

Model FL7040CC
Electric Field Probe with Custom Calibration
2MHz–40GHz
2–1000 V/m
User-Selectable X, Y, Z Axes



The FL7040CC 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 2 V/m without zero adjustment. Microprocessor based linearization technology provides a 54 dB dynamic range. When rotated about its critical angle mount, the probe provides typical isotropic response of ± 1.5 dB to 40 GHz.

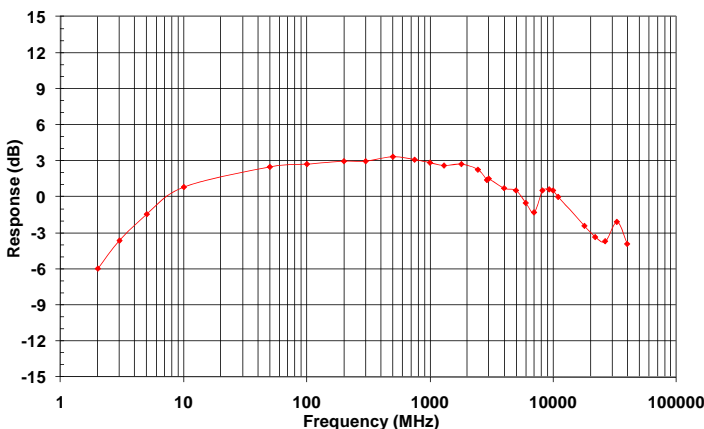
The FL7040CC is laser powered to allow for continuous operation without recharging or battery replacement.

Correction factors are provided with the probe. These factors can be loaded into the Model FM7004 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.

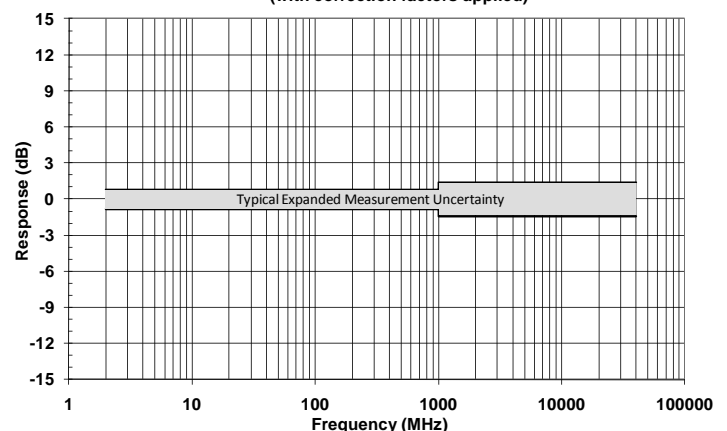
The FL7040CC communicates through glass fiber optic cables, up to 100 meters long, to the FI7000 interface. X, Y, Z, and isotropic readings can be returned through an FI7000 in 20 msec.

NOTES: *This probe requires an FI7000 for power and communication.
 FM7004 is recommended for local monitoring and control.
 Requires FI7000, FL7010 and MA7000 (sold separately).*

FL7040CC Typical Uncalibrated Frequency Response



FL7040CC Typical Calibrated Frequency Response (with correction factors applied)



SPECIFICATIONS, FL7040CC

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, 2 MHz–1 GHz
	1.4 dB, 1 GHz–40 GHz

Response Time/ Sampling Rate (through FI7000)..... 20 msec/up to 50 samples per second, USB and GPIB only

Isotropic Deviation (measured at the critical angle)..... ±0.5 dB @ 10 MHz
±1.5 dB, 2 MHz–40 GHz (typical)

Operating Range 2–1000 V/m

Linearity, 2 to 1000 V/m..... ±0.5 dB

Temperature Stability..... +0.5 dB over operating temperature range

Damage Level..... 1200 V/m CW

Ranges Single continuous range

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

Power Requirements Laser powered from FI7000 interface

Dimensions Approx. 278 x 65 x 65 mm

Probe Head Diameter..... 65mm

Weight 150g approx.

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 supplied with probe. User-specified calibration requirements must be provided using Form 647 at time of quote.