

EFS-10/100 ELECTRIC FIELD PROBES | DATASHEET

Special Features:

- Extreme small size
- PC connection via fibre optic link
- Excellent isotropy (0.3 dB typical)
- Frequency range: 10 kHz to 9.25 GHz
- Field strength measurements from
- **⊘** 0.14 V/m to 500 V/m
- Up to 80 hours operating time before recharging



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DESCRIPTION

The Frankonia EFS field-strength-meters especially have been designed for field strength measurements / field homogeneity measurements during radiated immunity tests according to IEC/EN 61000-4-3. But it could also be used to measure the radiation pollution of the environment, for example at workplaces or flats.

The EFS 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-10 / EFS-100 cover the frequency range from 10 kHz up to 9.25 GHz and are able to detect electrical field-strength in the range from 0.14 V/m to 500 V/m (depending on type). The sensors are battery operated by Li-Mn batteries, which allow a maximum operation time of 80 hours before re-charging.



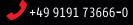


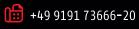






TECHN. SPECIFICATIONS	EFS-10	EFS-100	
requency range	10 kHz - 9.25 GHz	100 kHz - 9.25 GHz	
Flatness	0.1 – 150 MHz: 0.4 c	dB 1 - 150 MHz: 0.8 dB	
Nith frequency correction OFF	0.05 – 6 GHz: 1.6 d	dB 0.5 - 6 GHz: 1.6 dB	
	0.03 – 7.5 GHz: 3.2 c	dB 0.3 – 7.5 GHz: 3.2 dB	
Vith frequency correction ON	0.05 – 7.5 GHz: 0.4 c	dB 0.3 – 7.5 GHz: 0.4 dB	
Oynamic range (single range)	0.5 – 500 V/m (60 dB)	0.14 - 140 V/m (60 dB)	
inearity	0.4 dB @ 50 MHz / 1-500 V	/m 0.4 dB @ 50 MHz / 0.3 – 100 V/m	
esolution	0.01 V/m		
ensors	6 monopoles		
sotropicity	0.5 dB (0.3 dB typical) (@ 50 MHz)		
verload	1000 V/m	300 V/m	
leasured data X–Y–Z axis	sampling simultaneous on X-Y-Z axis		
ampling rate	22 S/s to 0.03 S/s, depending on filter setting		
igital filter	2.3 to 28 Hz, low-pass, pre-settable		
nternal battery	3 V – 5 mAh, rechargeable Li–Mn		
peration time	80 hours @ 0.4 S/sec., 28 Hz filter		
	60 hours @ 5 S/sec., 28 Hz filter		
echarging time	48 hours for full operation time		
nternal data memory	serial number, claibration data, calibration factors, firmware version		
ommunication	bidirectional fiber optic link		
ber optic connector	HFBR-0500		
ber optic length	10 m standard (20/40 m optional)		
ber optic to PC connection	fiber optic to RS232 converter, RS232 to USB converter		
C Software	included (display of field, temperature and battery voltage measurements,		
	setting of filters, sampling rate, frequency)		
perating temperature	−10°C ÷ +50°C		



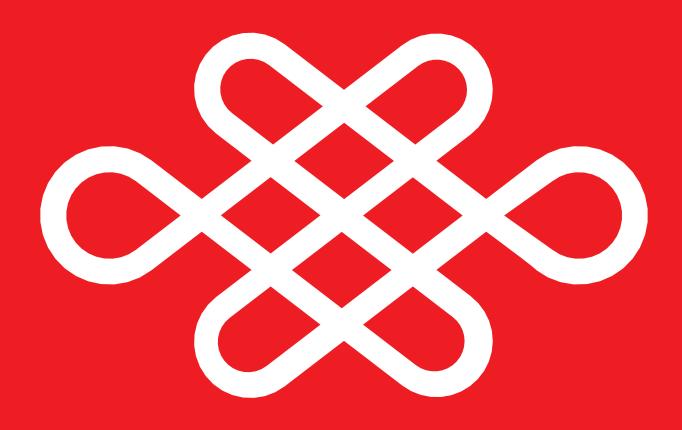






TECHN. SPECIFICATIONS	EFS-10 EFS-100		
Temperature reading	0.1°C resolution		
Battery voltage reading	10mV resolution		
Dimensions	53 mm overall, (body: 17 mm diameter, sensor: 17 mm)		
Weight	25 g, including 1 m fiber optical pigtail		
Probe mount	20 UNC female		
Included accessories	10m fiber optical cable, optical RS232 adapter + RS232/USB adapter,		
	software, battery charger		
Optional accessories	20m fiber optic cable, order-no.: EFS-0F20		
	40m fiber optic cable, order-no.: EFS-0F40		





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