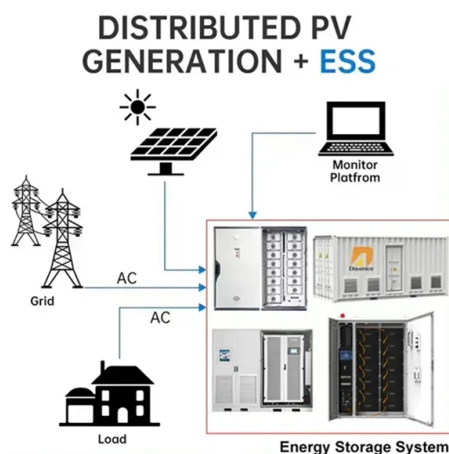


Cable tray jumper wires are used



Overview

Cable Tray Jumpers Use these jumpers to make electrical bonds between sections of cable tray. Are Bonding Jumpers Required for Standard Cable Tray Whether.

Key Takeaways

Cable tray jumper wires, also called bonding jumpers, are used to ensure electrical continuity and grounding across cable tray sections, especially where standard splice plates may not provide reliable conductivity. Purpose of Cable Tray Jumper Wires

Bonding jumpers are installed to maintain electrical continuity and grounding between cable tray sections. They act as a safety measure to prevent electrical faults from causing hazards by ensuring that all metallic parts of the tray system are properly bonded to the equipment grounding conductor (EGC) and can carry fault currents safely .

When Jumpers Are Required

Jumpers are not always required. Standard rigid metallic splice plates in aluminum or steel cable trays often provide sufficient electrical continuity if properly installed, clean, and tightly bolted . However, jumpers are necessary in certain conditions:

- Painted or powder-coated trays: Coatings can block electrical conductivity, so a copper bonding jumper ensures continuity .
- Expansion or adjustable splices: Flexible jumpers are needed to accommodate movement and maintain grounding .

- High-vibration environments: Jumpers prevent loosening of connections that could interrupt continuity .

- Resistance concerns: If the connection resistance exceeds 0.0003 ohms, a jumper is recommended to meet safety standards .

Installation Guidelines

- Jumpers are typically made of flexible copper wire, often 2 AWG soft drawn, tin-plated, and insulated with flame-retardant PVC .

- They should be bolted to the tray channel, not to the splice plate bolts, to ensure a reliable connection .

- Standard lengths, such as 36 inches, are used to span expansion joints, with optional lengths available for specific applications .

- For aluminum trays, insulated conductors are preferred to prevent electrolytic corrosion .

Best Practices

- Ensure all metallic cable tray sections are bonded to the EGC for personnel and facility safety .

- Use serrated nuts or star washers when connecting to uncoated metal to improve electrical contact .

- Inspect connections regularly, especially in painted or moving sections, to maintain low resistance and compliance with NEC requirements . In summary, cable tray jumper wires are essential for maintaining grounding and electrical continuity in situations where standard splice plates may not suffice, particularly in coated, adjustable, or high-vibration installations. Proper selection, installation, and inspection of jumpers ensure safety and code compliance.

Article Content

Equipment Grounding Conductors for Cable Tray Systems

Use three conductor cables without EGCs and install a single conductor EGC in the cable tray or use the cable tray as the EGC in

99-30 bonding jumper submittal

Bonding Jumper Use at each expansion splice and where cable tray is not mechanically/electrically continuous to ground * Hardware

Steel Ladder Tray Bonding Jumper | Ladder Trays | Cable Tray and

Bonding jumpers are used across discontinuities to maintain electrical continuity in the cable tray system. Also used to bond the

Bonding Jumper, 4/0 AWG Copper Wire Size, 14-1/2" Length

Bline bonding jumpers are used at each expansion splice and where the cable tray is not mechanically/electrically continuous to ground.

Grounding & Bonding Connectors

Cables must be secured to the cable tray prior to and after the transition, and protected by guarding or location. The electrical

Grounding Inspection of Steel and Aluminum Cable Tray Systems

Regardless of which type of equipment grounding system used, cable tray systems must be electrically continuous and effectively

Cable tray

In the electrical wiring of buildings, a cable tray system is used to support insulated electrical cables used for power distribution,

NEMA Standards Publication VE 2-2006

If a wire mesh cable tray is supporting cable with a built-in equipment grounding conductor or control or signal cables, then the tray

Practices for grounding and bonding of cable trays

A bare copper equipment grounding conductor should not be placed in an aluminum cable tray due to the potential for electrolytic

Cable Tray Installation Guidelines for Engineers

Cable trays shall be grounded at least every 15 m (50 ft) and at both ends for Cable Tray Installation Guidelines for Engineers. All

Document DICOS

Do not use a cable tray as a walkway, ladder, or support for people; a cable tray is a mechanical support system for cables and

Cable Tray Bonding Jumpers

GROUND" G STRAP, 6 3/4", #6 T" PLTD COPPER WIRE Eaton grounding strap, 0.162" height, 6.75" length, 0.162" width, Use to

Cable Tray and Reels | Wire and Cable Management

Fast installation with dependable support. Everything you need to build a cable management system, including Cablofil wire mesh

Bonding Jumpers Not Required for Standard Cable Tray Splice

Here, the use of bonding jumpers does not make a safety contribution to a properly installed cable tray system, and wastes both

Bonding Aluminum Cable Tray | Information by Electrical

I've have two B-Line aluminum Cable Trays carrying two 4/c #12 copper wires. I'm feeding two 6.9 FLA pump motors

confusion about sizing bonding jumper | Information by Electrical ...

The question are : 1, how to size the bonding jumper of cable tray and conduit if i don't use it as EGC (i just bonding

Types of Cable Trays – Purpose, Advantages, Disadvantages

Cable tray is alternatives to wire ways and electrical conduits, which completely enclose cables. Study types of cable

Microsoft Word

Bonding Jumpers Not Required for Standard Cable Tray Splice Plates A bonding jumper is classified as a reliable conductor to

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