

SMP

PORTABLE FIELD MONITORING SYSTEM

The SMP Portable Electromagnetic Field Monitoring System can measure electromagnetic field levels generated by any source within the frequency range of the probe attached to the system.

For example it can measure fields generated by different sources such as mobile telephone base stations, radio and television transmitters and repeaters, DECT systems, Wi-Fi systems, etc.

Those measurements can be made quickly and easily anywhere because the SMP is portable and simple to handle and use.

The data stored in the memory can easily be downloaded to a computer via a USB port for later processing.

National & international standards

The measurements are performed according to the most recognized international standards and recommendations related to the evaluation of the human exposure to the electromagnetic fields:

- European Union Council Recommendation of 12 July 1999 on the limitation of exposure of the general population to electromagnetic fields (0 Hz to 300 GHz).
- ICNIRP (International Commission on Non-Ionizing Radiation Protection) Guidelines for limiting exposure to time-varying electric, magnetic and electromagnetic fields (up to 300 GHz).



Main Features

The SMP can sample the field level continuously and store that data automatically in its built-in memory at user-configured intervals with a capacity of up to 64,000 samples.

The SMP is designed for simple and intuitive operation with 2 basic functions:

- instant and averaged field measurement
- storage of field measurements in memory

The SMP integrates a new multi-measurement system that allows performing instant measurements of the total field level, Ex, Ey and Ez separately, continuous measurements, arithmetic averaging, minimum and maximum values, and normative measurements.

The internal configurable alarm generates an audible signal (warning) when the measured level exceeds the adjustable threshold.

The SMP can be equipped with an internal GPS module so the measured data can be associated to its position and displayed on a GIS application.

Several field probes are available that can be easily interchanged thanks to its automatic probe recognition system.

The SMP contains a rechargeable Li-ion battery allowing the apparatus to run for over 10 hours.

Technical Specifications

Measurement Functions

Measurement field probes	Interchangeable; automatic probe detection and recognition system
Measurement units	V/m, kV/m, uW/cm2, mW/cm2, W/m2
Acquisition time	2 samples per second
Result types	Actual total field value, axis field value (X, Y, Z), maximum and minimum
Average type	Sliding average (continuous), arithmetic average, normative average
Averaging time	10s, 30s, 1min, 2min, 5min, 6min, 10min, 15min, 30min
Alarm	audible signal, 2400 Hz; adjustable threshold

Memory

Sample acquisition adjustable period	1s, 5s, 10s, 30s, 1min, 5min
Capacity	64,000 samples without GPS data 28,000 samples with GPS data

Interfaces

Probe	Push-pull connector. Automatic detection and recognition
Data download	Mini USB connector
Firmware update	Mini USB connector
Battery charger	coaxial jack connector + LED

Display

Display type	Transmissive, monochrome, STN, negative
Display size	60 x 78 mm (240 x 320 pixels)
Backlight	White LED
Display range	5 digits: 0.0001 to 99999

GPS

General	Hyper sensitivity with 20 independent channel satellite tracking system
Chip set	SiRF starIII GSC3
Position accuracy	1.5 m (CEP50) , 1.8 m (CEP95)
Update rate	1 s
Sensitivity	- 157 dBm (tracking)
SBAS (Satellite Based Augmentation System)	WAAS/EGNOS/MSAS support
Geodetic system	WGS 84

General Specifications

Battery	rechargeable Li-ion battery
Operation time	> 10 hours
Temperature range	-10 °C a +45 °C
Size (without field probe)	100 x 215 x 40 mm
Weight (without probe)	490 g (including the internal GPS receiver)

ELECTRIC FIELD PROBES

	WPT MOBILE TELEPHONE PROBE	WPF3 BROAD BAND PROBE
Sensor type	Isotropic, True RMS	Isotropic, RMS diode technology
Frequency band	GSM900, GSM1800 and UMTS	100 kHz – 3 GHz
Range	0,06 – 61 V/m (RMS)	0,5 – 150 V/m (CW) 0,5 – 25 V/m (RMS)
Dinamic range	> 60 dB	49 dB
Sensitivity	0,06 V/m	0,5 V/m
Resolution	0,1 dB	0,2 V/m
Interband attenuation	>15 dB between GSM900 – GSM1800 >5 dB between GSM1800 – UMTS	
Frequency response	± 1,5 dB	± 2 dB (1 MHz – 3 GHz) (20 V/m)
Linearity	+ 0,45 / - 0,8 dB	± 1 dB (0,5 – 2,5 V/m) ± 0,5 dB (2,5 – 120 V/m)
Isotropic deviation	< ± 0,5 dB	± 1 dB
Calibration	Internal EEPROM memory	Internal EEPROM memory
Calibration period	24 months (recommended)	24 months (recommended)
Operating temperature	-30°C a +80°C	-10°C a +80°C
Dimensions	28,5 x 10,5 x 10,5 cm.	28,4 cm. X 6 cm. (diameter)
Weight	140 g.	92 g.

