ООО «4ТЕСТ»
Телефон: +7 (499) 685-4444
info@4test.ru
www.4test.ru

MICRORAD

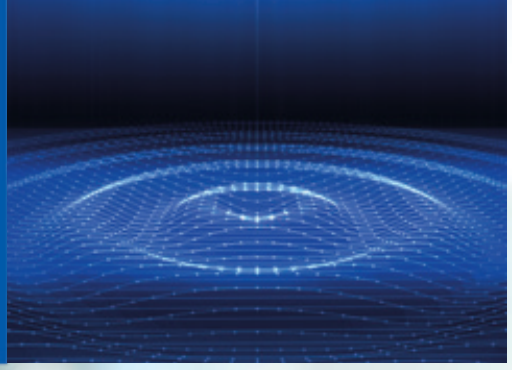
Percipere Aestimare et Inquirere

Company Profile





OUR MISSION



WELCOME TO ELECTROMAGNETIC SAFETY

Microrad's mission is to produce high precision, high reliability isotropic probes and handheld meters capable of evaluating the exposure levels of humans to electromagnetic fields.

We are constantly engaged in research and development for the purpose of providing our customers with the capability to simply and accurately certify electromagnetic safety in civil, professional and military working environments utilising leading edge technology.

The customer serves as the geometric centre of all of our activities and complete customer satisfaction is the final goal of the Microrad mission.

Our product range offers optimised price-performance measurement solutions spanning ranges from magneto static fields to millimetric waves and is highly focused on the electric traction; industrial welding; medical physics; telecommunications; radar surveillance sectors.

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OUR VISION

REALLY ALL IN ONE

We are convinced that when facing the future challenges in electromagnetic safety it will be essential to provide highly optimized metering systems.

These instruments must be flexible and easy to use, sufficiently powerful to analyse electromagnetic pulse fields and must have specific application Software for remote control and time/ frequency analysis.

Our vision is to provide this functionality to those who wish to operate multiple indices analysers capable of measuring from static/ almost static magnetic fields up to 6 GHz utilising only two probes while remaining compliant with Directive 2013/35 / EU.

All of this is available NOW! This solution is called NHT-3D, and to have this performance all you need is to connect it to the Microrad 33P and 01E probes.

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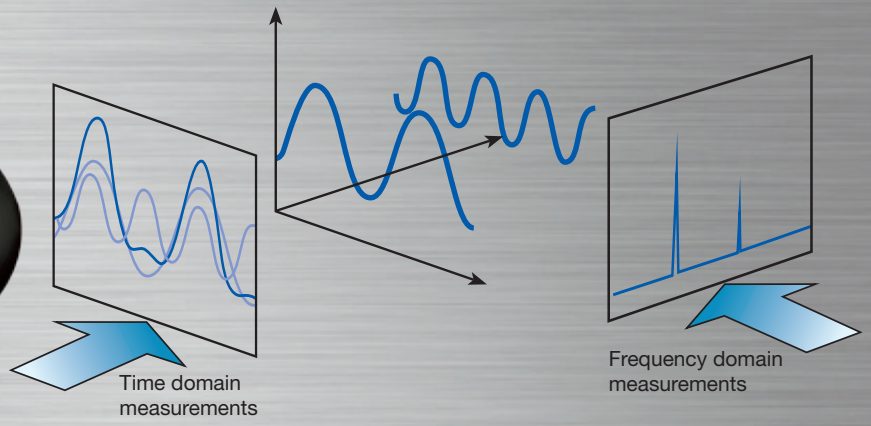
OUR TECHNOLOGY

$$WP_{10} = \left| \sum_{i=1Hz}^{100kHz} \frac{A_i}{EL_i} \cos(2\pi f_i t + \theta_i + \varphi_i) \right| \leq 1$$

Over 20 different manufacturing processes incorporating special components and materials are utilised in the construction of Microrad sensors. Improvements in product functionality, efficiency and performance is the result of the application of our continuous research.

