

FL7006/Kit

Electric Field Probe Kit

- 100kHz–6GHz
- 0.5–800 V/m
- User-selectable X, Y, Z Axes

Features

The FL7006/Kit includes the equipment listed below. The FI7000 is housed in a 19" wide by 3.5" (2U) high instrument case with a 1.75 (1U) high blank panel. Please see individual product specification sheets for details.



Units shown not to scale.

Model FL7006/Kit Equipment List:

- Model FL7006 Probe with carrying case and Calibration Report from an A2LA-accredited lab
- Model FI7000 Probe Interface
- Model FC7010 Fiber Optic Cable set for FL7000 Series probes, 10 meters.
- Model MA7000 Fiber Optic Mating Adapter Set

NOTE: FM7004A is recommended for local monitoring and control.

Model	Description
FL7006/Kit	FI7000 Housed in 2U Instrument Case
FL7006/Kit M1	Rack Mount (Instrument Case removed)

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Features

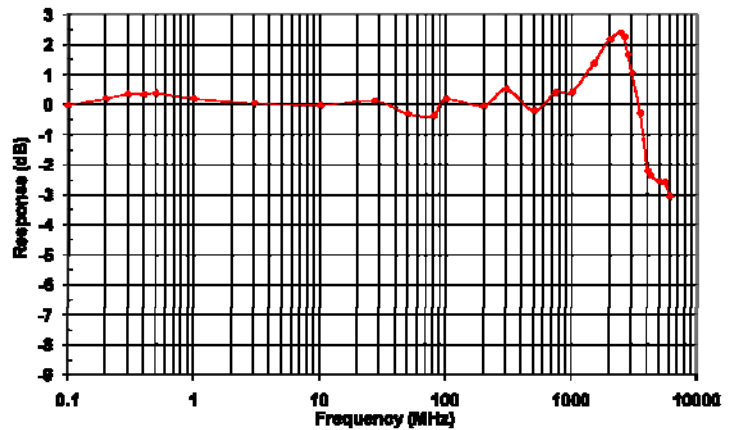
The FL7006 is a smart, fast, extremely accurate electric field probe that contains an internal microprocessor to provide linearization, temperature compensation, control, and communication functions. Noise reduction and temperature compensation allow accurate measurements down to 0.5 V/m without zero adjustment. Microprocessor based linearization technology provides a 64 dB dynamic range. When rotated about its ortho angle mount, the probe provides isotropic response of ± 0.5 dB over 2 GHz.

The FL7006 is laser powered to allow for continuous operation without recharging or battery replacement. This probe requires an FI7000 for power and communication. FM7004A is recommended for local monitoring and control.

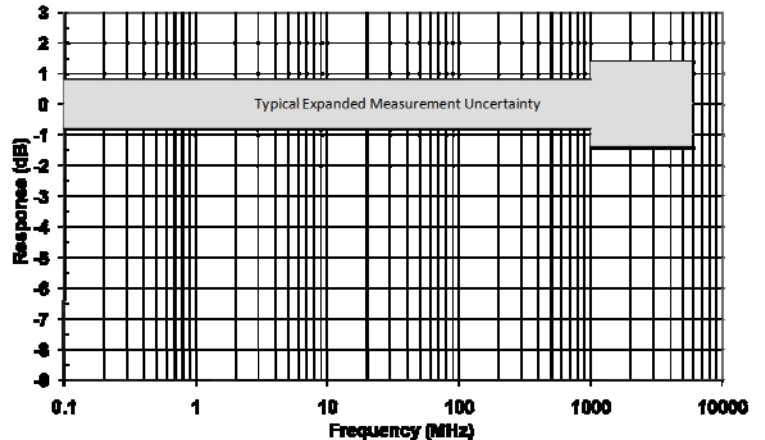
Correction factors are provided with the probe. These factors can be loaded into the Model FM7004A Field Monitor (sold separately) to automatically correct the probe readings at user-specified frequencies. When correction factors are applied, the true accuracy of the probe can be realized.

The FL7006 communicates through glass fiber optic cables, up to 100 meters long, to the FI7000 interface. X, Y, Z, and isotropic readings can be returned through an FI7000 in 20 msec.

FL7006 Typical Uncalibrated Frequency Response



FL7006 Typical Calibrated Frequency Response (with correction factors applied)



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Specifications

Amplitude Accuracy (field aligned with sensor axes):

Without correction factors applied:
 ± 1.0 dB @ 10 MHz

With correction factors applied: Typical expanded measurement uncertainty (95% confidence interval):

0.8 dB, 100 kHz–1 GHz
1.4 dB, 1 GHz–6 GHz

Response Time/Sampling Rate (through F17000):

20 msec/up to 50 samples per second, USB and GPIB only

Isotropic Deviation (measured at the ortho angle):

± 0.5 dB @ 10 MHz
 ± 0.5 dB, 0.5 MHz–2 GHz (typical)

Operating Range:

0.5–800 V/m, 100 kHz–1 GHz
0.5–600 V/m, 1 GHz–4 GHz
0.7–800 V/m, 4 GHz–6 GHz

Linearity, 0.5 to 800 V/m:

± 0.5 dB and ± 0.3 V/m

Temperature Stability: ± 0.5 dB over operating temperature range

Damage Level: 1000 V/m continuous field

Ranges: Single range

Data returned from probe: X, Y, Z axes, and composite

Power Requirements: Laser powered from F17000 interface

Dimensions:

5.7 x 5.7 x 5.7 cm (2.25 x 2.25 x 2.25 in)
2.92 cm (1.15 in) DIA spherical housing
3.18 cm (1.25 in) sensor radome per axes

Weight: 62.5 g (2.2 oz)

Operating Temperature Range: 10°C to 40°C (50°F to 104°F) @ 5% to 95% RH non-condensing

Fiber Optic Connectors: Two E2000 compact duplex connectors at 1 meter, includes fiber optic verification loop.

Calibration Data: Accredited Calibration Report (A2LA) supplied with probe