RadiSense® 26

Electric Field Probe

Model - RSS2026S

Accurate High Speed Robust

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The high frequency E-field probe

Accurate | **High Speed** | **Robust**

Raditeq, the inventor of the first laser powered E-field probe in the world provides a full range of accurate and fast laser powered probes from 9 kHz to 40 GHz. With their long experience and extensive knowledge on laser power technology and field probe measurement technology, the RadiSense® probes provide the most reliable, high quality range of laser powered E-field probes in the market, with unprecedented measurement uncertainty.

Wide range - The RadiSense® 26 has a wide frequency range from 10 MHz to 26 GHz allowing accurate isotropic E field strength measurements within a range from 1 V/m to 1000 V/m. This wide range makes the RadiSense® 26 ideal for EMC Automotive, Military/Aerospace and CE marking applications.

Fast and accurate - The RSS2026S provides the most accurate frequency response and isotropy, with a maximum measurement speed of 100 measurements/second (individual X-Y-Z axis + isotropic value). This makes the RSS2026S field probe ideal for immunity test applications when measuring continuous wave (CW) and or Pulse modulated (PM) fields as defined in the Mil-Std 461.

Modular - The RadiSense® 26 is intended to be used in combination with the RadiCentre® modular test system, which is available as a 1-slot (CTR1001S), 2-slot (CTR1004B), 7-slot (CTR1009B) or the 8-slot (CTR2008A). The probe is connected to the laser power plug-in card (model LPS2001B) with FC/ST dual fiber links. The plug-in card provides the laser power source and bi-directional communication to the probe. The fiber optic extension cable between the RadiSense® 26 probe and the LPS2001B plug-in card is standard available at three different lengths (10, 20 or 30 m). Other lengths to a maximum of 100 m are available on request.

Calibration report - Raditeq offers the option that RadiSense field probes are delivered with a factory calibration certificate. This certificate provides field probe correction factors for frequency response (X,Y,Z-axis), linearity data at two spot frequencies and anisotropy (rotational symmetry) over the entire frequency. The factory calibration certificate is provided by Raditeq in Acrobat® PDF format and additionally the correction data is given in Excel® file format. For customers requiring accredited calibration certificates, we remain offering calibration services being performed at an external ISO17025 accredited calibration laboratory.

Internal calibration data - The linearity adjustment data, by default is stored inside the probe. In addition, the frequency response calibration data of the X-Y-Z axis can be stored as user correction data inside the probe. As a result, there is no need to apply frequency dependent corrections for individual axis' in software anymore. This feature results in a high accuracy and ease-of-use.

Software support -The RadiSense® probes are supported by RadiMation and RadiMation Pro, automated EMC test and measurement software packages. The RadiSense® probes can also be controlled with most other brands of commercial EMC test software packages, like ETS Lindgren TILE and R&S EMC32/Elektra.

RadiSense® 26 Specifications

Model	RSS2026S
Field measurement range	1 to 1000 V/m
Damage Level (Max.)	2000 V/m
Frequency range	10 MHz to 26 GHz
Resolution	0.001 V/m < 0 - 10 V/m 0.01 V/m < 10 - 100 V/m 0.1 V/m > 100 - 1000 V/m
Measurement speed (x, y, z and E_{tot})	100 measurements/s
Accuracy [1,2]	
Frequency response	-4.0 dB + 2 dB (10 MHz - 20 MHz) ± 1 dB (20 MHz - 26 GHz)
Anisotropy [3]	± 0.5 dB (10 MHz - 1 GHz) ± 1 dB (1 GHz - 10 GHz) ± 2.0 dB (10 GHz - 26 GHz)
Linearity	± 0.5 dB ± 0.5 V/m
Dimensions	
Shape of housing	stalk probe
Electrical measuring volume	1 cm³
Total lenght including body	30 cm (11.81 in)
Number of antennas	3 dipoles
Environmental conditions	
Temperature range (operating)	0 ˚C to 40 ˚C (32 ˚F to 104 ˚F)
Relative humidity (operating)	10 % to 90 % RH (non-condensing)
Calibration & Power consumption	
Factory adjustment data	Internally stored, ISO/IEC 17025 calibration (RSS2026S only)
Accredited calibration [4]	Traceable, accredited calibration with certificate (optional)
Optical LASER power	Max. 0.5 Watt at aperture @ 808 nm
Laser safety class	Class 1M
Fibre connection	
Laser fibre optic connector	FC/PC fibre
Data fibre optic connector	ST/PC fibre
Extension fibre length [5]	Standard lengths 10m, 20m or 30m. Maximum 100m
Safety	
Interlock	External interlock & closed loop safety system
Warranty [6]	Three years

1) The overall measurement accuracy of a field probe is primarily determined by the measurement uncertainty of the calibration laboratory. This calibration uncertainty varies significantly between different calibration labs. Therefore, the specified accuracy for the probe does not include the measurement uncertainty of the calibration laboratory but refers solely to the accuracy and stability of the probe itself. To determine the overall measurement uncertainty, the RSS (Root Sum Square) of the specified accuracy of the probe and the stated measurement uncertainty of the calibration report must be calculated.

2) The specified accuracy is stated as the standard uncertainty of measurement multiplied by the coverage factor k = 2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

3) Anisotropy is the maximum deviation from the geometric mean as defined by IEEE 1309-2013

4) This calibration can be stored inside the probe as user correction data

5) The probe set is delivered with a 10 m extension fibre. Other fibre length to maximum 100 m available on request

6) Standard warranty is 1 year. After you register your new Raditeq product two (2) years of warranty will be added for free.
   Registration can be done at: www.raditeq.com

- Specifications measured after 30 minutes warm-up time.

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