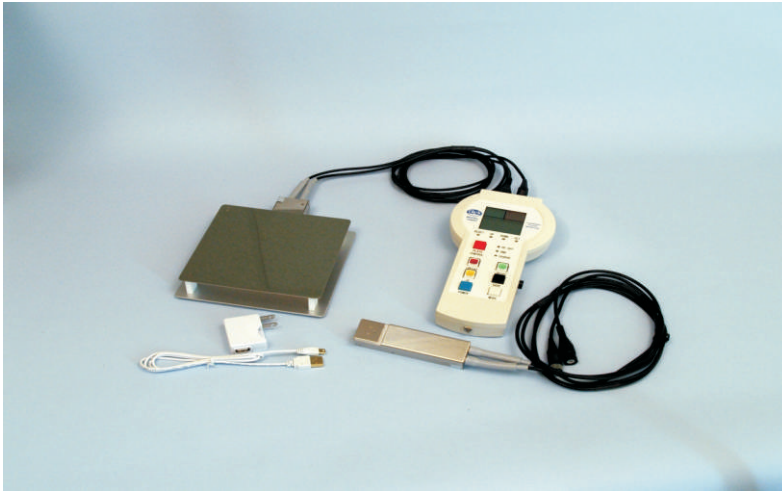


Model 159HH

Hand-Held Charged Plate Monitor



The Trek Model 159HH Hand-Held Charged Plate Monitor is a compact, highly accurate hand-held instrument that can be used to measure air ionization system performance characteristics such as electrostatic decay and ion balance. Its user-friendly operation makes it suitable for frequent use in gathering data and inspecting systems in the workshop or on the production floor.

The Model 159HH can be used in either manual mode or automatic mode. Manual mode allows the user to individually measure positive decay time, negative decay time and ion balance. The automatic mode utilizes the decay and ion-balance test settings as previously set and stored in the manual mode and allows all three measurements to be taken automatically, at user-defined start and end times, sampling time and measurement duration. Measurement data of up to 1,000 data samples can be saved in internal memory and then later transported to a personal computer through the USB port in CSV format.

Ion collecting plate availability includes a standard model using a 150mm X 150mm sensing plate which complies to the IEC61340 standard and a miniature plate using a 25mm X 25mm sensing plate for use in difficult-to-reach locations.

Power to the Model 159HH is provided by a built-in battery that can be recharged from a Mini-B to USB cable connected to the USB port on a personal computer or from the Mini-B to USB cable connected to a universal line power AC/DC adapter. The Model 159HH is CE compliant.

- **Highly Accurate**
- **Lightweight and Compact Hand-Held Design**
- **Automatic or Manual Modes**
- **USB Port**
- **Measure Difficult to Reach Locations**
- **Able to Automatically Measure \pm Decay Time and Ion Balance**
- **Set Sampling Time and Measurement Start/End Times**
- **Test Data Saved in Internal Memory**
- **Built-In Rechargeable Battery**
- **CE Compliant**
- **Standard Probe Complies to IEC61340**

Model 159HH Specifications

All specifications are with no load unless otherwise specified.

Digital Display

The digital panel meter (DPM) displays alpha-numeric characters with regard to the following information:

Plate Test Voltage (0 to $\pm 1.20\text{kV}$)

- 1) at < 1,000V: 0 to $\pm 999\text{V}$
- 2) at > 1,000V: $\pm 1.00\text{kV}$ to $\pm 1.20\text{kV}$

Decay Time

- 1) at < 100 sec.: 0.0 to 99.9 sec.
- 2) at > 100 sec.: 100 to 300 sec.

Test Mode

- 1) Automatic mode measures and displays positive charge decay time, negative charge decay time and ion balance voltage based on predefined testing settings
- 2) Manual mode measures and displays user-selected tests: positive charge decay times, negative charge decay time and ion balance voltage
- 3) Ion balance voltage test displays most positive and most negative hold peak voltage values

Test End

Displays when the automatic test mode has finished

Out-of-Range

Displays the word, "Out" when the test does not finish within the specified decay mode test time or the voltage does not decrease

Features

Maximum Test Plate Voltage

$\pm 1200\text{V}$

Accuracy

$\pm 10\%$ ± 1 digit

Interface

USB 2.0 compatible

Power Supply

- 1) Built-in, rechargeable battery; rechargeable via the USB connection to a universal line AC/DC adapter
- 2) Typically 30 hour battery life

Cable

USB to Mini-B type

Analog Output Voltage

- 1) Minimum load impedance: $1\text{k}\Omega$
- 2) Scale factor: 1mV/V

CE Compliant

Ion Collecting Plates (ordered separately:)

- 1) Model 159P-150X150-1.5, 150 mm X 150 mm X 1.5 meter connecting cable length. Complies with IEC 61340
- 2) Model 159P-25X25-1.5m 25 mm X 25 mm X 1.5 meter connecting cable length, miniaturized probe

Operating Conditions

Temperature

10° to 40° C

Humidity

5% to 60% RH

General

Dimensions

- 1) Main Unit:
11.7 cm W x 4.7 cm H x 22.8 cm D
(4.6" W x 1.85" H x 9.0" D)
- 2) Available Charge Plates - Please specify the desired plate(s) when ordering:
 - i) Miniature Plate Surface:
25 mm X 25 mm
1.0" x 1.0"
Connector Length:
60.33 mm (2.375")
 - ii) Standard Plate Surface:
150 mm X 150 mm
6" x 6"
Connector Length:
88.9 mm (3.5")

Weight

410 g (14.5 oz)

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All specifications are subject to change.
1140/DEC

Model 159HH Accessories (supplied)

Operator's Manual, USB Cable, Universal AC/DC Adapter

Model 159HH Separately Ordered Accessories

Model # 159P-150X150-1.5 (150 mm X 150 mm Collecting Plate)
Model # 159P-25X25-1.5m (25 mm X 25 mm Collecting Plate)