

## LASER powered field strength probe

*Accurate · High Speed · Robust · Small*

### World leader in Innovation!

DARE!! Instruments, the inventor of the first LASER powered E-field probe in the world provides a full range of small and fast LASER powered probes from 9 kHz to 18 GHz. The first RadiSense probe was developed and produced in the previous century. Delivered to companies all around the world, this probe has become the industry standard. The RadiSense has proven to deliver the best quality in the market, with unprecedented measurement uncertainty.

### Small and accurate

Due to its small size the RadiSense 18 GHz field strength probe puts an end to all size-related field strength measurement problems. With a probe size of only 1.0 x 1.0 x 1.0 cm, resulting in a measurement volume of 1 cm<sup>3</sup> (smallest competitive probe is 185 cm<sup>3</sup>) it ensures accurate measurements especially in small (G)TEM cells. RadiSense probes are the smallest probes in the world!

### High speed and wide band

With a measurement speed of 60 samples per second for all separate axis and isotropic value, the RadiSense ensures fast measurements. Due to the wide frequency range starting at 30 MHz up to 18 GHz it is ideally suited for EMC Automotive, Military and CE marking applications.

### Robust

The RadiSense probe comes in a strong rigid housing; hence it is very robust compared to other probes.

### Battery-free

DARE!! invented the first battery free probe in 1999. Although several companies have tried to copy this technology, the long experience of DARE!! with LASER power technology has resulted in the world's most reliable LASER powered field probe. Using LASER light as a power source, battery related problems like large probe dimension and quickly drained batteries are avoided. Furthermore a LASER powered probe is particularly useful for continuous measurements (e.g. overnight testing). The probe measures all three E-field axes

using low noise amplifiers and a single chip microprocessor. The measured E-field strength data is communicated to the read-out unit through a second fibre optic cable.

### Software support

The RadiSense field strength probes are supported by the RadiMation automated EMC measurement software. The probe can also be controlled with most available commercial EMC test software packages.



### Versions

The RadiSense is standard supplied with a plug-in card for the series of RadiCentre EMC test systems. The RadiCentre allows the RadiSense probes to communicate by RS232, USB, LAN or GPIB (IEEE 488) interfaces. The RadiCentre-1 (CTR1001S) single slot mainframe can control one field probe. The RadiCentre-4 (CTR1004B) has 2 available slots and the RadiCentre-9 (CTR1009B) has 7 available slots. Both the 2-slot and 7-slot RadiCentre units have a 7 inch color TFT touchscreen display, which can be used for monitoring applications with multiple E-field probes.

# RadiSense® 18 GHz E-field Probe

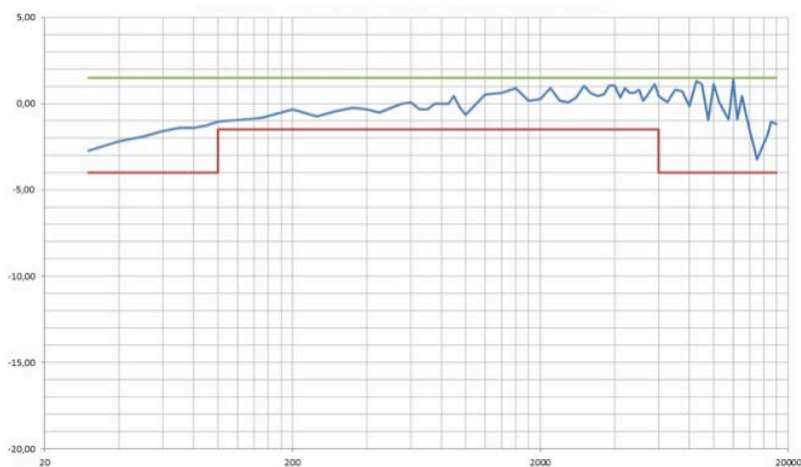
## Technical Specifications



Product code	RSS1018A	
Measuring range	1 to 600 V/m	
Overload indicator on	> 1000 V/m	
Maximum input level	1500 V/m	
Frequency range	30 MHz to 18 GHz	
Frequency response (with correction factors applied) 1	± 0.6 dB @ 30 MHz	
Frequency response (uncorrected)	30 MHz to 100 MHz	+ 1.5 dB to - 4.0 dB
	100 MHz to 6 GHz	± 1.5 dB
	6 GHz to 18 GHz	+ 1.5 dB to - 4.0 dB
Resolution	0.01 V/m	
Linearity	± 0.5 dB +/- 0.5 V/m	
Isotropic deviation	< ± 1.5 dB @ 1 GHz	
Measurement speed (X,Y, Z & ETot)	60 samples/s	
Shape	Stalk	
Electrical measuring volume	1 cm <sup>3</sup>	
Outer dimensions (length)	280 mm (11.0 in)	
Outer dimensions (diameter)	Stalk: 16 mm (0.6 in), Body: 28 mm (1.1 in), Tip: 22 mm (0.8 in)	
Weight	95 g (3.36 oz)	
Antenna elements	8 mm monopole	
Operating temperature range	15 °C to 35 °C (59 °F to 95 °F) @ 10% to 90% RH non-condensing	
Calibration data	ISO17025 accredited calibration (optional)	
Optical LASER power	0.5 Watt at aperture at 808 nm	
F.O. connector data	FC/PC 200/230 µm fibre, 1.5 m fixed and 10 m extension <sup>2</sup>	
F.O. connector LASER	FSMA 200/230µm fibre, 1.5m fixed and 10 m extension <sup>2</sup>	

<sup>1)</sup> Accuracy depending on external calibration laboratory

<sup>2)</sup> Probe is delivered with 1.5 m fixed + 10 m extension fibre and FC/FSMA in-line coupling set. Fibre length up to a maximum of 500 m is available on request.



RSS1018A Typical frequency response with limits (dB).

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