

Grounding Regulations for Distribution Boxes and Meter Boxes



Article Overview

Proper grounding of distribution boxes and meters ensures safety, prevents electrical hazards, and complies with regulatory standards such as the NEC and OESC.

Key Regulatory Requirements

Single-Point Grounding: The Ontario Electrical Safety Code (OESC) mandates that the supply authority system grounded conductor (neutral) must be connected at one point only at the consumer's service. For a single meter base and service box, grounding can be made at either the meter base or the service box, but not both, to prevent objectionable currents and ensure safety. In multi-gang meter bases, grounding must occur at the meter base, with bonding connections between service boxes sized according to code.

Grounding Electrode Requirements: The National Electrical Code (NEC) specifies that grounding electrodes, typically copper-clad steel rods, must be at least 8 feet long and 1/2 or 5/8 inches in diameter. The rod must be fully driven into the soil to provide a low-resistance path for fault currents. In difficult soil conditions, rods may be driven at an angle not exceeding 45 degrees, provided the full length remains in contact with the earth.

Grounding Conductor Sizing: The Grounding Electrode Conductor (GEC) connecting the meter box or main service panel to the grounding electrode must meet minimum size requirements based on the largest ungrounded service-entrance conductors. Approved clamps rated for direct burial and corrosion resistance must be used to ensure a mechanically secure and electrically sound connection

Article Content

Jun 23, 2026

National grid logo and tag

Install, own and maintain: transformer pad, reinforcement and grounding, oil containment where required by the Company or local

Sep 17, 2025

DUKE UNIVERSITY CONSTRUCTION STANDARDS 1

Introduction Grounding is utilized within electrical distribution systems to provide an alternative, low- impedance path around the

Apr 09, 2026

Grounding & Bonding — Why it is done And How to Install Properly

Bonding is accomplished when the electrician connects equipment grounding conductors to the equipment grounding terminal bar in

Aug 22, 2025

NEC Requirements for Grounding of Services | EC& M

Correct grounding of services depends upon understanding the definition and role of the grounded conductor.

Nov 08, 2025

ARTICLE 250 GROUNDING AND BONDING

GROUNDING AND BONDING Introduction to Article 250—Grounding and Bonding ounding electrical installations. The terminology

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GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

The designer will evaluate the sizing of the grounding system and the need for an isolated or bonding ground system separate from

Feb 25, 2026

DISTRIBUTION BOX

Each DISTRIBUTION BOX and controller must be grounded. On the US market, a 5.26 mm 2 (10 AWG) ground wire

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METER ROOM_RE M final lastlast

5.7. All meter boxes shall be installed at a height of 200 mm from ground to the bottom of the meter box. Civil construction

Apr 30, 2026

What Is a Meter Box? A Complete Guide to Types, Safety, and

Learn what a meter box is, why it matters for electrical safety, its types, components, standards, and best installation

May 26, 2026

10-15-* Grounding with a meter base on the supply side of service boxes

Where the consumer's service has a single meter base and service box, the Ontario Electrical Safety Code (OESC) permits the

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10-15-* Grounding with a meter base on the supply side of service boxes

When grounding is installed at the meter base, the grounding conductor is not permitted to be installed in the conduit containing the

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The Basics of Grounding and Bonding

Section 250.4 states the general requirements for grounding and bonding of electrical systems for both grounded and ungrounded

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How to Properly Ground an Electrical Meter Box

Essential guide to code-compliant electrical meter box grounding. Understand materials, installation steps, and crucial

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GROUND GRID SPECIFICATIONS

Each Power Circuit Breaker or Power Transformer having a bushing Voltage Transformer on the tank shall have the Voltage

Jul 23, 2026

Electrical grounding and bonding per NEC

Understanding correct grounding and bonding design and construction is crucial for proper electrical system operation

Aug 24, 2025

Microsoft Word

SEC Distribution System extends from the MV (33 kV, 13.8 kV) feeder outlets of HV / MV Substations down to SEC Customer

Jun 22, 2026

Electrical grounding and bonding per NEC

The intent of this article is to discuss the requirements of solidly grounded, alternating current electrical systems less

Nov 13, 2025

Grounding System Installation Standards for Distribution Boxes and ...

Whether you're a seasoned pro or just starting out, this comprehensive guide will give you practical insights into proper

Oct 29, 2025

Where Should I Place My Meter Box

Where Can I Put My Meter Box & What Regulations do I Need to Follow? A meter box acts as a protective shield for

Mar 13, 2026

Article 250

Separately derived systems The grounding and bonding requirements for separately derived systems are in 250.30. What has

Contact Us

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