



rf/microwave instrumentation

Model FL7018
Electric Field Probe
3MHz–18GHz
1–1000 V/m
User-Selectable X, Y, Z Axes



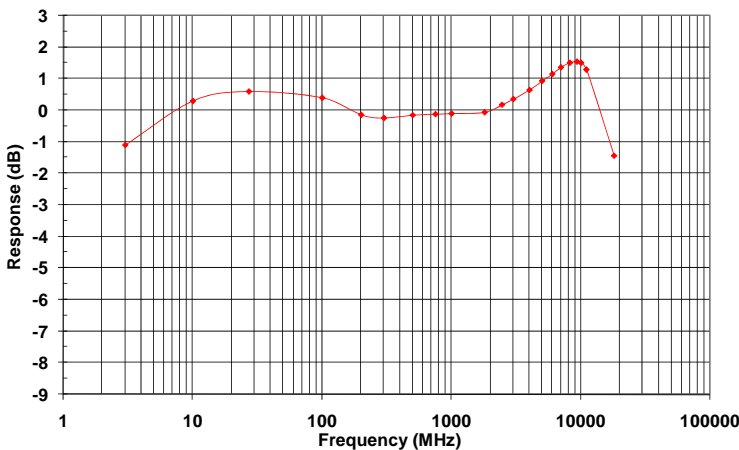
The FL7018 is a smart, fast, extremely accurate electric field probe that contains an internal microprocessor to provide linearization, temperature compensation, control, and communication functions. Noise reduction and temperature compensation allow accurate measurements down to 1 V/m without zero adjustment. Microprocessor based linearization technology provides a 60 dB dynamic range. When rotated about its magic angle mount, the probe provides isotropic response of ± 1 dB to 8 GHz.

The FL7018 is laser powered to allow for continuous operation without recharging or battery replacement.

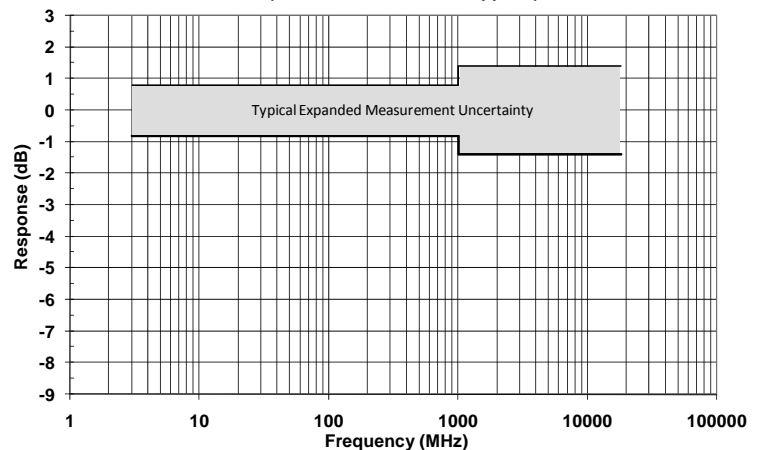
The FL7018 communicates through glass fiber optic cables, up to 100 meters long, to the FI7000 interface. X, Y, Z, and isotropic readings can be returned through an FI7000 in 20 msec.

NOTES: This probe requires an FI7000 for power and communication. FM7004 is recommended for local monitoring and control.

FL7018 Typical Uncalibrated Frequency Response



FL7018 Typical Calibrated Frequency Response (with correction factors applied)



SPECIFICATIONS, FL7018

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–18 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
±1.0 dB, 10 MHz–8 GHz (typical)
±2.0 dB, 8 GHz–18 GHz (typical)

Operating Range 1–1000 V/m

Linearity, 1 to 1000 V/m ±0.5 dB AND ±0.3 V/m

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

Damage Level..... 1600 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 (A2LA) supplied with probe