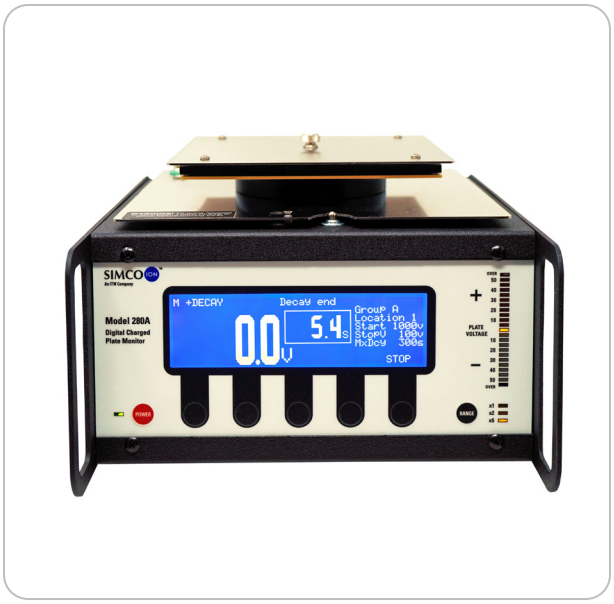
SIMCO ION™
An ITW Company



Charged Plate Monitor

MODEL 280A

Simco-Ion's Model 280A Charged Plate Monitor (CPM) incorporates enhanced circuitry that enables it to more accurately measure the performance of high-frequency AC ionizers, as well as pulsed DC ionizers and steady-state DC ionizers. The Model 280A, built on the Model 280 platform, incorporates enhanced circuitry that enables it to more accurately measure the performance of high-frequency AC ionizers. The architecture of the Model 280A simplifies testing in open or enclosed environments. The detachable plate and programmable automated test sequencing offer remote testing capability, allowing multiple tests without opening an enclosure to reset the instrument.

The Model 280A can be used as a portable CPM and is capable for of up to 6 hours of operation on the internal battery before recharge. It has enough memory for storage of over 1000 tests and more than 100 individual test locations.

Features

- Enhanced circuitry bandwidth to measure high-frequency AC ionizers
- Improved plate capacitance accuracy
- User programmable test protocol
- Delayed start
- AC line input or battery operation
- Comes with 6" detachable plate
- Built-in temperature and humidity sensors
- Onboard data archiving memory
- Digital LCD display

Benefits

- Increased dynamic range to capture AC ionization performance
- Provides more accurate decay times
- Manual mode or automated test sequencing
- Reduces operator induced field distortion and allows airflow settling
- Portability for easy movement in a variety of test locations
- Ideal for mini-environments, and inside process tools
- Accurately documents environmental test conditions
- Onboard memory holds test data with the ability to download data for records or analysis
- Easy to read and interpret data screen

