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



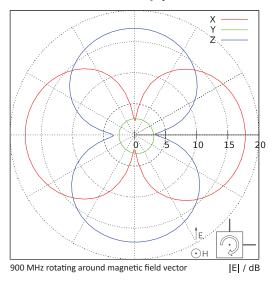
Technical data

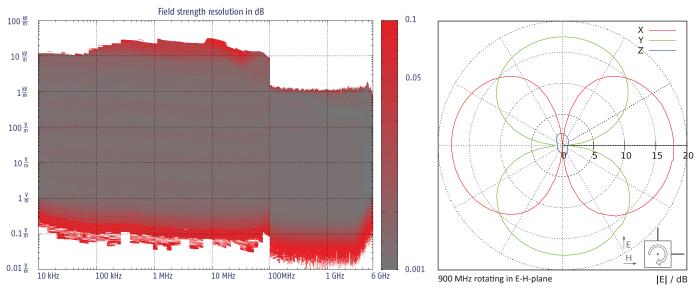
Fi		1 21	1.9		6		
	. –	1.9.1	P .	. –		ιυ,	

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)