

Grounding of cable trays and metal conduits



Article Overview

Metallic cable trays and conduits must be properly grounded and bonded to ensure electrical safety, continuity, and compliance with NEC standards.

General Principles

All metallic cable trays and conduits are considered non-current-carrying parts of equipment that may become energized during a fault. They must be bonded and grounded to provide a low-impedance path for fault currents, protect personnel, and ensure proper operation of overcurrent devices . Grounding is required regardless of whether the tray or conduit is used as an Equipment Grounding Conductor (EGC) .

Equipment Grounding Conductor (EGC) Use

- Cable trays as EGC: Steel or aluminum trays can serve as the EGC if they meet NEC 392.60 criteria, including minimum cross-sectional area, UL classification, and installation in facilities where qualified personnel maintain the system .
- Separate EGC: If the tray is not rated as an EGC, a separate conductor must be installed in the tray or within the cables themselves, bonded to each tray section using grounding clamps or jumpers .
- Conductor sizing: EGC sizing should follow NEC Table 250.122, based on the largest overcurrent protection device in the circuit .

Bonding and Continuity...

Article Content

Feb 05, 2026

Bonding and Grounding wire mesh cable tray.

Article 250.96(A) "Metal raceways, cable trays, cable armor, cable sheath, enclosures, frames, fittings, and other metal non-current

Apr 03, 2026

Practices for grounding and bonding of cable trays

Metallic Cable Trays Cable tray may be used as the Equipment Grounding Conductor (EGC) in any installation where qualified

May 09, 2026

Earthing or Bonding a Metallic Cable Tray: What the Regs Really Say ...

If you must earth a tray for functional reasons (static discharge, RFI), do it at one end only. Bonding both ends can form

Apr 05, 2026

Bonding conduit sleeves

Following the 607 standard, cable trays and conduits used for distributing telecommunications cabling are bonded to a

Mar 29, 2026

Grounding Inspection of Steel and Aluminum Cable Tray Systems

For safety reasons, the grounding should be right before the wire is energized. This is true for cable tray, conduit, cable, or any

Jul 30, 2025

Cable Tray Grounding: Power, Instrumentation, and Telecommunications

Where cable tray systems contain only signal and communication circuits that operate at low energy levels, power grounding per

Dec 22, 2025

Grounding & Bonding Connectors

Metal cable trays must be grounded and an electrically continuous system per NEC Article 392. The ground network consists of all

Jul 30, 2025

Safely Installing, Maintaining and Inspecting Cable Trays

If channel dropouts or conduit-to-cable tray adapters listed for grounding are not used, grounding and bonding must be provided by

Feb 05, 2026

Grounding Requirements for Electrical Cables, Cable Trays, and

Guidelines for grounding electrical cables, busbars, and cable trays in wiring projects, ensuring safety and compliance

Jan 15, 2026

Practices for grounding and bonding of cable trays

All metallic cable trays shall be grounded as required in Article 250.96 regardless of whether or not the cable tray is being used as an

Feb 24, 2026

How to Properly Ground and Bond Structured Cabling Systems| CMW

Posted on: 02/06/2025 The correct way to ground and bond a cabling system is to ensure all conductive components, such as cable

May 25, 2026

Cable Tray Grounding Wire: What You Need to Know

Discover the best practices for Cable Tray Grounding Wire installation. Learn key requirements, safety tips, and

Jun 06, 2026

Understanding Cable Tray Grounding: A Comprehensive Guide

Cable tray grounding is an indispensable aspect of electrical installations that plays a pivotal role in ensuring safety,

Aug 07, 2025

How to achieve continuous grounding in PCS cable trays/conduits for ...

This section explains how, in PCS (Precast Conduit System) engineering, techniques such as bridging, multi-point

Oct 07, 2025

Cable Tray Installation Rules (NEC 392) - Electrical Trader

All metallic cable trays must be grounded as outlined in NEC Article 250.96, even if the tray isn't being used as an

Jan 06, 2026

Equipment Grounding Conductors for Cable Tray Systems

Cable tray have excellent safety and dependability records, because of the result of cable tray's unique features plus

May 31, 2026

Practices For Grounding and Bonding of Cable Trays

Metallic cable trays must be grounded and can serve as an equipment grounding conductor if the metal cross-sectional area meets

Mar 27, 2026

EMT conduits grounding and bonding | Information by Electrical ...

Our project client has their own Engineering Standards that state: Metallic conduit shall be grounded at both end

Jan 27, 2026

Cable Tray Grounding: Electrical and Non-Power Conductors

Grounding/ Earthing Cable Trays The ground network consists of all metal parts of a building connected together:

Mar 04, 2026

NEC Standards for Cable Trays: Grounding, Fill Capacity

The flexibility and scalability of cable trays make them an ideal choice for environments where cable density and

Dec 17, 2025

Cable Tray Grounding: Power, Instrumentation, and

Cable tray systems are not required to be mechanically continuous, but shall be electrically continuous. Cable trays are also bonded

Feb 17, 2026

grounding cable trays | Information by Electrical Professionals for ...

Metal raceways, cable trays, cable armor, cable sheath, enclosures, frames, fittings, and other metal non?current

Oct 10, 2025

Grounding & Bonding Wire Mesh Cable Trays

However, while wire mesh trays offer mechanical and thermal advantages, proper grounding and bonding are critical

Jun 24, 2026

(B) Steel or Aluminum Cable Tray Systems

Steel and aluminum cable tray systems can serve as equipment grounding conductors if specific criteria are met. These include

May 21, 2026

Grounding Inspection of Steel and Aluminum Cable Tray Systems

Electrical grounding is essential for personal safety and protection against arcing that can occur in any part of the wiring system,

Nov 01, 2025

Bonding and Grounding

For example, the trays and fittings are identified as an equipment conductor. Needed for bonding Chapter 3 provides specific

Apr 17, 2026

Bonding conduit to cable tray

The cable tray is bonded to the building steel itself and the conduit is usually bonded through the use of a bonding

Jul 30, 2025

NEC Standards for Cable Trays: Grounding, Fill Capacity

This article provides a comprehensive framework that governs various aspects of cable tray installations, including

Jul 09, 2026

Equipment Grounding Conductors for Cable Tray Systems

Cable tray wiring systems have excellent safety and dependability records. These excellent records are the result of cable tray's

Jan 01, 2026

Equipment Grounding Conductors for Cable Tray Systems

Equipment Grounding Conductors for Cable Tray Systems Cable tray wiring systems have excellent safety and dependability

Jan 07, 2026

Explaining NEC Article 250 on Grounding and Bonding

This bonding ensures that the cable tray system does not pose a shock hazard and that fault currents can safely flow

Contact Us

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