Ionization Solutions

WWW.SIMCO-ION.COM

Model 280A	
Power	90-250 VAC, 50/60 Hz, <12W operating (6 hrs internal battery life for portable use; charge time <8 hrs to >90% capacity)
Charge Plate	Detachable: 6" x 6" (15.2 x 15.2 cm) Capacitance: 20 pF, ±5% (not including strays) Zero Drift: <100 mV/sec (no incident ion flow) Self Discharge: <200 mV/sec
LCD Display	240 x 64 character/graphic
Display Time	4 digit display Accuracy: 0.1% of reading ±1 lsd Resolution: 0.1 sec for readings <1000 sec; 1 sec for reading >999 sec
Display Voltage	240 x 64 character/graphic; 3.5 digit display (Decay and Peak reading) Accuracy: ±0.1% of reading ±3 lsd (least significant digit) Resolution: 1V for readings >99V; 0.1V for reading <100V
Voltage Peak Detector	Balance Test Bandwidth: <10 Hz (pulse width >50 msec less 10% error typical) Average Voltage Overflow: When averaging overflows, the last calculated value for the average voltage will be displayed, and the Avg line of the display will flash, indicating an overflow; the instrument continues to correctly indicate changes to the positive and negative peak voltages, +Vp and -Vp, respectively
Charge Voltage	Range: 10V to 100V above the start voltage Resolution: Settable to 1V increments Accuracy: 0.3% of setting ±2.5V
Start Voltage	1000V, standard Range: ±10 to ±1000V Resolution: Settable to 1V Accuracy: 0.3% of setting ±2.5V
Stop Voltage	100V, standard Range: 0 to ±995V Resolution: Settable to 1V Accuracy: 0.3% of setting ±2.5V
Electrometer	Dynamic Range: ±1200V Follower Error: <10 mV Speed of Response: <10 msec for 1 kV to 0V (90-10%) Bandwidth: -3 db @ 1 Khz 20 Vp-p; 3 db @ 10 Hz 2000 Vp-p Noise: <12 mVrms
Temperature Sensor	Range: 0-122°F (0-50°C) Accuracy: ±37°F (±2°C), typ
Humidity Sensor	Range: 10-80% RH @ 25°C Accuracy: ±5% (typ)
Monitor Output	Interface: USB Divide by 200 Accuracy: Output: 0.1% of reading ±12 mV Impedance: 1 kOhms
Operating Env	Temp: 41-95°F (5-35°C); Humidity: ±5% typ from 10% to 80% RH @ 77°F (25°C)
Dimension	11 x 9 x 6" (27.9 x 22.9 x 15.2 cm)
Weight	12.5 lb (5.67 kg)
Certification	CE UKCA

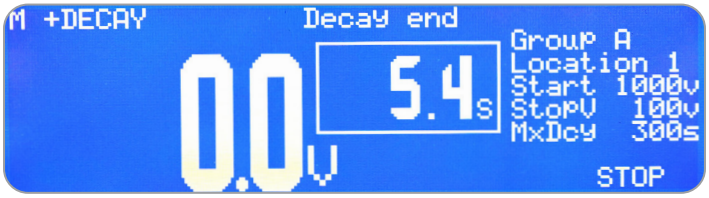
Programmable Tests and Data Storage

The Model 280A can be easily programmed to perform a series of tests. Measurements include discharge time for both positive and negative polarities, balance voltage and swing voltage. Multiple measurements of any or all of the parameters can be automatically recorded at each location. A programmable "measure pause interval" allows the user time to walk away from the instrument before the measurement begins, incorporating an automated settling time into the test sequence. The results can be recorded for each location and the data downloaded to a computer for analysis, archiving and graphing.

The charge plate is detachable and has a variety of mounting options. A 6" charge plate comes standard with the unit and a 1" charge plate is available for environments where space is limited, and the application does not require strict adherence to the ANSI/ESD STM3.1 for the usage of a 6" charge plate. These options provide flexibility and ease-of-use in a variety of environments, including mini-environments.

Advanced Instrument Design

As ionization technologies have advanced over the years, new demands have been placed on the capabilities and features of the charged plate monitors used to evaluate them. Additional and improved features have been incorporated into the Model 280A which improve the accuracy of the plate measurements and enable the unit to measure higher frequency AC ionizers. This instrument may be used to make measurements described in the ESD Association Standard ANSI/ESD STM3.1.



The Model 280A CPM displays an easy to view LCD screen for tracking of your operating parameters. Users can set the test parameters all by the simple push of a button.

Ordering Information

91-0280A-C02	Charged Plate Monitor Model 280A
25-0550	5' extension cord for Charge Plate
29-0280	Replacement battery
32-0290	Replacement Detachable charged plate 1" x 1" (2.5 x 2.5 cm)
32-0296	Optional Detachable charged plate 6" x 6" (15.2 x 15.2 cm)
91-0181	Instrumentation tripod

SIMCO ION™
An ITW Company

DS-0280A-02_V2 - 8/23
© 2022 Simco-Ion
All rights reserved.

Simco-Ion, Technology Group
1141 Harbor Bay Parkway, Suite 201
Alameda, CA 94502
Tel: +1 (800) 367-2452 (in USA)
Tel: +1 (510) 217-0460
ioninfo@simco-ion.com
www.simco-ion.technology