

## ELECTRIC FIELD PROBES HI-6053 Electric Field Probe

ETS-Lindgren's Model HI-6053 is a battery-operated electric field probe that operates at a Frequency Range of 10 MHz to 40 GHz.



ETS-Lindgren's Model HI-6053 is a battery-operated electric field probe that provides broadband frequency coverage and wide dynamic range that satisfies the demands of most test requirements. To take advantage of this capability, the HI-6053 RF field probe was designed to be single range reading so data can be read continuously over the entire dynamic range. Data values for each axis (X, Y, and Z) can be read individually or summed. ETS-Lindgren's HI-6053 Electric Field Probe is a fully intelligent sensor enabling fast and accurate electric field measurements with industry-leading performance specifications. Optical coupling to a variety of readout options makes this probe ideally suited for a wide range of field monitoring applications.

This field probe incorporates user replaceable/rechargeable batteries.

The HI-6100 Field Monitor provides manual functions and programmed control via IEEE-488 and RS-232 Serial Data Interfaces. Readings from up to four field probes can be displayed simultaneously.

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.

For direct connection to a PC, either the HI-4413P Serial or the HI-4413USB interfaces are available.

### Key Features

- Frequency Range: 10 MHz to 40 GHz
- Individual and Summed Axis Values
- Dynamic Range: 2.0 to 800 V/m (Single Range)
- User Replaceable/Rechargeable Batteries
- A2LA Accredited Calibration Report
- Suitable for MIL Standard Specs:
  - MIL-STD 461F Radiated Susceptibility (RS)
- Suitable for Automotive Specs:
  - SAE J1113/27
  - GM W 3091/3097/3101
  - FORD FMC1278
- Operates with Most 3rd Party Immunity Software

### Specifications

## Electrical Specifications

---

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

**Frequency Response with Correction:**

- 10 MHz to 18 GHz  $\pm$  0.9 dB
- 18 to 40 GHz  $\pm$  1.1 dB

**Frequency Range:** 10 MHz to 40 GHz

**Frequency Response:**

- 10 to 100 MHz + 3.0, -4.0 dB
- 100 MHz to 1 GHz +3.0, -0.50 dB
- 1 to 18 GHz +4.0, -2.0 dB
- 18 to 40 GHz +3.5, -4.5 dB

