

CHARGED PLATE ANALYZER AND CPA KIT

MODEL 204
MODEL 216

Miniature, full function analyzer for evaluating the performance of ionizers, static protective material and ESD controlled installations.

Features:

- ❑ Fully functional Static Meter
 - Chopper stabilized
 - Operates in ionized air
 - 3½-Digit LCD meter
 - Recorder output
- ❑ Internal ±1200V charging source.
- ❑ Internal timer
 - 60 seconds (6 second optional)
 - 0.3/(0.03) second resolution
- ❑ Removable charged plate detector
 - 1 Volt resolution
 - Standard 20 pf capacitance
 - 1"x3" detector plate
 - Plug-in 6"x6" plate (optional)
 - Tripod mount
- ❑ Meets ESD STM 3.1-2000 & SAE J1645



Applications:



The Model 204 Charged Plate Analyzer is a precision, low cost, hand held instrument that performs virtually all the functions of bench top charged plate monitors and meets the requirements of both ESD STM3.1-2000, "Ionization" and other specifications requiring a charged plate monitor. It is an ideal instrument for performing periodic ionizer audits per ESD SP3.1-2000 "Periodic Verification of Air Ionizers", but also has the accuracy for laboratory use. Other applications for the Model 204 include triboelectric charging analysis, static dissipation of material per SAE J1645 plus many different types of electrostatic measurements.

The Model 204 is available as a stand-alone unit or as part of the Model 216 Charged Plate Analyzer Kit, housed in an ABS carrying case, along with a plug-in 6"x6" detector plate, tripod, Utility Wiring Verifier with ground jack plus a Humidity/Temperature/Dew Point Indicator.

www.electrotechsystems.com

ets

MODEL 204

Description:

The Model 204 Charged Plate Analyzer is a fully functional charged plate monitor that combines the ETS Model 212 Static Meter with the Model 208B Charging Source plus a timing circuit and removable Model 205C Charged Plate Detector. It is packaged in an enclosure that is only twice the length of an ETS static meter.

The precision electrostatic fieldmeter features a chopper-stabilized sensor for long-term, accurate measurements in both normal and ionized environments, and when used as a field meter only (Charged Plate Detector removed), it can measure from 0 to ± 20 kV at a Meter-to-Object distance of 1 inch (2.5 cm). Higher voltages can easily be measured by increasing the distance. A zero control allows the user to compensate for offsets when required. The internal charging source is a miniature, dual polarity 1200 Volt power supply that charges the isolated 1"x3" detector plate when either the + or - CHARGE button is depressed.

The charging function automatically activates the timing mode. As the applied 1200 Volt charge on the detector plate decays, either by ionization or by dissipation through a resistance, the timer starts counting when the measured voltage decays below 1000 Volts and stops when it reaches 100 Volts. Decay times up to 60 seconds in 0.3 second increments can be measured.

The 3½-digit LCD meter displays the voltage (10 Volt resolution), polarity, low battery warning plus dissipation time when the decay function of the Analyzer is used. A recorder output jack (± 200 mv full scale) enables a visual or hard copy record of the measured voltage to be obtained.

The Charged Plate Detector snaps onto the front of the unit. When installed the maximum measurable voltage becomes ± 2000 Volts with 1-Volt resolution. A 1:1 configuration (10V resolution) is available as an option for high voltage applications up to ± 5 kV. Also available is a 6"x6" standard size detector plate that plugs into the 1"x3" detector plate, converting the Model 204 to a full size CPM. A ¼-20 threaded insert enables the instrument to be mounted onto a tripod. A 10' coiled grounding cord is also supplied. The Model 204 is also available as part of the Model 216 Kit that includes the 6"x6" detector plate, tripod, Model 256 Utility Wiring Verifier with standard banana jack and the Model 546 Humidity/Temperature/Dew Point Indicator housed in a ABS carrying case. For static dissipation measurements, a relay operated grounding module is available.

Specifications:

ELECTRICAL

Sensor	Vibrating Reed
Range	± 20 kV @ 1" (2.5 cm)
Display	3 ½-Digit LCD
Resolution	10V (1V with C.P.D.)
Accuracy	$\pm 2\%$
Linearity	$\pm 2\%$
HVPS	± 1200 V @ 50 μ a
Timer	0-60 sec., 0-6 sec. (optional)
Resolution	0.3 sec., 0.03 sec (optional)
Rec. Out	2.5 mm Jack
Signal	10 mV/kV
Power	9V Battery
Life	20 Hrs. typ.
Bat Low	LCD Symbol

CHARGED PLATE DETECTOR

Capacitance	20 \pm 3 pf
Det. Plate	1"x3" (2.5x7.6 cm)
Plug-in option	6"x6" (15.2x15.2 cm)
Range:	± 2 kV
Gnding	¼" Male Snap
Cord	10' (3 m)

MECHANICAL

Dimensions	8"Lx2.4"Wx0.9"H (20.3x14.6x22.9 cm)
Weight	9 oz. (255 gm)

WARRANTY One Year

In accordance with ETS policy to improve its product line, the specifications cited above are subject to change without notice. 3/5/04



electro-tech systems, inc.

3101 Mt. Carmel Avenue, Glenside, PA 19038 • Tel: (215) 887-2196 • Fax: (215) 887-0131