

GROUND TESTING CERTIFICATION FOR THE LIGHTNING PROTECTION INDUSTRY

TRAINING SEMINAR

A TEGG[®] authorized training company

A lightning protection system is a fundamental component for safeguarding any structure or facility against the destructive effects of lightning strikes. Ensuring good grounding is paramount in preventing costly damage and downtime due to service interruptions or inoperative surge protection caused by poor grounds. Regular testing of a lightning protection system is crucial for detecting faults and ensuring its functioning correctly. Inspections and testing should occur at different stages, including during construction and installations, after installation, periodic testing recommended by IEC 62305-3, LPI 175 and NFPA 780 Standards, and after alterations or repairs. Grounds help ensure rapid operation of the protection relays by providing low resistance fault paths in the event of foreign potentials due to faults, and low ground resistance is required to meet NEC[®], OSHA and other electrical safety standards.

IN THIS SESSION

AEMC[®] Instruments certified technical trainer, Gregg Wong, will provide an informative review of the essential methods for testing the reliability of a lightning protection system. Testing topics covered:

- Ground resistance testing
- Point-to-point testing
- Ground or soil resistivity testing

These methods are utilized to inspect the mechanical and electrical conditions of all conductors, connections, joints, and ground electrodes. Additionally, each individual earth grounding point and its conductors need to be electronically tested for resistance to ground. Proper testing of the lightning protection system can ensure that the structure and all its elements are safe from the effects of lightning strikes. By regularly performing grounding tests you can confidently:

- Confirm that the lightning protection system fits into the requirements mentioned in the standard documents
- Ensure that all the components of the lightning protection system are in good condition, there is no corrosion and are capable of performing their functions
- Make sure that any recently added service or construction is properly incorporated into the lightning protection system

AFTER THIS SESSION

You will understand proper sizing and testing of grounding systems and the instruments needed to simplify ground testing. Through a combination of classroom instruction and hands-on demonstrations, you will learn the various types of ground resistance tests, the proper application for each test and how to correctly operate the equipment used in conducting these tests. Attending this session will give you all the information you need to conduct ground resistance testing correctly and efficiently, saving you substantial time and money in the future.

CLASSROOM

This session will consist of classroom presentations and discussions on all aspects of soil resistivity and ground resistance testing as well as bonding. The 4-Point soil resistivity test and the 3-Point Fall-of-Potential ground resistance testing methods will be presented along with the revolutionary clamp-on test method. Touch potential testing will also be covered.

References to the IEEE Green Book, IEEE standard 142-2007, IEEE standard 81-2012, LPI 175, MIL-HDBK-419A, AFMAN 32-1065, and article 250 of the National Electrical Code will be referenced and discussed throughout the session:

- When and how to use each test method
- When and where not to use a particular test method
- Proper placement of auxiliary rods to conduct each type of test
- How to calculate the required ground electrode depth based on soil resistivity data
- How to distinguish ground resistance measurements from loop resistance
- How to use the Fall-of-Potential method when it is not practical to drive auxiliary rods
- How to test bonding resistance

FIELD TESTING

This session will consist of on-site field tests demonstrating the different methods of ground resistance testing discussed during the first half of the day. Participants will have the opportunity for hands-on experience and demonstrations of proper testing procedures including measurement of soil resistivity, correct placement of test rods, using the 3-Point method and proper use of the clamp-on test method.



4-Point and
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MODELS 4620 & 4630



Clamp-On Ground
Resistance Testers
MODELS 6416 & 6417



Bond Testers/
Micro-Ohmmeters
MODEL 6240



3-Point Ground
Resistance Testers
MODEL 6424



Don't wait! Sign up for this seminar today!



SEMINAR INCLUDES:

Full Day of Classroom and "Hands-on" field test sessions, lunch, and course materials

All participants attending will receive:

- **\$50.00 REBATE CERTIFICATE** toward the purchase of an AEMC® Instruments ground tester
- AEMC® Instruments Ground Testing Certification for the Lightning Protection Industry binder and USB drive with useful tools to assist in ground resistance testing, calculator clipboards, personalized training certificate, and a NEW digital multimeter!



Save thousands in contractor expense!

\$525
per person

\$250
per person

Discount pricing for members of the
Lightning Protection Institute

ENTER PROMO CODE: **LPIMEM25**



All seminars will begin at 10:00 am. Lunch will be served at noon and the seminar will end at approximately 4:30 pm. Class locations and dates are subject to change, refer to our website for updates.

Acknowledgment of your registration and all pertinent information will be sent to you.

Please note: Applicants may cancel up to ten (10) working days before the day of the course for a full refund. Cancellations received later than ten days prior to the course are subject to a \$100 service charge. Those who have not canceled two (2) days prior to the course and "no shows" are subject to the entire fee. AEMC® Instruments reserves the right to cancel within seven business days.



SIGN UP TODAY!



Get a **FREE** meter up to a **\$99** value when you sign up!



GIVEAWAY
We will be giving away a **FREE** Ground Resistance Tester Model 6416 to one lucky attendee!



For more information call (800) 343-1391 or email marketing@aemc.com
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