

FL7040 Electric Field Probe

- 2MHz-40GHz
- 2-1000 V/m
- User-selectable X, Y, Z Axes

Features

The FL7040 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. When rotated about its ortho angle mount, the probe provides isotropic response of ± 1.5 dB to 40 GHz.

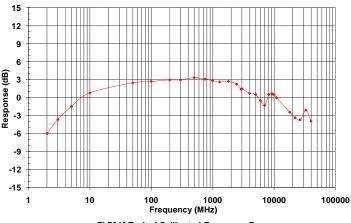
The FL7040 is laser powered to allow for continuous operation without recharging or battery replacement. This probe requires an Fl7000 for power and communication. FM7004A is recommended for local monitoring and control.

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.

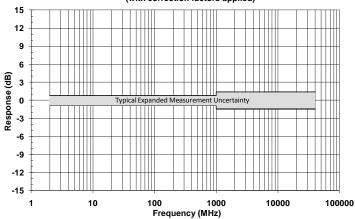


The FL7040 communicates through glass fiber optic cables, up to 100 meters long, to the Fl7000 interface. X, Y, Z, and isotropic readings can be returned through an Fl7000 in 20 msec.





FL7040 Typical Calibrated Frequency Response (with correction factors applied)



AR RF/Microwave Instrumentation

160 School House Rd Souderton, PA 18964 215-723-8181

For an applications engineer call:800.933.8181

www.arworld.us



Page 2

FL7040

Electric Field Probe

- 2MHz-40GHz
- 2-1000 V/m
- User-selectable X, Y, Z Axes

Specifications

Amplitude Accuracy (field aligned with sensor axes):

Without correction factors applied: $\pm 1.0~\mathrm{dB}$ @ $10~\mathrm{MHz}$

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 F17000): 20 msec/up to 50 samples per second at F17000, USB and GPIB only

Isotropic Deviation (measured at the ortho 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 F17000 interface

Dimensions: Approx. 278 x 65 x 65 mm (10.95 x 2.6 x 2.6 in)

Weight: Approx. 150 g (5.3 oz)

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

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