Soft links between cable trays



Overview

Cable Tray Technical Guide A practical guide to product selection and. Cable tray length is selected based on the load to be supported, the distance betw.

Key Takeaways

Soft links in cable trays are flexible connections that allow slight movement, vibration absorption, and thermal expansion while maintaining electrical and mechanical continuity.

Purpose of Soft Links

Soft links are used to reduce stress on cable trays caused by thermal expansion, vibration, or structural movement. They prevent tray sagging, cable damage, and loosening of rigid connections, improving system longevity and safety. These links are particularly useful in long runs, industrial environments, or areas with frequent mechanical vibrations.

Methods to Implement Soft Links

Flexible Clamps or Couplings Soft links can be achieved using spring-loaded clamps or flexible couplings that connect tray sections without rigid bolting. These allow slight movement while keeping the trays aligned and cables supported. Quick Connect Systems Some manufacturers provide snap, slide, or twist systems that act as semi-rigid connections.

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While primarily designed for fast assembly, they also allow minor movement, effectively functioning as soft links in dynamic environments. Cable Tray Expansion Joints For long runs, expansion joints are installed between tray sections. These joints accommodate thermal expansion and contraction, preventing stress on the tray and cables.

They are often combined with flexible fasteners or clamps. Use of Splice Plates with Controlled Torque Even traditional splice plates and bolted connections can be adapted for soft linking by using slotted holes or torque-controlled fasteners, allowing limited movement while maintaining mechanical stability.

Installation Considerations

Ensure alignment and support: Soft links should not compromise the overall tray stability. Intermediate supports may be required. Maintain electrical continuity: If trays are metallic, grounding continuity must be preserved across flexible connections.

Follow manufacturer guidelines: Different tray systems have specific recommendations for flexible or semi-rigid connections. Allow maintenance access: Soft links should not obstruct cable pulling or inspection.

Advantages

Reduces mechanical stress and vibration transfer. Prevents cable insulation damage and joint loosening. Accommodates thermal expansion in long tray runs.

Simplifies maintenance and future modifications. Soft links are an effective solution for enhancing the durability and safety of cable tray systems, especially in industrial or high-vibration environments, while maintaining compliance with electrical installation standards.

Article Content

Cable Tray Technical Guide A practical guide to product selection and ...

Cable tray length is selected based on the load to be supported, the distance between the supports (also referred to as the span), and handling and installation constraints.

GUIDE CABLE TRAYS TECHNICAL

NEMA VE 1-2017 Specifies requirements for metal cable trays and associated fittings designed for use in accordance with the rules of Canadian Electrical Code, Part I and the National Electrical Code®

ITER Cabling Handbook

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An equipotential link between cable trays and the copper bar, as well as between cable trays shall be installed. An equipotential link shall be installed approximately every 10 meters following NFC 15-900.

Cable Tray Connectors | McMaster-Carr

Choose from our selection of cable tray connectors, including cable and hose trays, steel formable cable and hose trays, and more. Same and Next Day Delivery.

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This allows you to create a radius for 90-degree intersections and shape the direction of cabling to your liking. The black powder-coated metal plate adds a radius that further strengthens

TECHNICAL HANDBOOK

The Speed Link SLS can attach directly to the perforated holes in most cable trays. It can support the other types of cable pathway, but not as an “out of the box solution.”

7 Types of Cable Trays: How to Choose the Right One

Selecting the correct cable tray type is not arbitrary—it depends on a combination of cable characteristics, environmental conditions, and installation requirements.

SWIFTS CABLE TRAY

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This publication is intended as a practical guide for the proper and safe* installation of cable ladder systems, cable tray systems, channel support systems and associated supports.

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Learn how to install cable trays correctly. Get the ultimate step-by-step guide on setting up a seamless and reliable cable management system.

Best Practice Guide to Cable Ladder and Cable Tray Systems

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This guide covers cable ladder systems, cable tray systems, channel support systems and associated supports intended for the support and accommodation of cables and possibly other electrical

Wiring in Cable Trays: Your Guide to Tidy and Safe

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Cable Tray Technical Guide A practical guide to product selection and ...

Cable Tray Technical Guide A practical guide to product selection and installation This guide for engineers and installers has been developed by ABB as a practical reference regarding cable tray

Guide to cable support systems

A cable support system consists of cable support lengths and system components, such as cable support fittings, support elements, mounting elements and system acces-sories. The cable support

Cable Installation Guidelines in Trays | PDF | Cable | Rope

The document provides guidelines for installing cable in cable trays, including design considerations and formulas for calculating maximum tensions, sidewall pressures, bending radii, and more. Key factors

CABLE TRAY SYSTEMS GUIDE

Steel Ladder System Hubbell''s NEXTFRAME® Ladder Tray is the effective and widely used cable runway that supports and delivers bundles of cable between cabinets, racks, and closets, along

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