

How to ground a temporary power distribution box on a construction site



Article Overview

Temporary power distribution boxes must be properly grounded using a dedicated equipment grounding conductor and comply with NEC Article 590 to ensure worker safety and prevent electrical hazards.

Key Grounding Requirements

1. Equipment Grounding Conductor (EGC): All temporary power distribution boxes must have a continuous equipment grounding conductor connecting the box to the main service or feeder ground. This ensures that any fault current is safely directed to earth, reducing the risk of electric shock or fire . 2. GFCI Protection: Most temporary power receptacles, including those on spider boxes, require GFCI protection per NEC 590.6. GFCIs provide additional protection by quickly disconnecting power if a ground fault occurs, which is especially important in wet or outdoor construction environments . 3. Assured Equipment Grounding Conductor Program (AEGCP): If GFCI protection is not used, the AEGCP can be implemented. This program requires:

- A written procedure for grounding inspections
 - A designated competent person to perform daily visual inspections
 - Testing of grounding conductors before first use, after repairs, and at regular intervals
 - Documentation of all tests and removal of defective equipment
4. Connection to Ground Rods or Grounding Electrode System: Temporary distribution boxes may be...

Article Content

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Construction

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Improve temporary power safety with our expert guide. Learn about NEC Article 590, GFCI protection,

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Temporary protective grounds shall be placed at such locations and arranged in such a manner that the employer can demonstrate

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NEC 590: Temporary Power for Construction Sites

Complete guide to NEC Article 590 temporary power requirements for construction sites. Learn GFCI protection rules, cord and cable

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Temporary Power Regulations in Construction

It reviews regulations around equipment approval, ground-fault protection, wiring methods, boxes and fittings, panelboards,

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To ensure protective grounds will protect workers, grounding methods must employ good engineering controls such as those

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