

How to reinforce and fix the support when moving a cable tray



Overview

A Guide to Installing and Supporting Electrical Cable Trays This guide covers the critical steps, from selecting the right electrical cable tray and perform.

Key Takeaways

To reinforce and fix a cable tray during relocation, ensure proper support spacing, use strong connection hardware, and consider tray type and material to prevent sagging and maintain safety. Assess and Plan Support Requirements

Before moving a cable tray, evaluate the weight of the cables, the tray type, and the span between supports. Cable trays should not sag under load, so spacing between supports must be adjusted according to the tray's structural capacity and the total cable weight. For heavy loads, reducing the distance between supports (e.g., from 3 meters to 2.5 meters or less) significantly improves stability and prevents bending or sagging .

Reinforce the Tray Structure

- Increase tray depth or collar height: Taller side rails add vertical stiffness, reducing deflection under load .
- Use thicker tray material: Upgrading from 1.6 mm to 3 mm metal increases mechanical strength for high-load areas .

- Consider tray type: Ladder trays provide better load-bearing capacity due to transverse rungs, while ventilated troughs offer continuous support for smaller cables .

Secure Connections and Supports

- Splice plates and bolted connections: Use flat metal splice plates with nuts and bolts to join tray sections securely, ensuring weight is properly transferred to supports .
- Hanger, wall-mounted, or floor-mounted supports: Choose support types based on available space and installation location. Hangers are adjustable and ideal for overhead runs, wall-mounted supports save floor space, and floor-mounted brackets are suitable for large industrial corridors .
- Unistrut systems: Flexible and strong, these can be installed from ceiling, wall, or floor to provide reliable support .

Additional Reinforcement Tips

- Use interior separators: For mixed cable types, separators prevent sagging and maintain organization .
- Check for proper grounding and bonding: Reinforced supports must maintain electrical safety and comply with NEC requirements .
- Inspect after relocation: Ensure all fasteners are tight, the tray is level, and cables are evenly distributed to prevent stress points . By carefully planning support placement, selecting appropriate tray types and materials, and using secure connection methods, you can safely move and reinforce cable trays while maintaining structural integrity and compliance.

Article Content

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