

MONROE 282IS AND 282A-1

Full-featured, hand-held fieldmeters for performing static surveys and evaluate charge accumulation in electronic manufacturing and in industrial operations.



The Monroe 282-IS Digital Stat-Arc™ 2 and Monroe 282A-1 Digital Stat-Arc™ 3 are pocket-sized, non-contacting static meters for consistently accurate readings. Simply hold the instrument so the range finder LED beams from a non-pulsing circle indicating you're at exactly the right distance from the target for readings up to 20 kV.

PRODUCT HIGHLIGHTS

- Easy-to-read digital display of field strength provides quantitative data with 100V resolution
- LED pulsed beam range finder identifies calibrated distance from the surface
- Chopper-stabilized measurement technique works in the presence of ionization
- Recorder output to pass measurements to auxiliary instruments to display or record the data
- Drift-free accuracy even in ionized environments
- Optional Charge Plate System for testing ionization systems
- Monroe 282IS is UL approved for use in hazardous environments

TYPICAL APPLICATIONS

- Monitoring "static-free" electronic workstations
- Measuring static build-up on webs in converting, laminating, and printing operations
- Checking grounds and bonding in dry particle/power transport systems
- Testing ionizer performance using optional charged plate adapter Monroe 282CPS

HIGHLIGHTS

Normal Range

0 to ± 19.99 kV @ 1 in

Accuracy

$\pm 5\%$ of reading, + zero offset,
 $\pm$ LSD

Response Time

80 to 100 msec, 10 to 90%

TECHNICAL DATA

Performance Specifications

Display	LCD 3 ½-digit with auto polarity readout, with hold and low battery indicators		
Range	0 to ±19.99 kV at 1 in		
	Voltages of 20kV and higher may be measured by increasing the distance to the target:		
	kV	Distance	Multiply Reading By
	0 to 40	4.0 in	2
	0 to 80	8.5 in	4
Accuracy	±5% of reading, + zero offset, ± LSD		
Analog Output Amplitude	1 V signal denotes 10 kV reading at 1 in for high impedance loads		
Response Time	Typical 80 to 100 msec 10 to 90%		

Mechanical Specifications

Dimensions (L x W x H)	6.1 x 10.7 x 2.3 cm (2.4 x 4.2 x 0.9 in)
Weight	0.14 kg (0.31 lb) with battery
Jack Type	Accepts standard 2.5 mm (3/32 in) monaural phone plug

Electrical Specifications

Battery	9 V NEDA #1604 or equivalent
Battery Life	40 hours of normal use, with alkaline battery

Environmental Specifications

Operating Temperature	0 to 50°C (32 to 122°F)
Relative Humidity	0 to 85% noncondensing
Ionized	Unaffected by ionized equipment

282IS Industrial Approval and Certification¹

UL Certification Class I Groups A, B, C, D, and Class II Groups E, F, G, when powered by 9 V carbon zinc or zinc chloride battery NEDA 1604 or NEDA 1604D
UL Certification for Class I, Division 1, Groups C and D only when powered by 9 V alkaline NEDA 1604A

¹ For UL approved, intrinsically safe meters, customers must specifically request Monroe 282IS when ordering.

EASY-TO-USE OPERATION

1. Turn the instrument ON.
2. Discharge your body by touching a grounded metal object.
3. Point the aperture toward a grounded object and press the ZERO button.
4. Aim the aperture toward the target surface at a distance of 1 in. Adjust the distance until the flashing beams of the LEDs in the instrument converge. Read the voltage and polarity of the charged surface on the meter display.

For additional measurements, repeat step four. To freeze the display, press the HOLD button. To read the voltages, start at a greater distance to the target as given under specifications.

Maintenance

The battery should be replaced annually, whenever you plan an extended period of unattended monitoring, or whenever "BAT" appears on the display for more than an instant. To obtain accurate and drift-free readings, the sensor plate and especially the area around the aperture must be kept absolutely clean at all times. Never touch the aperture with anything—not even a cotton swab.

REFERENCE NUMBERS

Special Request Custom Range Units	
282L	2000 V FS
282M	20 kV/cm
282H	200 kV FS
SE0101	Voltmeter Adapter



ABOUT ADVANCED ENERGY

Advanced Energy (AE) has devoted more than three decades to perfecting power for its global customers. AE designs and manufactures highly engineered, precision power conversion, measurement and control solutions for mission-critical applications and processes.

Our products enable customer innovation in complex applications for a wide range of industries including semiconductor equipment, industrial, manufacturing, telecommunications, data center computing, and medical. With deep applications know-how and responsive service and support across the globe, we build collaborative partnerships to meet rapid technological developments, propel growth for our customers, and innovate the future of power.

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For international contact information,
visit advancedenergy.com.

sales.support@aei.com
+1.970.221.0108

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