

## ELECTRIC FIELD PROBES HI-6105 Electric Field Probe

ETS-Lindgren's HI-6105 Electric Field Probe operates at a Frequency Response of 100 kHz to 6 GHz.



ETS-Lindgren's laser-powered HI-6105 Electric Field Probe embodies the latest innovations in isotropic sensor design and low noise, miniaturized electronics. Designed to be single range reading, the HI-6105 can read data continuously over the entire dynamic range. Data values for each axis (X, Y, and Z) can be read individually or summed. Fiber optic signal and power lines link the Model HI-6105 RF field probe to either the EMCenter, or as a direct connect to a PC USB port with the HI-6113 Laser Data Interface and ProbeView™ Laser Software.

The EMCenter™ Modular RF Platform along with the EMSense™ interface card can be used with the HI-6000 series field probes as a Field Monitor in addition to its capability as a system level platform.

The HI-6113 Laser Data Interface provides the laser power and communications for the HI-6105 Electric Field Probe. A USB connection to the PC allows for quick and easy data collection, using ProbeView for Laser Probes software.

### Key Features

- Laser Powered -Permits Extended Testing
- Frequency Response:
  - 100 kHz to 6 GHz
  - Dynamic Range 0.5 V/m to 800 V/m (Single Range)
- Provides Individual and Summed Axis Values
- A2LA Accredited Calibration Report
- Suitable for MIL Standard Specs:
  - MIL-STD 461F Radiated Susceptibility (RS)
- Suitable for Automotive Specs:
  - SAE J1113 27
  - GMW 3091/3097/3103
  - FORD FMC 1278
- Suitable for Commercial Specs: EN/IEC 61000-4-3 Radiated Immunities
- Operates with Most 3rd Party Immunity Software

For High Field and High Frequency Requirements the Model HI-6x53 is Recommended

### Specifications

## Electrical Specifications

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**Detection:** Isotropic (X, Y and Z Axis Readings)

**Frequency Range:** 100 kHz to 6 GHz

**Frequency Response with Correction:** 100 kHz to 6 GHz  $\pm$  0.9 dB

**Frequency Response:** (Typical)

- 500 kHz to 2 GHz +1.0, -2.5 dB
- 2 GHz to 5.5 GHz +3.5, -4.5 dB
- 5.5 GHz to 6 GHz +2.0, -6.0 dB

**Dynamic Range:** 0.5 V/m to 800 V/m (Single Range)

**Resolution:** 0.01 V/m

**Isotropic Deviation:**  $\pm$ 0.5 dB @ 400 MHz

**Linearity:**  $\pm$ 0.5 dB (1 to 800 V/m)

**Sample Rate (Typical):** 70 Samples per Second Maximum

**Overload Withstand:** >1500 V/m CW

## Physical Specifications

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**Physical Interface:**

- Duplex Optical Fiber (62.5 Micron Multimode)
- FC Connectors for Laser Cable, Integral 1m Optical Cable
- ST Connector for Transmitter Cable, Integral 1m Optical Cable

**Operating Range:** 10°C to 40°C (50° F to 104° F); 5 to 95% Relative Humidity Non-condensing

**Dimensions (Housing):** 32 mm x 32 mm x 32 mm; (1.26 in x 1.26 in x 1.26 in)

**Mounting:** 1/4 in - 20 UNC Internal Thread

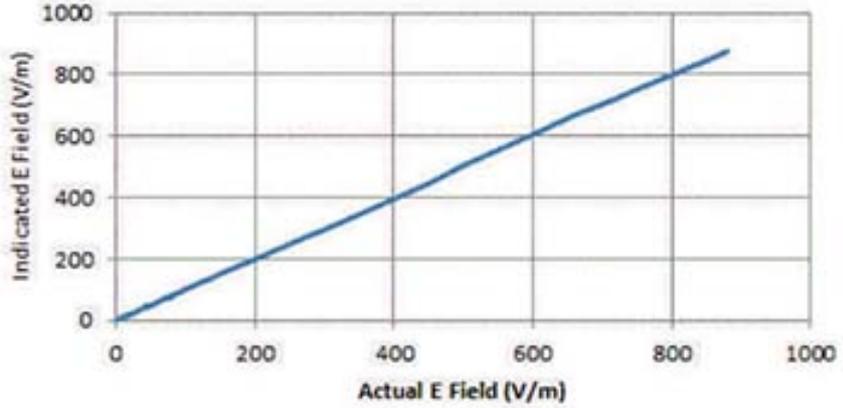
## Other Specifications

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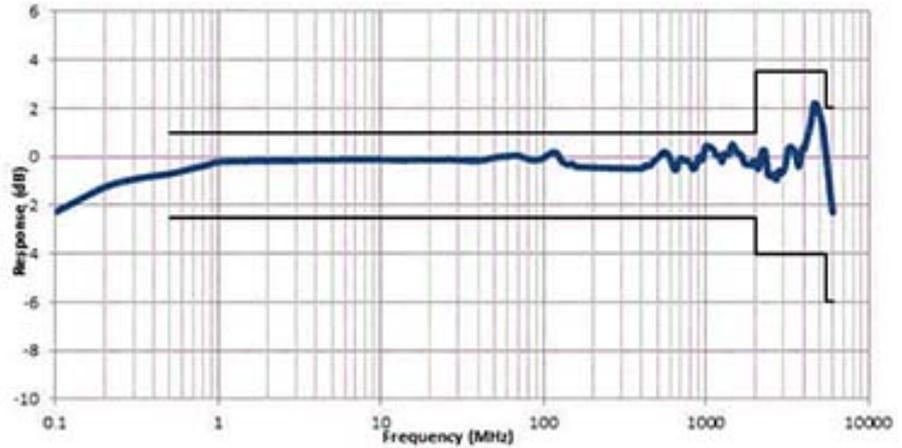
- Manual
- Probe Assembly
- A2LA Traceable Calibration Report
- 10m Optical Cable
- Bulkhead Connector (2)
- Carrying Case
- Fiber Cleaning Kit and Swabs

Product Charts

**Linearity Response at 27 MHz**  
Actual Data Taken at 100 MHz  
Probe Remains Linear to 0.2 V/m



**Frequency Response Anechoic Room and TEM Cell Setups - Field Level 20 V/m**



**Isotropic Deviation Actual Data Taken at 400 MHz**  
Field Level 20 V/m - Maximum Variation 0.54 dB

