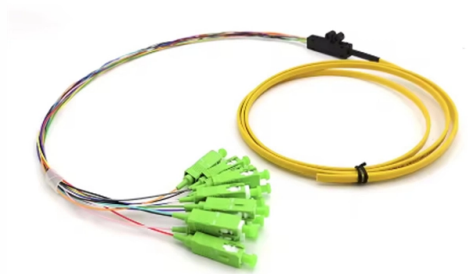


Should cable trays be installed overhead



Overview

There should be no installation of the cable below the temperature rating that is marked on the cable.

Key Takeaways

Overhead cable trays are installed by securely mounting support brackets to the ceiling, aligning and connecting tray sections, and properly routing and securing cables while ensuring grounding and spacing compliance. Planning and Preparation

Before installation, plan the tray layout according to cable type, load, and future expansion needs. Determine the tray type (ladder, perforated, wire mesh, or solid-bottom) and calculate the required width and depth based on the number and size of cables. Identify ceiling attachment points and ensure the structure can support the tray load.

Mounting Supports

Overhead trays require secure supports, such as trapeze hangers, center-span supports, or wall brackets anchored to the building structure. Supports should be spaced 1.5 to 3 meters apart, depending on tray type and load, to prevent sagging. Use appropriate hardware kits to attach brackets and ensure they are level and aligned.

Installing Tray Sections

- Lift tray sections carefully using cranes, hoists, or manual handling for smaller sections. Avoid using the tray itself as a lifting point.

- Connect sections using bolted splices or splice plates to ensure structural integrity .
- Incorporate fittings such as horizontal bends, vertical risers, tees, and reducers to navigate changes in direction or elevation .
- Check alignment and level throughout the installation to maintain a straight and stable run.

Cable Routing and Securing

Once the tray is installed, lay cables neatly, separating by voltage or function. Use cable ties or straps to organize bundles and leave slack for expansion or future adjustments . For wire mesh trays, integrated sidewalls help contain high volumes of cables .

Grounding and Bonding

Metal trays must be properly grounded to ensure safety and compliance with electrical codes. Use bonding jumpers across tray sections to maintain electrical continuity .

Final Steps

- Label cables and document the layout for maintenance and troubleshooting .
- Inspect the installation for secure connections, proper support spacing, and cable organization.
- Ensure corrosion protection if trays are exposed to moisture, using appropriate finishes like powder coating or electro-zinc . By following these steps, overhead cable trays can be installed safely, efficiently, and in a way that allows for easy maintenance and future expansion.

Article Content

Cable Tray Questions | Cable Tray Institute

Answer: The NEC does not have a specific installation clearance, but indicates in section 318-6 (b) that cable trays should be

NEC Article 392 Guide: Ensuring Compliance for Cable Tray Systems

A cable tray should not be overstuffed to ensure that a building is safe. Filling the tray does not necessarily mean till

Cable Tray Questions | Cable Tray Institute

Answer: Yes; cables are tied down in cable trays to keep the cables in the cable tray, to maintain spacing between cables, or to

Overhead Cable Tray Installation

Overhead cable tray installation in substations involves mounting cable trays above ground level—typically on ceilings, beams, or

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Adequate room should be provided around the cable tray to allow for the set-up of cable pulling equipment and to provide easy

Best Practice Guide to Cable Ladder and Cable Tray Systems

Introduction This publication is intended as a practical guide for the proper and safe* installation of cable ladder systems, cable tray

FAQ | Cable Tray Institute

Question: Is it necessary to provide tie-down cables installed in a cable tray? Answer: Yes; cables are tied down in cable trays to

FactSheet

Overloading cable trays Cable trays come in a wide variety of sizes. The appropriate size and number of cable trays depends directly

Cable Laying: Everything You Must Know

The installation of metal cable trays should commence after the main civil engineering work is completed, synchronously with other

Installation Of Cable In Cable Trays: NEC, Safety

The use of ladder-type trays as raceways for insulated cables is becoming more prevalent. These raceways are being more heavily

INSTALLATION GUIDE

There should be no installation of the cable below the temperature rating that is marked on the cable. The ladder tray system must

CABLE TRAY SYSTEMS GUIDE

The design and cost of the cable tray is greatly affected by this designation. In order to determine the most appropriate and

Cable Management Tray Installation

Looking to improve your cable organization and create a clean, safe workspace? In this video, we'll guide you through the step-by

Cable Tray Manual: NEC Article 392 Guide

In-depth guide to cable trays, focusing on NEC Article 392. Covers types, selection, installation, and safety standards for electrical

Safely Installing, Maintaining and Inspecting Cable Trays

tray. Allow enough working space around the added cable tray. Grounding of cable tray systems is essential for personal safety and

Related Video Reference

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