

Trek Model 511

Hand-Held Electrostatic Field Meter



The Model 511 is a high-quality, portable, chopper-stabilized, non-contacting electrostatic field meter designed for testing and auditing electrostatic fields in ESD sensitive areas so that operators can find them before they become a problem.

Features of the Model 511 field meter, such as its LED indicator with a switch selectable measurement range of either 2 kV or 20 kV, add to instrument flexibility and benefit the operator through its ease of use. Operators also benefit from the ability to obtain or audit reliable and accurate ESD measurements in either ionized or non-ionized environments.

Key Specifications

- Measurement Range: Low range: 0 to ± 2 kV / inch
 High range: 0 to ± 20 kV / inch
- Measurement Accuracy: Voltage monitor output: Better than $\pm 5\%$ of reading, ± 10 mV
 Voltage display: Better than $\pm 5\%$ of reading, ± 2 counts

Typical Applications Include

- Electrostatic discharge auditing and monitoring
- Surface voltage measurements of photo-conductors or dielectric surfaces
- Charge monitoring in semiconductor production
- Measuring of electrostatic potentials on film, polymers, and paper
- Assessing the voltage generation of materials, equipment and personnel
- Balancing and test ionization blowers and devices

Features and Benefits

- Push-button "auto-zero" feature removes any offset voltage
- Compact, pocket size
- Easy-to-read LED display
- Distance ranging system utilizes LEDs to indicate a 1-inch spacing between the instrument and the test target
- Hold Function allows the user to hold a display when a measurement is being taken in a location where reading the display is difficult
- CE compliant
- Chopper-stabilized probe technology



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Model 511 Specifications

Performance

Measurement Range (switch selectable)

Low Range	0 to ± 2 kV / inch
High Range	0 to ± 20 kV / inch

Measurement Accuracy

Voltage Monitor Output	Better than $\pm 5\%$ of reading, ± 10 mV
Voltage Display	Better than $\pm 5\%$ of reading, ± 2 counts

Voltage Monitor

Output	2 volts output at full scale
Ratio	
Low Range	1/1000 of the measured electrostatic field
High Range	1/10000 of the measured electrostatic field

Front Panel Meter

Voltage Display	3 ½ digit LED display
Range	
Low	0 to ± 1.999 kV / inch
High	0 to ± 19.99 kV / inch
Display Resolution	
Low Range	1 V / inch
High Range	10 V / inch
Sampling Rate	3 readings per second

Features

Ground Snap Connector	Provides connection for a grounding wire
Range/Zero Switch	Resets the instrument to zero and selects the measurement range
Low Battery Indicator	An LCD display message indicates when the battery is low
Hold Switch	Retains the LCD display reading when depressed

General

Dimensions	23.9 mm H x 69.9 mm W x 125.5 mm L (0.94" H x 2.75" W x 4.94" L)
Weight	140 g (4.9 oz.) with battery
Voltage Monitor Connection	2.5 mm jack (3/32") monophone
Tip	Signal
Sleeve	Ground
Operating Conditions	
Temperature	10°C to 30°C (50°F to 86°F)
Relative Humidity	To 80%, non-condensing
Altitude	To 2000 m (6561.68 ft.)

Power Requirements

Power	One (1) 9-volt alkaline battery (not supplied)
Operating Time	Greater than 50 hours, with a new battery at 21° C continuous
Power Switch	A membrane switch that is designed to prevent accidental turn on. Powers the instrument on and off

Included Accessories

Operator's Manual	PN: 23480
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Optional Accessories

Charge Plate	Model No: 16168
Charger	Model No: 16167

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