	+ 24 V_{DC}
Power Consumption	< 150 mA

PARAMETER	NHT3D-LBO CHARACTERISTICS
Sensor Type	Triaxial
Measurement	RMS / Peak
Frequency Band	100 kHz – 6.5 GHz
Frequency Response	+/- 1.5 dB (1 MHz – 3 GHz)
	+/- 2.5 dB (3 GHz – 6.5 GHz)
Linearity	+/- 0,5 dB (2 – 200 V/m)
Dynamic Range	1 – 350 V/m
Isotropic Response	+/- 0,5 dB @ 100 MHz
Pulse Response	500 μsec
Accuracy	10 μsec
Temperature Range	-10 °C / + 50°C
Protection Degree	IP65
Power Supply	+ 24 V_{DC}
Power Consumption	< 150 mA

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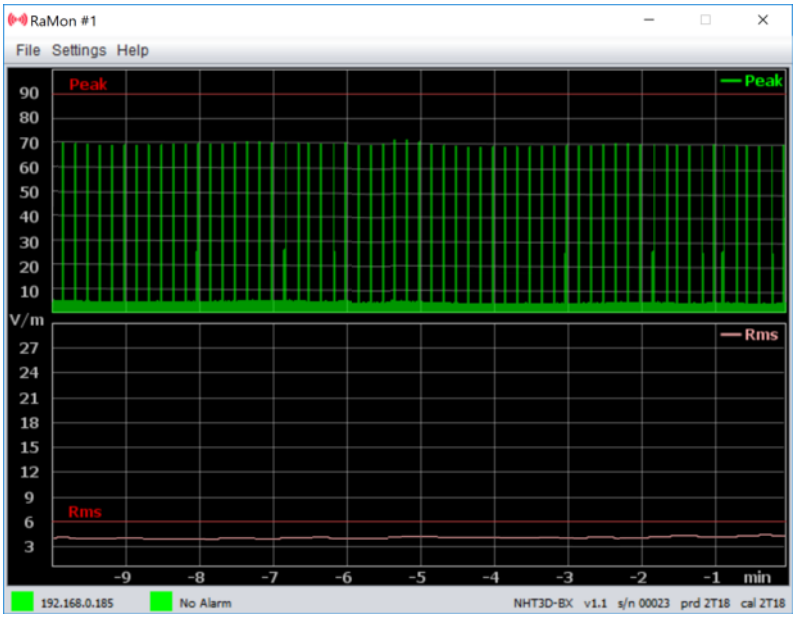
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RaMon is the PC software application that allows the user to interact with the area monitor. By launching the RaMon application with an area monitor unit correctly powered and connected to the PC, the acquisition of the measured signal is already active.

The area monitor, consisting of a triaxial probe, carries out both peak and r.m.s. measurement (calculated over a time interval of 6 minutes) of the electric field every second, and sends the data to the connected PC. If the peak value or the r.m.s. value exceeds the relative alarm threshold, and this is activated, an alarm signal is generated.



RaMon is used to view and analyze the electric field values measured by the area monitor. It allows the following operations:

- display the levels of the measured isotropic field, both peak and r.m.s.;
- signal the exceeding of a programmable threshold both for the peak value and for the r.m.s. value of the measured field;
- graphic display of the curve over time of the measured field;
- manually perform image zooming and centering operations;
- manually measure through the use of markers the temporal characteristics of the displayed signal;
- save the displayed data or export them either in numeric format or as images.

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