EFS-LASER



New Laser-powered Electric Field Probe

10 kHz to 6 GHz

The Frankonia EFS-LASER Electric Field Probe especially has been designed for field strength measurements / field homogeneity measurements during radiated immunity tests according to IEC/EN 61000-4-3. However, it is also excellent to measure the radiation pollution of the environment, for example at workplaces or flats.

The EFS-LASER is an isotropic miniature E-field sensor to ensure, that the E-field will not be influenced by the size of the sensor itself. It even does not need any metering unit (which could also influence the field-strength), because of its direct fibre-optic output, which does allow direct connection of the sensor to the USB-interface of the control PC or laptop. The measuring values may be displayed via the individual IEC 61000-4-3 control software or via a windows-software included in the delivery.

The EFS-Laser cover the frequency-range from 10 KHz – 6 GHz. The utilized linearization technol-ogy provides a dynamic range up to 100 dB. The EFS-Laser is a smart, fast, extremely accurate electric field probe, which provides linearization, temperature compensation, control and communication functions. Noise reduction and temperature compensation allow accurate measurments down to 0.1 V/m. The probe is laser-powered to allow continuous, galvanically isolated operation without recharging or battery replacement. The power supply unit comes either in a 19" (1Hu)

case for rack mounting or in a small handy box.



Special features

- Laser powered no more empty batteries
- Extreme small size
- High resolution, high speed, low noise
- Frequency range: 10 kHz to 6 GHz
- Field strength measurements from 0.1 V/m up to 10 kV/m
- Wide dynamic range
- Continuous real-time data streaming
- Temperature compensation



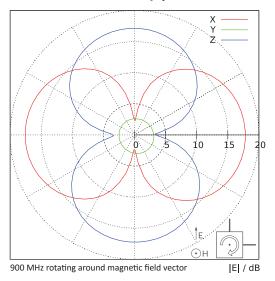
Technical data

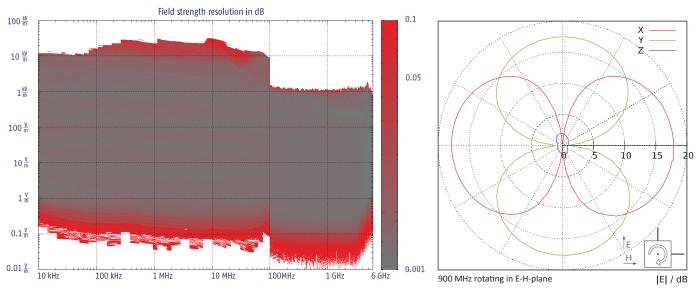
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| Frequency Range | 10 kHz 6GHz | PC II |
|---|--|------------------------|
| , , , | | Appl |
| Analog Rise Time 10 kHz 100 MHz low Bandwith 10 kHz 100 MHz high Bandwith 100 MHz 6 GHz | 4 μs 40 ns 25 ns | Burst Burst Lase |
| | 23 113 | Lase |
| Minimum Pulse Width Burst Mode Streaming Mode | 500 ns 2 μs | Laser |
| Resolution | < 0.01 dB | Fiber |
| Sampling Rate Burst Mode Streaming Mode | 2 MSample/s > 500 kSample/s | Max. Inpu |
| Field Strength 10 kHz 100 MHz 100 MHz 6 GHz | < 1 V/m > 10 kV/m < 0.1 V/m > 700 V/m | Inpu Amb Dime |
| Damage Level 10 kHz 100 MHz 100 MHz 6 GHz | 40 kV/m 10 kV/m | *Pov |
| Dynamic Range 10 kHz 100 MHz 100 MHz 6 GHz Isotropy, 900 MHZ | 80 dB 100 dB 70 dB 80 dB < 1dB | |
| Amplitude Accuracy 10 kHz 10 MHz (1.5 V/m to 30 V/m) > 10 MHz 1 GHz (1 V/m to 80 V/m) > 1 GHz 8 GHz (3 V/m to 100 V/m) | 1.3 dB 1.5 dB 1.0 dB | |
| Linearity Error | < 0.1 dB | |
| Temperature Stability | 0.1 dB | |
| Ambient Temperature | 10 °C 40°C | |
| | | |

| Computer-Interface | | | |
|--------------------------------|---------------------------|--|--|
| PC Interface | USB 2.0 | | |
| Application Software | included | | |
| Burst Trigger Output Level | 3.3 V CMOS | | |
| Burst Trigger Output Connector | BNC | | |
| aser – Wavelength | 850 nm | | |
| aser - Output Power | 750 mW | | |
| ₋aser - Shutdown Time | 1 ms | | |
| iber Optic Connector | FC / ST | | |
| iber Optic Cable Length | 15 m | | |
| Max. Fiber Optic Cable Length | 100 m (sold on request) | | |
| nput Voltage* | 5V ± 5% | | |
| Input Current | < 2A | | |
| Ambient Temperature | 10 °C 40 °C | | |
| Dimensions (W x D x H) | 483 x 43.5 (1HE) x 120 mm | | |
| *Power supply | included | | |
| | | | |

Isotropy





67 x 67 x 124 mm



Dimensions (W x D x H)