Operator's Manual

Model 282CPS-1
Portable Charged Plate System
for use with
Monroe Model 282A-1
Digital Stat-Arc™ 3

MONROE ELECTRONICS

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PRODUCT DESCRIPTION

Monroe Electronics Model 282CPS-1 is an add-on for the Model 282A-1 Digital Stat Arc 3 Fieldmeter. This system permits the fieldmeter to be used to test and monitor the effectiveness and balance of air ionization devices.

Model 282CPS-1 is designed to meet ESD Association Standard SP3.3-2000. For absolute accuracy we recommend that you use our Model 268A or 288 which meets all requirements of the standard.

The Model 282CPS-1 includes a Charger (Model 280) and an Adapter Plate (Model 96138) for the 282A-1 Fieldmeter.

The 282A-1 Digital Stat Arc 3 (sold separately) is an accurate and portable fieldmeter for detecting and measuring static potentials. Performance of the Digital Stat Arc 3 is based on Monroe's proven chopper-stabilized circuitry, guaranteeing accurate measurements even in ionized environments. The HOLD feature allows balance measurements to be taken in areas inaccessible with standard Charged Plate Monitors. Convergent LED beams provide easy positioning of the meter. The analog output provides 1 volt output corresponding to a 10kV reading on the display. Complete specifications are presented later in his manual.

OPERATING INSTRUCTIONS

INSTALL THE MODEL 96138 ADAPTER PLATE

The case of the Model 282A-1 fieldmeter has two slots along its sides. The TOP slot is the one closest to the instrument front. Slide the tabs of the Adapter Plate ground plate into the TOP slots of the meter case as far as they will go.

MODEL 282A-1 FIELDMETER

Refer to the 282A-1 Operator's Manual for operating instructions.

MODEL 280 CHARGER

This unit is turned on by depressing the momentary pushbutton. The recommended method of use is to:

1. Touch the desired polarity terminal to the floating plate.
2. Touch the opposite polarity terminal with your finger while wearing a grounded wriststrap. (The user's body provides the ground path for both the Model 280 charger and the Model 282A fieldmeter.)
3. Depress the pushbutton power switch on the 280 charger. Plate voltage should indicate over 1000V.)
4. Remove the connection of the Model 280 charger from the plate while keeping the power pushbutton depressed.
5. Begin timing the moment contact is broken with the plate.

Polarity selection

The terminals are labeled (+) and (-). To provide a POSITIVE voltage output, connect the negative (-) terminal to ground while pressing and holding the power button. To provide a NEGATIVE voltage output, connect the positive (+) terminal to ground while pressing and holding the power button.

IMPORTANT: A ground path must be provided between one of the output terminals of the 280 and the ground reference of the 282A-1 fieldmeter and adapter plate. This is normally provided by holding the 280 charger in one hand and the 282A-1 with adapter plate in the other. If this is not possible, use a test lead to connect one of the 280 output terminals to the 282A-1 ground connection (output jack.)

CALIBRATION

Monroe Electronics instruments are factory calibrated prior to shipment. Calibration should be performed annually, or more frequently if specified by contract or company policy. The instruments should also be recalibrated any time it has been repaired or tampered with.

Monroe Electronics will recalibrate the instruments at a reasonable cost or provide information and procedures regarding calibration upon request. Our calibration services offer traceability to NIST or MIL-STD-45662A.

SPECIFICATIONS

Model 96138 Adapter Plate

Plate Capacitance: 20 Pico farads ($\pm$ 5 Pico farads)

Range: 0 to $\pm$ 2kV

Grounding: Connection is made through conductive material of Model 282A-1 case

Weight: 1.5 oz

Dimensions: 2.4"L x 4.2: W x 0.9" D
(6.1 x 10.7 x 2.3 cm)

Model 280 Charger

Output: 1100VDC nominal, <1μA max.

Output Terminals: Two acorn buttons labeled (+) and (-)

Load Regulation: Better than 8% NL to FL
where FL = 10^9 Ω

Battery Type: 9V NEDA, #1604 or equivalent,
40 hours of normal use.

Temperature Range: $+10^0$ to + 30^0 C (+ 50^0 to 86^0F)

Relative Humidity: 10% to 80 % non-condensing

Dimensions: 3.75" L x 2.88" W x 1" D
(9.5 x 7.3 x 2.5 cm)

Weight: 2.8 oz (79 gm)

BATTERY CARE

Both the 282A-1 and 280 use a 9V alkaline battery for operation. Batteries should be replaced when "BAT" is indicated on the Model 282A meter (7.5 volts.) The Model 280 battery should be replaced when you can no longer charge over 1000 volts.

CLEANING

It is important to keep the insulators on the adapter clean and free of contaminates that may cause surface leakage. To test the performance of the adapter plate, charge the plate and note that discharge rate in a non-ionized area. The self-discharge rate to 10% of original voltage should not be less than five minutes.

The area around the aperture of the 282A-1 must be kept clean to ensure accurate, drift-free readings. Never touch the aperture with anything. To remove dust or other particulate matter, use low-pressure instrument grade air. To remove more severe contamination, spray or flush with the smallest practical amount of clean technical grade isopropyl alcohol. After cleaning with alcohol, allow the instrument to dry for several hours before use.

WARRANTY

Monroe Electronics, Inc. warrants to the owners, each instrument and sub-assembly manufactured by them to be free from defects in material and workmanship for a period of two years after shipment from factory. This warranty is applicable to the original purchaser only.

Liability under this warranty is limited to service, adjustment or replacement of defective parts (other than fuses or batteries) on any instrument or sub-assembly returned to the factory for this purpose, transportation charges prepaid.

This warranty does not apply to instruments or sub-assemblies subjected to abuse, abnormal operating conditions, or unauthorized repair or modification.

Since Monroe Electronics, Inc. has no control over conditions of use; no warranty is made, or implied as to the suitability of our product for the customer's intended use.

RETURN POLICY TO FACTORY

Materials returned to Monroe must have a Return Material Authorization number. To obtain a RMA number, contact our A/V Switching & Control Customer Service at 585-765-2254 or fax 585-765-9330. Customers have 30 days to determine that the product ordered fills their need and performs as described in Monroe's literature. Units returned for approved repair or credit, must be in the original packaging including all parts and paperwork plus be in very good physical condition. If not, the customer is billed the cost to refurbish the unit and for missing accessories and merchandise. No products may be returned for exchange or credit after 12 months of the shipment date. Monroe reserves the right to repair or replace units under warranty.

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Specifications subject to change without notice.