

Cable tray jumper connection standard



Summary of Content

Bonding jumpers are generally not required for standard metallic cable tray splice plates unless the tray is painted, has expansion joints, or is in a high-vibration environment.

General Guidelines

For standard rigid aluminum or galvanized steel splice plates, bonding jumpers are typically not necessary because the splice plates themselves provide sufficient electrical continuity between cable tray sections, meeting NEC grounding requirements (NEC 250 and 392.60) and NEMA standards . Properly installed UL-classified splice plates with tight bolted connections can safely carry fault currents without additional jumpers .

Situations Requiring Bonding Jumpers

Bonding jumpers should be installed in the following cases:

- Painted or powder-coated trays: Coatings can block electrical continuity, so a flexible copper jumper ensures proper grounding .
- Expansion joints: Trays that require movement need flexible jumpers to maintain continuity across joints .
- High-vibration environments: Braided copper jumpers are preferred to prevent breakage and maintain reliable grounding .
- Resistance concerns: If the connection resistance exceeds 0.0003 ohms, a jumper is recommended to ensure safety and compliance .

Installation Practices

Article Content

Bonding Jumpers Not Required for Standard Cable Tray Splice Plates

It is not necessary to install bonding jumpers in parallel with the standard rigid aluminum or steel one-piece metallic bolted side rail

Bonding Jumpers Not Required for Standard Cable Tray Splice Plates

It is not necessary to install bonding jumpers at standard rigid galvanized steel or aluminum splice plate connections or offset

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

Bonding Jumpers Not Required for Standard Cable Tray Splice Plates

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

Bonding Jumper-Cable Tray) | PDF | Equipment | Electrical Equipment

Metallic cable trays shall be bonded to building steel and earth as supplemental grounding for ground fault protection and signal

Bonding Jumpers

A bonding jumper is required to be installed with adjustable splices and expansion splices. Install Bonding Jumpers by bolting each

NEMA Standards Publication VE 2-2018

Attaching a channel cable tray by using the method illustrated in Figure 3-88 maintains the electrical requirements, and the bolted

Cable Tray Bonding Jumper Insights | PDF | Cable | Industries

The document discusses bonding jumpers for cable tray splice plates. It summarizes that: 1) Bonding jumpers are not required for

Cable Tray Installation Rules (NEC 392) - Electrical Trader

Core rules for selecting, installing, grounding, and filling cable trays—clearances, materials, separation, and bonding

Cable tray manual

These documents: ANSI/NEMA VE-1, Metal Cable Tray Systems; NEMA VE-2, Cable Tray Installation Guidelines; and NEMA FG-1,

Contact Us

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