Cable tray jumper wire size



Overview

Bonding Jumper Use at each expansion splice and where cable tray is not mechanically/electrically continous to ground * Hardware included 16" 406 mm 3/8 DIA. Catalog No.

Key Takeaways

Cable tray jumper wires are typically sized based on the largest ungrounded conductor in the tray or per NEC Table 250. 102(C)(1), with braided copper jumpers commonly used for flexibility and reliability.

Jumper Wire Sizing

The size of a cable tray bonding jumper depends on the largest ungrounded supply conductor in the tray.

According to NE

C Section 250. 102(C)(2), if multiple raceways or cables are paralleled, the jumper can be sized either individually for each raceway or as a single jumper based on the sum of the circular mil areas of the largest conductors in each set. For very large conductors exceeding 1100 kcmil copper or 1750 kcmil aluminum, the jumper must be at least 12.

5% of the area of the largest ungrounded conductors.

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Jumper Type and Material

Braided copper jumpers are preferred because they are flexible and can accommodate movement in expansion joints without breaking. Standard jumpers, such as Snap Track bonding jumpers, are often 36 inches long and green in color, but custom lengths are available. The wire must be UL-listed or approved for grounding, not just any conductor.

Installation Considerations

Ensure tight bolting of splice plates; painted or powder-coated trays require jumpers because coatings block electrical continuity. Typically, a minimum of four bolts (two on each side) is recommended to maintain a reliable connection. For long cable tray runs, bonding jumpers may be installed every 50–100 feet to improve safety and reduce impedance.

Summary

To select the correct cable tray jumper wire size: Identify the largest ungrounded conductor in the tray.

Refer to NE

C Table 250. 102(C)(1) for the corresponding jumper size. Use braided copper jumpers for flexibility, especially at expansion joints or painted trays.

Ensure proper bolting and periodic bonding along the tray for safety and compliance. Following these guidelines ensures electrical continuity, safety, and NEC compliance in cable tray installations.

Article Content

99-30 bonding jumper submittal

Bonding Jumper Use at each expansion splice and where cable tray is not mechanically/electrically continous to ground * Hardware included 16" 406 mm 3/8 DIA. Catalog No. 99-N6

Equipment Grounding Conductors for Cable Tray Systems

Use standard three conductor cables with standard size EGCs and parallel the EGCs that are in the cable assemblies with the single conductor EGC (Sized as per Table 250-95) in the cable tray or with

Are Bonding Jumpers Required for Standard Cable Tray Splice Plates?

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Whether you need extra wires (jumpers) depends on if your connecting plates are tested for grounding. If the plates are UL Classified, they are strong enough to carry electricity safely by

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

Cable Tray Installation Procedure Guide

CABLE TRAY INSTALLATION PROCEDURE - Free download as Word Doc (.doc / .docx), PDF File (.pdf), Text File (.txt) or read online for free. This document

Grounding Inspection of Steel and Aluminum Cable Tray Systems

For safety reasons, the grounding should be right before the wire is energized. This is true for cable tray, conduit, cable, or any electrical system. The grounding inspection should start with the installation

Bonding Jumpers

Ensure reliable grounding with Snap Track Cable Tray Bonding Jumpers from TechLine Mfg. Made from durable materials and designed for easy installation. Contact us today!

Bonding Jumper-Cable Tray) | PDF | Equipment

EARTHING SYSTEMS: NEMA VE 2-2000 Page 37 Table 4-5 MINIMUM SIZE EQUIPMENT GROUNDING CONDUCTORS FOR GROUNDING RACEWAY AND EQUIPMENT (NEC TABLE 250

B-Line series Cable Tray Design Considerations

As an industry leader in cable tray, Eaton offers one of the widest ranges of cable management solutions available in the market today with its B-Line series portfolio. With unmatched quality and service, we

Sizing of Conductors Related to Grounding & Bonding

Wire-type main bonding jumper in wireway sized per Table 250.102 (C) (1) Figure 10. Supply-side bonding jumper installed in “daisy-chain” series

CABLE TRAY SYSTEMS GUIDE

The galvanized wire then welded and formed into the appropriate basket tray size. Hubbell''s pre-galvanized finish performs the same as the post-zinc plated production finish while avoiding

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Document DICOS

wire mesh cable tray fitting: A fitting for wire mesh cable tray systems, fabricated from wire mesh cable tray straight sections. The fitting is field-constructed and attached to the adjacent sections using

Tuling Cable Tray Earthing Jumper

The size of a typical earthing jumper for a cable tray ranges from 6 AWG to 2 AWG. We can make earthing jumpers with customized gauge sizes depending on the system voltage and current ratings.

Criteria for Sizing, Designing, Installing and Supporting of Cable-Tray ...

11.2 Expansion fittings, flexible connectors, hinged connectors and non-continuous tray runs shall have a ground bonding strap to insure continuity of the cable tray ground system. See STD-G309A. 11.3

Are Bonding Jumpers Required for Standard Cable Tray Splice Plates?

Learn when bonding jumpers are mandatory for cable trays and when UL-rated splice plates are sufficient to ensure electrical continuity and pass your next site inspection.

Cable tray manual

If these circuits were installed in cable tray, the conductor sizes would not need to be increased since the parallel conductor derating factors do not apply to three conductor or single conductor cables in

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

I would say no, you must size the bonding jumper for the cable tray according to the highest rated OCPD likely to energize the tray. So if you have a 30A circuit in the tray, a #10 EGC

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