Through the study of complex geometries Microrad has created a series of highly integrated solutions including the 33P probe, which started out as a challenge and has now become a reality.

Microrad is the first company in the market to create a triple isotropic sensor capable of measuring static magnetic fields, magnetic induction fields and the variable electric field with a single probe.



The hardware and firmware structure of our NHT-3D when connected to the WAVE software, allows the customer to analyze pulsed fields, automatically calculate the WP10, II98, IB, IRSS indexes and to simultaneously function as an oscilloscope and spectrum analyzer.

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METER
NHT 3D

NHT-3D is a high performance handheld analyzer designed for measurement of electric and magnetic fields which are characterised by complex form factors in the frequency range from 0 Hz to 400 kHz and wide band signals up to over 40 GHz.
Thanks to the interchangeability of the probes it is possible to configure the instrument for measurements in different environments and in compliance with directive 2013/35/EU.
Main Areas of Application: Energy, Telecommunication, Medical, Railway, Automotive, Military.

KEY FEATURES

- Selective measurements for magnetic induction (H) and electric fields with any form factor.
- Frequency range from 0 Hz to 400 KHz in selective mode, over 40 GHz in wideband mode.
- Time domain analysis (oscilloscope mode with automatic and manual trigger).
- Frequency domain analysis and FFT spectral analysis in real time up to 65536 isotropic samples (x, y and z axes).
- Dynamic Range→100 dB without range changing.
- Selectable indexes available on the meter: WP10 (Icnirp 2010 Health Physics 99:818-836-2010) IB50 (Time domain Analysis CEI EN 62233).
- Selectable indexes via software: WP10 (Icnirp 2010 Health Physics 99:818-836-2010) IB50 (Time domain Analysis CEI EN 62233) II98 (Icnirp 1998 Health Physics 74:494-522-1998) IRSS (Frequency domain Analysis CEI EN62233).
- Calculation and display of RMS, IRMS, Max, Min, instant, Fmax.
- Display screen which indicates safety threshold limits according to current safety standards in the public or the professional environment.
- GPS receiver and temperature sensor available on board.
- Power supply: Li-ion battery with over 24 hours of operation time.
- Fiber optic communication (up to 40mt).
- Firmware updating directly by use.

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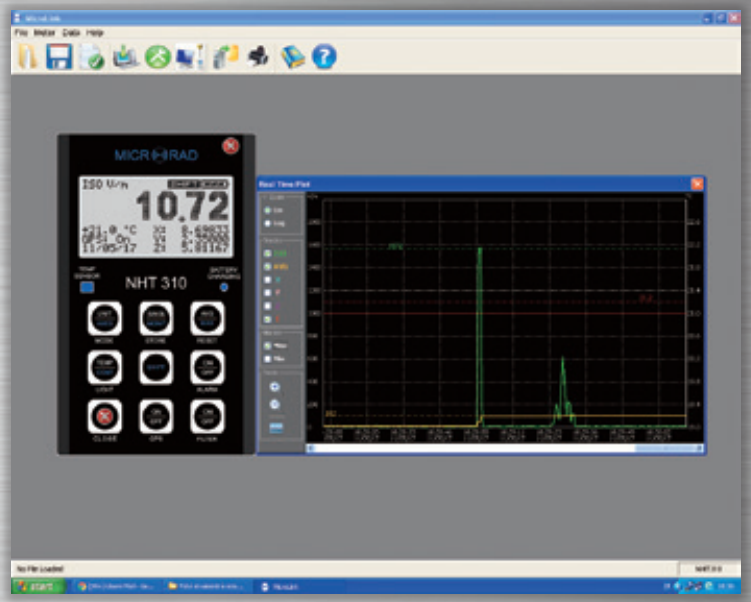
METER
NHT 310

The NHT-310 meter is capable of measuring a wide frequency of electric, magnetic and electromagnetic fields. By selecting and inserting the appropriate probe the instrument covers all frequencies from static magnetic field to millimetric waves.



