

TECHNICAL DATA

CPM-766 Charged Plate Monitor



Product Highlights

- Measures Decay and Balance (Offset Voltage) in accordance with ANSI/ESD STM3.1 and IEC 61340-4-7
- Uses rechargeable Li-ion batteries
- Up to 250 hours of battery life
- Automated test sequences of tests
- Selectable stop voltages for decay tests
- Programmable delayed start option
- Large color touchscreen LCD display
- Built-in temperature and humidity sensor
- Internal memory up to 200 data sets
- Fast response time
- Analog output

What's included

- AC/DC Power Supply
- USB-C Cable
- 72" Ground Cord
- Q007B Common Point Ground Connector
- Carrying Case
- Microfiber Cloth
- NIST Traceable Calibration Certificate with Data

A portable Charged Plate Monitor that evaluates the performance of ionizers per ANSI/ESD STM3.1 and IEC 61340-4-7

The CPM-766 is an advanced Charged Plate Monitor that utilizes a microprocessor for assessing the effectiveness of air ionizers in neutralizing static charge within ionization systems. It offers the capability to conduct positive and negative decay tests, as well as balance (offset voltage) tests, enabling the determination of the operational efficiency of an ionization system. Compliant with the ESD Association Standard ANSI/ESD STM3.1 and IEC 61340-4-7 Ionization, the CPM-766 is suitable for testing various types of ionization systems.

The CPM-766 conducts both manual and automatic decay and balance tests to qualify and periodically verify ionizers. Its internal memory is capable of storing up to 200 test data. The test data includes balance averages, temperature and humidity, date and time and can be saved under specified locations and areas.



General Specifications

PERFORMANCE	
Charging Range	±1,250 ±5% volts DC
Charging Speed	Charges from zero to over ±1000 volts in 3 seconds at ambient conditions
Accuracy	Voltage Monitor Output: Better than ±5% of reading, ±10 mV Voltage Display: Better than ±5% of reading, ±2 counts
Response Time	Less than 180ms (90-10%)
Sensor Noise Signal (Typical) ¹	Maximum Voltage: +3 volts Minimum Voltage: -5 volts
OUTPUT	
Connection Type	BNC Connector located on the back panel
Analog Output	±2 Volts
Scale Factor	1 Volt output corresponds to 10 kV
ISOLATED CONDUCTIVE PLATE	
Conductive Plate Size	6.0" x 6.0" 15.2 cm x 15.2 cm
Capacitance	20 pF ±2 pF
Plate Voltage Retention	Floating plate voltage discharges less than 10% over a 5 minute period when charged to over 1kV ²
Plate Spacing	0.805" (2.4 cm) between isolated and ground plates
Spacers	Plate spacers made from machined virgin, white Teflon [®]
Plate Construction	Aluminum Bright nickel plating Conductive plate is not detachable
DISPLAY	
Type	Color Capacitive Touchscreen
Size	5.0" Diagonal
Resolution	800 x 480 pixels
Response Time	10ms Typical
Surface Treatment	Anti-Glare
Touch Point	5
Glove Use	Supports PVC, PE, Lightweight Rubber Gloves (0.3mm thick)
GROUNDING	
Case	2 green banana jacks mounted on the side panel
TEMPERATURE & RELATIVE HUMIDITY SENSOR	
Temperature Accuracy ³	±2°F (±1°C)
Relative Humidity Accuracy	±10%
POWER	
Battery	Re-chargeable Li-Ion battery (included). Battery swappable through easily accessible battery door at the bottom of the instrument
Battery Life	250 hours when in standby mode 48 hours typical 10 hours (of continuous use) Approximately 1000 decay tests
Charging	Rechargeable via USB 2.0 through PC port or Wall Charger (included)
Charging Time	4 hours (from 1 to 100%)
MEMORY	
Capacity	200 Data Sets
Data Sets	Data sets include Decay Time, Start and Stop Voltage, Min/Max/Avg, Temperature & Humidity, Location, Area and Timestamp
ENVIRONMENT	
Operating Temperature	10°C to 30°C (50°F to 80°F)
Operating Relative Humidity	0% – 80%, non-condensing
Operating Altitude	2000 m
PHYSICAL SPECIFICATIONS	
Dimensions (HxWxL) ⁴	5.5" x 8.9" x 10.6" 13.9 cm x 22.6 cm x 26.9 cm
Weight	4.83 lbs (77.28 oz.) with battery 4.69 lbs (75.04 oz.) without battery
Case Material	Aluminum
WARRANTY	
	2 years on circuit board 1 year on the display 1 year on sensor ⁵

¹ Typical specifications are not guaranteed

² When measuring at <70% Rh

³ Accuracy based on the instrument while not actively charging

⁴ When in overhead measurements position

⁵ Warranty on the sensor limited to a defective sensor that was not dropped or used for measuring a source greater than 20kV.

801B-012 Li-Ion Battery Pack

General Specifications	
Battery Type	3-cell, Rechargeable
Technology	Lithium-Ion Technology
Nominal Capacity	2400mAh
Output Voltage	3.7V
Performance Amp-Hour	2.4Ah
Performance Watt-Hour	8.88Wh
Transport Safety Certified	UN38.3
IATA UN Number	UN3480
IATA Class (Sub Hazard)	9
Operating Temperature	Discharging: -20°C to 60°C (-4°F to 140°F) Charging: 0°C to 45°C (32°F to 113 °F)
Storage Temperature	-5°C to 35°C (-23°F to 95°F)
Storage Humidity	≤75% Rh
Battery Pack Dimensions (WxHxD)	53mm x 48.5mm x 15mm 2.0" x 1.9" x 0.6"
Weight	65g (2.2 oz)
Certification	CE Approved. Complies with EU Batteries Regulation 2023/1542.

Packing Instructions (P.I.)¹

When battery is packaged separately (e.g. a replacement battery pack):	IATA P.I. 965 Section IB applies
When battery is packaged with the instrument, not contained in it:	IATA P.I. 966 Section II applies
When battery is contained within the instrument, then packaged:	IATA P.I. 967 Section II applies

¹ Per IATA 2021 regulations. Regulations subject to change without notice.

The 801B-012 battery packs have been tested and were found to comply with the criteria of "UN Model Regulations, Manual of Test and Criteria, ST/SG/AC.10/11/Rev.7 Part III, subsection 38.3", also known as "UN38.3". As a result they can be shipped unrestricted internationally by any means.

Ensure that any shipment packaging that contains these batteries is properly marked on the outside of the package for containing Li-ion batteries, using the label as described in the 'Additional Requirements Section' of Packing Instructions 965...970. Minimum size of the label is 120 x 110 mm (4.75 x 4.33 inches).

Ordering Information

Part No.	Description
CPM-766	Charged Plate Monitor ¹

¹Includes grounding and charging accessories, and a carrying case

Optional Accessories

Part No.	Description
801B-012	Rechargeable Li-ion Battery Pack
PFP-861LL	72 inch Test Lead, Green
800B-001	AC/DC Power Supply with Multi-Blade Input
700-001	USB 2.0 A to USB-C Cable
Q007B	Common Point Ground Connector
CPM-700C	Carrying Case
766-034	Microfiber Cloth - Black
766-020	BNC Cover



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