Cable trays can be used as grounding conductors



Overview

All metallic cable trays must be grounded as outlined in NEC Article 250.96, even if the tray isn''t being used as an equipment grounding conductor (EGC).

Key Takeaways

Yes, metallic cable trays can be used as equipment grounding conductors (EGC) if installed and bonded according to NEC standards and best practices. Using Cable Trays as Grounding ConductorsMetallic cable trays can serve as the equipment grounding conductor (EGC) in installations where qualified personnel will service the system, provided they meet certain criteria such as minimum cross-sectional area and UL classification for grounding suitability. All metallic trays must be grounded regardless of whether they are used as the EGC, in compliance with NEC Article 250.

96. Non-metallic cable trays, however, cannot be used as grounding conductors.

Bonding and Continuity

Cable trays must be electrically continuous, even if not mechanically continuous, and sections should be bonded together using bolting, splice plates, clamps, or bonding jumpers to ensure a reliable path for fault currents. Flexible jumpers with appropriately sized lugs are recommended at connection points to maintain continuity and safety. When an EGC cable is installed in or on the tray, it is good practice to bond it to each or alternate tray sections to prevent displacement under fault conditions.

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Material Considerations

When using cable trays as grounding conductors, care must be taken with material compatibility. For example, a bare copper EGC should not be placed in an aluminum tray due to the risk of electrolytic corrosion in moist environments. Instead, insulated conductors with exposed bonding points using tin- or zinc-plated connectors are preferred.

Safety and Compliance

Proper grounding of cable trays ensures that stray currents are safely diverted to the earth, reducing the risk of electric shock, equipment damage, and interference with sensitive electronics. Grounding also supports compliance with NEC standards, enhances system reliability, and is critical in industrial, commercial, and critical infrastructure installations.

Summary

Metallic trays can be used as EGCs if properly bonded and compliant with NEC standards. Non-metallic trays cannot serve as grounding conductors. Bonding jumpers and flexible connections are recommended to maintain electrical continuity.

Material compatibility must be considered to prevent corrosion. Grounding cable trays improves safety, system stability, and regulatory compliance. By following these guidelines, cable trays can effectively function as part of a safe and reliable grounding system.

Article Content

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 equipment grounding conductor (EGC). This precaution helps prevent

Practices for grounding and bonding of cable trays

Cable tray may be used as the Equipment Grounding Conductor (EGC) in any installation where qualified persons will service the installed cable tray system. There is no restriction as to where the

Equipment Grounding Conductors for Cable Tray Systems

The intent of this article is to review grounding practices for cable tray wiring systems. The Equipment Grounding Conductors are the most important conductors in the electrical systems. The Equipment

Equipment Grounding Conductors for Cable Tray Systems

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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 unique

Can cable tray be used as a ground carrying conductor?

Yes, the B-Line cable tray (P/N 25A09-30-120) may be used as an equipment grounding conductor, provided it is properly bonded. Cabinets or conduits may be bonded directly to the tray using listed

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 a loop, increasing magnetic coupling and nuisance RCD trips.

Cable Tray Grounding Wire: What You Need to Know

Can I use the cable tray itself as a grounding wire? Yes, but only if the tray is made of metal and meets the required electrical conductivity and

What Are Equipment Grounding Conductors (EGC) for Cable Trays?

Can the Cable Tray Itself Be the Grounding Conductor? Yes, the metal cable tray can serve as the safety ground, which means that you may not need another piece of green copper wire.

The Importance of Grounding in Cable Trays and How to Do It?

Grounding in cable trays allows electrical leakage from the outer surfaces of the conductors to be channeled into the tray. It helps to safely direct dangerous currents that may result

Overhead Cable Management: Cable Runway vs. Cable Tray

Overhead Cable Management Products from Enconnex Enconnex has partnered with Liberty to deliver best-in-class cable runway and wire mesh cable tray systems. Our overhead cable

Wire Basket Overhead Cable Tray Routing System Application Guide

Wire Basket Overhead Cable Tray Routing System contributes to effective space utilization and network performance, and it provides speed of deployment, structural integrity, cable protection, and ease of

Cable Tray NCCER Module 26207-14 Flashcards | Quizlet

Study with Quizlet and memorize flashcards containing terms like Except for type MC, all multi conductor cable''s operating at or above 600V must be separated by a solid divider from tables operating under,

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Cable Tray Sizing Calculator | IEC 61537 & NEC 392

Use this cable tray sizing calculator to check fill %, select tray size, and comply with IEC 61537 & NEC 392 with formulas, example and checklist.

26 05 36 Cable Trays for Electrical Systems

When using epoxy- or powder-coat painted cable trays as a grounding conductor, completely remove coating at all splice contact points or ground connector attachment.

A T&B Cable Tray Metallic cable tray

Finally, in installations where cable tray can be used as the equipment grounding conductor (per NEC standards), it is easy to visually check the system components as well as conduct checks for

The FOA Reference For Fiber Optics

A widely used aerial cable is optical power ground wire (OPGW) which is a high voltage distribution cable with fiber in the center. The fiber is not affected by the

Cable Tray Questions | Cable Tray Institute

Answer: No. Cable trays are a support system for electrical cables, power, signal, and communication and optical fiber cables. NEC section 300-8 does not permit any tube, pipe, or equal for water, air

Wire Weight Calculator | Cable Weight Tool

Calculate electrical wire weight for copper and aluminum conductors. Free tool for cable tray loading and shipping estimates.

Related Video Reference

This video was associated with the source search result. Verify technical details against current product documentation and project requirements.

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