

Cable tray jumper specifications



AI Overview

Bonding jumpers are generally not required for standard rigid metallic splice plates unless the tray is painted, powder-coated, or includes expansion joints. Standard Splice Plates and Electrical Continuity For standard rigid aluminum or steel cable tray splice plates, the plates themselves typically provide sufficient electrical continuity between tray sections when properly bolted. UL-classified splice plates, when tightly secured, can carry fault currents safely without additional jumpers, meeting NEC grounding requirements and NEMA guidelines. Installing extra bonding jumpers in these cases does not improve safety and may unnecessarily increase labor and material costs.

Situations Requiring Bonding Jumpers

Bonding jumpers become necessary in specific conditions:

- Painted or powder-coated trays:** Coatings can block electrical continuity, so a flexible copper bonding jumper ensures a reliable path.
- Expansion or adjustable splices:** Movement in the tray system can interrupt continuity; jumpers bridge these discontinuities.
- High-vibration environments:** To maintain low-resistance connections, jumpers may be required to prevent loosening or intermittent contact.

When used, bonding jumpers are typically made of 2 AWG soft-drawn tin-plated copper stranded cable with flexible, flame-retardant insulation, and are bolted directly to the tray channel rather than the splice plate. Standard lengths, such as 36 inches, are designed to span expansion joints effectively.

Electrical Resistance Considerations

A connection resistance above 0.0003 ohms usually indicates the need for a jumper to ensure safety and compliance. Properly installed standard splice plates generally maintain resistance below this threshold, making additional jumpers unnecessary in typical indoor installations with galvanized steel or aluminum trays.

Compliance with Standards

Cable tray systems must comply with NEC Article 250 and 392.60 for grounding and bonding. Standard metallic splice plates, when installed correctly, satisfy these requirements without additional jumpers.

Article Content

Grounding Inspection of Steel and Aluminum Cable Tray Systems

This is true for cable tray, conduit, cable, or any electrical system. The grounding inspection should start with the installation and should continue until all tray sections are connected together, either by

Cable Tray Jumpers

9", 6 AWG THHN Green Wire. 2 hole configuration. 1/4" or 3/8" stud sizes. Connection is weatherproofed with UL listed heat shrink.

Cable Tray Jumpers

Use these jumpers to make electrical bonds between sections of cable tray.

Bonding Jumper, Furnished With 1/4" Hardware

Bonding Jumper, Furnished With 1/4 Inch Hardware, For Use With KwikSplice Series Cable Tray, Cat #: 9930, Mfr: Eaton B-Line

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

99-30 bonding jumper submittal

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

IEC 61537:2023 | IEC

Where necessary, cable tray systems and cable ladder systems can be used for the arrangement of cables into groups. This document does not apply to conduit

CABLE TRAY INSTITUTE

The Cable Tray Institute (CTI) was founded in 1991 to support the cable tray industry by engaging in research, development, education, and the dissemination of

Cable Tray Jumpers

Product Family Detail Cable Tray Jumpers Use these jumpers to make electrical bonds between sections of cable tray. 6 AWG THHN green wire, 9" long 2-hole lugs 1-4" or 3/8" stud sizes

Harger, Inc.

HARGER''s WS-CTJUMP9 cable tray jumper cable. Features 1/4 in 2 hole lug and #6 THW wire. 9 in of wire. 15 in overall length.

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Bonding Jumper-Cable Tray) | PDF | Equipment

Metallic cable trays shall be bonded to building steel and earth as supplemental grounding for ground fault protection and signal grounding (“noise” prevention).

Full cable tray systems specification document

B. Cable tray systems are defined to include, but are not limited to straight sections of [ladder type] [trough type] [solid bottom type] [channel type] cable trays, bends, tees, elbows, drop-outs, supports

Equipment Grounding Conductors for Cable Tray Systems

Equipment Grounding Conductors for Cable Tray Systems Cable tray wiring systems have excellent safety and dependability records. These excellent records are the result of cable tray''s unique

Resources for Cable tray and ladder systems

Our cable tray design considerations guide details key factors to consider when designing cable tray systems for industrial and commercial applications. Browse or download the cable tray catalog for

12-SDMS-06

Cable tray sections, fittings and connected raceways shall be bonded properly using bonding jumper at both ends. The bonding jumper shall be bare copper conductor of 50 mm² size and 400 mm long.

Cable Tray

Cable Tray Cable trays are mechanical support systems that provide a rigid structural system for electrical cables, raceways, and insulated conductors used

CABLE TRAY SYSTEMS GUIDE

CONCENTRATED STATIC LOADS: Some applications may require the cable tray to support the weight of a single, dead object in addition to the cable loads. Specifications typically require this to be

StructuredGround Grounding Auxiliary Cable Brackets and Jumpers ...

StructuredGround™ Grounding Auxiliary Cable Brackets and Jumpers specifications
The cable pathway system shall incorporate an auxiliary

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

Steel bonding jumpers provide reliable grounding across cable tray gaps, with fasteners included for laminated jumpers. Check specifications for proper use.

I-BEAM Ladder Bonding Jumper [GBJ-C]

Our aluminum, I-beam ladder cable trays feature 3-inch tangents and are using connectable with our fittings and accessories. Aluminum ladder cable trays

Bonding Jumpers

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

Cable Tray Technical Specifications | PDF

The document provides a technical data sheet for cable trays including ladder and perforated types. It lists specifications for material, thickness, dimensions,

Contact Us

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