**Dynamic Range:** 2 to 800 V/m (Single Range)

**Resolution:** 0.01 V/m

**Isotropic Deviation:**  $\pm$ 1.0 dB < 18 GHz

**Linearity:**  $\pm$ 0.5 dB

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

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

## Physical Specifications

---

**Physical Interface:** FSMA Connectors; Duplex Optical Fiber (200 Micron Multimode)

**Battery:** (4) Rechargeable NiMH AAA

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

**Battery Life:** >30 Hours Continuous

**Battery Charger:** 100-240 VAC Universal Input; 3-Hour Charge from Full Depletion

**Weight:** 0.36 kg (12.64 oz)

**Dimensions (L x W):** 43.8 cm x 5.7 cm (17.24 in x 2.24 in)

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

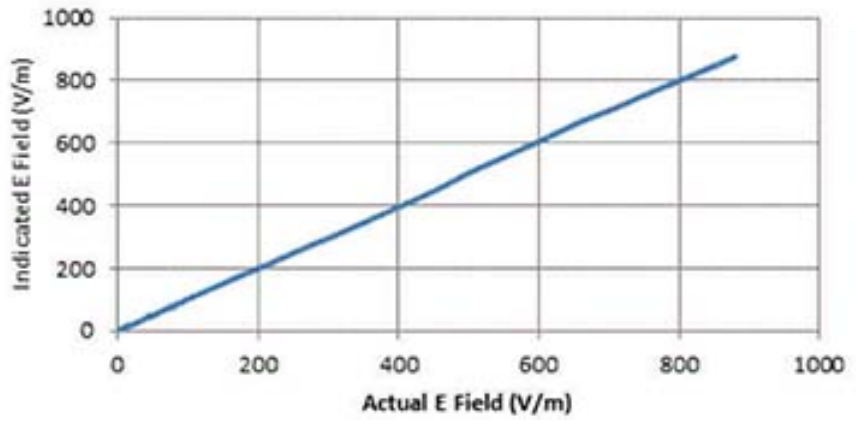
## Other Specifications

---

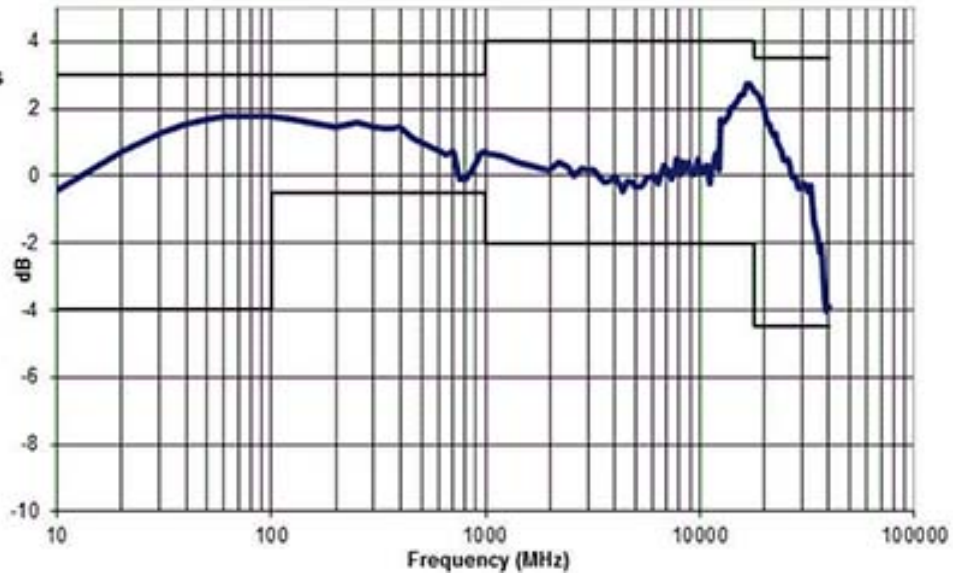
- A2LA Traceable Calibration Report
- Carrying Case
- Owners Manual
- Bulkhead Connector (2)
- Fast Battery Charger
- Probe Assembly
- 10m Fiber Optic Cable

### Product Charts

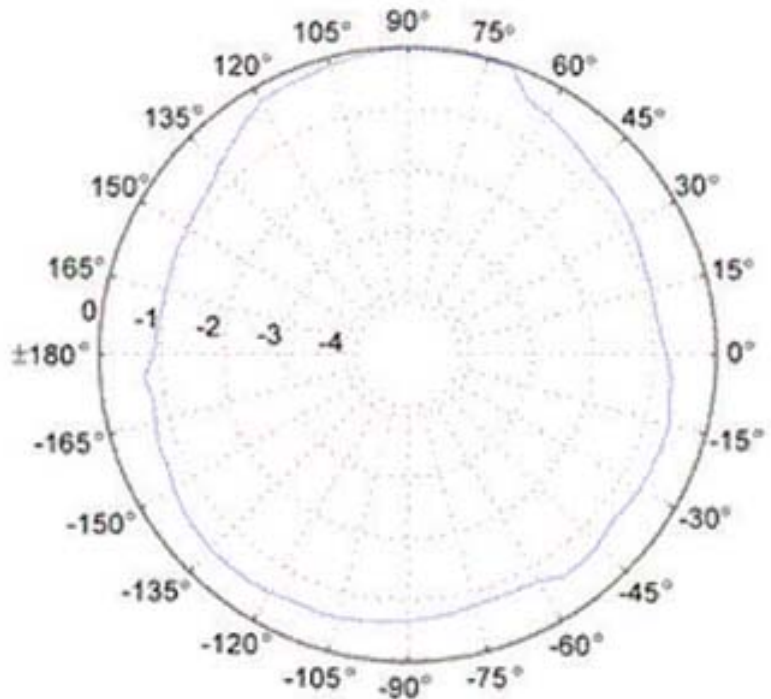
**Linearity Response at 1 GHz**



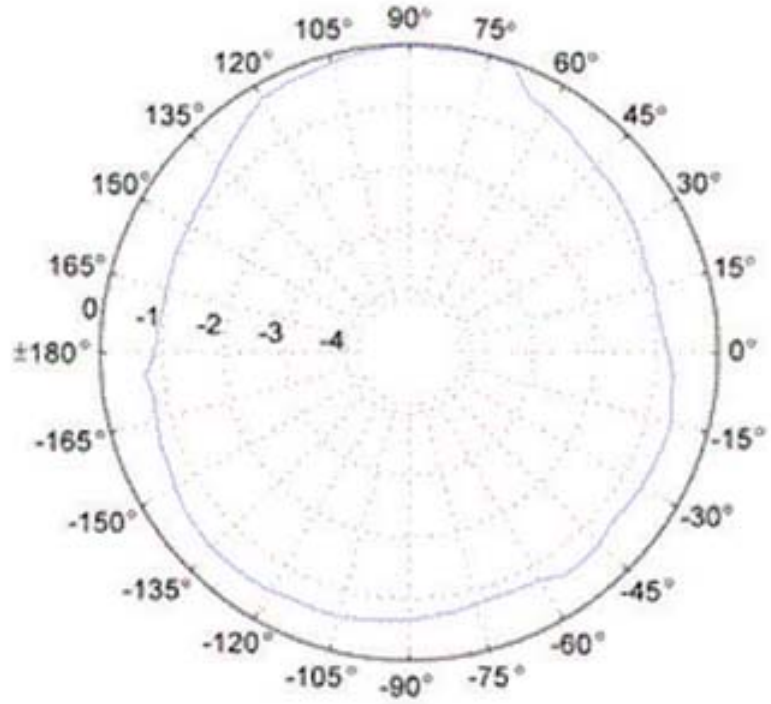
**Typical Frequency Response with Limits**



**Typical Isotropic Response in dB at 1 GHz**



### Typical Isotropic Response in dB at 10 GHz



### Typical Isotropic Response in dB at 18 GHz