KEY FEATURES

- Broadband measurement capability from 0 Hz to over 40 GHz.
- Interchangeable probes for measuring Electric, Magnetic and Electromagnetic fields.
- Shell in aluminium-magnesium alloy.
- Integrated temperature sensor and GPS unit.
- Battery autonomy up 70 hours.
- Data logger → 21000 samples.
- Multiple monitoring and logging capability.
- Microlink software for displaying measurements and data.
- Optical Interface / USB link.

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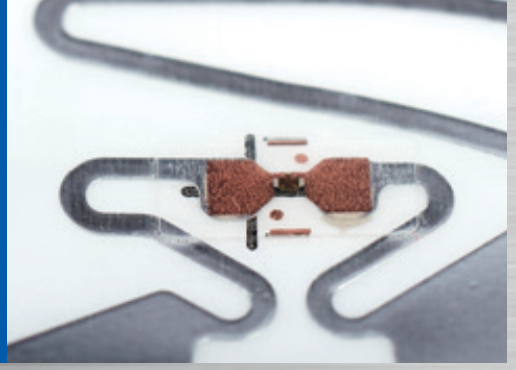
PROBE



The Microrad range of probes/ sensors is in continual evolution, our isotropic sensors are the culmination of specific Know How and the result of years of research and experimentation. The sensors are highly dynamic and responsive to pulsed signals, prerequisites for today's needs when measuring electromagnetic fields originating from digitally modulated sources.

If you cannot find what you are looking for amongst our products please contact us, it may already be under development!

	Type	Size	Frequency Range
Probes	01E		Freq. 100 kHz ÷ 6.5 GHz <-> E Field <-> 0.2 ÷ 350 V/m (CW)
	02E		Freq. 400 kHz ÷ 40 MHz <-> E Field <-> 2 ÷ 800 V/m
	02H		Freq. 300 kHz ÷ 30 MHz <-> H Field <-> 0.016 ÷ 16 A/m
	03E		Freq. 100 kHz ÷ 18 GHz <-> E Field 0.8 ÷ 340 V/m
	04E		Freq. 3 MHz ÷ 40 GHz <-> E Field 0.5 ÷ 350 V/m
	06E		Freq. 100 kHz ÷ 6.5 GHz <-> E Field 0.35 ÷ 650 V/m
	10B		Freq. 1 Hz ÷ 400 kHz <-> B Field 0.1 µT ÷ 1 mT
	10H		Freq. Static Magnetic Field Hz <-> B Field 5 µT ÷ 5 mT
	11E		Freq 1 Hz ÷ 400 kHz <-> E Field 20 V/m ÷ 20 kV/m
	20H		Freq. 0 Hz ÷ 1000 Hz <-> B Field 1mT ÷ 15T
	30H		Freq. 0 Hz ÷ 1000 Hz <-> B Field 200µT ÷ 600 mT
	20B	100cm²	Freq. 1 Hz ÷ 20 kHz <-> B Field 300 nT ÷ 16mT
	30B	100cm²	Freq. 1 Hz ÷ 400 kHz <-> B Field 300 nT ÷ 16mT
			Freq. 1 Hz ÷ 20 kHz <-> E Field 20 V/m ÷ 20 kV/m
	33N	100cm²	Freq. 1 Hz ÷ 20 kHz <-> B Field 300 nT ÷ 16 mT
			Freq. Static magnetic Field <-> B Field 5µT ÷ 5mT
			Freq. 1 Hz ÷ 400 kHz <-> E Field 20 V/m ÷ 20 kV/m
	33P	100cm²	Freq. 1 Hz ÷ 400 kHz <-> B Field 300 nT ÷ 16 mT
			Freq. Static Magnetic Field <-> B Field 5µT ÷ 5mT

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Piazza delle Azalee 13/14
05018 Orvieto (TR) - Italy

Tel. +39 0763 393291
Fax +39 0763 394423

ISO 9001:2008