

# Cable tray expansion joints require jumper wires



## Article Overview

Yes, cable tray expansion joints generally require flexible copper jumper wires to maintain electrical continuity and ensure safety.

### Why Jumper Wires Are Needed

Cable tray expansion joints are installed to accommodate thermal expansion and contraction of the tray system due to temperature fluctuations, preventing stress, misalignment, or damage to the cables and tray structure . Because expansion joints allow movement, the metal parts of the tray may not maintain continuous electrical contact. Flexible copper bonding jumpers are required to bridge the gap and ensure proper grounding across the moving sections .

### Installation Guidelines

- **Placement:** Bonding jumpers should be installed around the expansion joint splice plates and sized to match the fault current capacity of the cable tray side rails or cross-section .
- **Support:** Cable tray supports should be located within 2 feet of each side of the expansion joint, and expansion guides should allow the tray to slide without distortion .
- **Material Considerations:** If the tray is painted, powder-coated, or made of materials that reduce conductivity, jumpers are essential because coatings can block electrical continuity ....

## Article Content

Feb 09, 2026

### Thermal Contraction and Expansion of Cable Tray

There are expansion joint splice plates and bonding jumpers available from cable tray manufacturers. A cable tray support should be

Feb 04, 2026

### Five Common Cable Tray Installation Defects and Prevention Measures

Cable tray installation may seem straightforward, but field experience reveals the same five defects appearing

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### Bonding Jumpers

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

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### Managing Thermal Expansion and Contraction in Cable Tray Systems

Learn how to manage thermal expansion and contraction in cable tray systems with expert tips on expansion joints,

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### Expansion Splice Plates. Legrand Cable Tray

Supports should be located within 600 mm (2 ft) of each side of the expansion splice plates. Expansion splice joints should be

Jun 20, 2026

### INSTALLATION GUIDE

To maintain electrical continuity all expansion connectors require a bonding jumper. The ends of the jumper must be a minimum

Jun 17, 2026

### Cable Tray Installation Rules (NEC 392) - Electrical Trader

Flexible bonding jumpers at expansion joints allow for this movement while preserving the ground path. When dealing

Sep 22, 2025

### 392.44 Expansion Splice Plates.

An expansion splice plate may have slotted holes to allow for movement in the cable tray. A bonding jumper is required where cable

Sep 05, 2025

### 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

Mar 28, 2026

### Cable Tray Thermal Expansion Guidelines

For a 100°F temperature differential, steel trays require a joint every 128 feet and aluminum every 65 feet. 3) Bonding jumpers

Dec 24, 2025

### PRODUCT SHEET T& B Cable Tray Super-Duty Splice Plate

— 01 Expansion splice — 02 Mid-span splice — Note: For purposes of illustration, bonding jumper not shown but is required at

Aug 16, 2025

### Cable Tray Thermal Expansion Guidelines

1) Cable trays need expansion joints to allow for thermal contraction and expansion due to temperature changes. The NEC requires

May 06, 2026

### Cable tray manual

Instead of large conduits, cable channel may be used very effectively to support cable drops from the cable tray run to the equipment

Aug 03, 2025

### Bonding Jumpers Not Required for Standard Cable Tray Splice

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

Apr 12, 2026

### Cable tray expansion joint setting method

Reasonable setting of cable tray expansion joints is a key link to ensure the safe operation of the cable tray system,

Jul 22, 2026

Cooper B-Line

Heavy Duty Expansion Splice Plates Heavy Duty Expansion Splice Plates are engineered to eliminate the NEMA recommended

Dec 29, 2025

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

Nov 04, 2025

Cable Tray Expansion Joint Installation: Comprehensive Guide

Discover best practices for cable tray expansion joint installation to accommodate thermal changes, ensuring

Sep 22, 2025

Thermal Contraction and Expansion of Cable Tray

VE 1 Table 6-1 shows the allowable lengths of steel and aluminum cable tray between expansion joints for the temperature

May 11, 2026

Equipment Grounding Conductors for Cable Tray Systems

Equipment Grounding Conductors for Cable Tray Systems Cable tray wiring systems have excellent safety and dependability

Jun 10, 2026

Cable Tray Installation and Cable Handling Method Statement

Expansion connectors must be provided at building expansion joints and in long runs of outdoor trays at intervals of 30 m (100 ft) or

Dec 10, 2025

Thermal Contraction and Expansion of Cable Tray

It is important that cable tray installations incorporate features which provide adequate compensation for their thermal

Mar 12, 2026

Microsoft Word

There are expansion joint splice plates and bonding jumpers available from cable tray manufacturers. A cable tray support should be

Jan 19, 2026

What is Expansion Joint Cable Tray Installation

Learn the essentials of expansion joint cable tray installation and how they ensure safe and durable cable tray

Nov 01, 2025

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

## Contact Us

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