Requirements for jumper wires of cable tray expansion joints

Overview

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 themselves. In this case, you can skip the jumpers as long as the metal stays tightly. However, you must use copper bonding jumpers if the tray is painted or has expansion joints for movement. A connection resistance above 0. This subject. It is not necessary to install bonding jumpers in parallel with the standard rigid aluminum or steel one-piece metallic bolted side rail splice plates that are the connections between the cable tray sections. The following pages address the 2014 National Electrical Code® requirements for cable tray systems as well as design solutions from practical experience.

Article Content

Jan 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, and factors such as thermal expansion compensation, vibration absorption

Mar 28, 2026

CABLE TRAY

Supports for cable trays should provide strength and working load capabilities sufficient to meet the load requirement of the cable tray wiring system. Consideration should be given to the loads associated

Sep 06, 2025

Cable Tray Installation and Cable Handling Method

Expansion connectors must be provided at building expansion joints and in long runs of outdoor trays at intervals of 30 m (100 ft) or as specified in NEMA VE 2.

Jul 23, 2026

Five Common Cable Tray Installation Defects and

Cable tray installation may seem straightforward, but field experience reveals the same five defects appearing repeatedly across projects worldwide.

Oct 10, 2025

Heavy Duty Expansion Splice Plate Installation Guide

Installation guide for 9A-6016 & 9A-6017 heavy duty expansion splice plates. Includes gap settings, torque specs, and material list.

Jun 11, 2026

Document DICOS

For metal cable tray, bonding jumpers are required for electrical continuity unless the splice plates meet the electrical continuity requirements of NEMA VE 1 Section 4.7, Grounding.

Feb 07, 2026

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 corrosion of the aluminum cable tray in a moist environment. For such

Aug 16, 2025

Cable Tray Expansion Joint Installation:

Discover best practices for cable tray expansion joint installation to accommodate thermal changes, ensuring structural integrity and compliance

Mar 15, 2026

Practices for grounding and bonding of cable trays

Grounding and bonding of cable trays There are three wiring options for providing an EGC in a cable tray wiring system: An EGC conductor in or on

Aug 24, 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 tray systems are

Oct 30, 2025

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.

Mar 07, 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 located within 2 feet of each side of the expansion joint splice plates

Oct 23, 2025

Cable tray bonding | Information by Electrical Professionals for ...

Do I have to use a bonding jumper at each cable tray splice point that is bolted tightly together? I currently have 3 runs of 24 tray about 80ft long. we have one expansion plate section per

Jul 15, 2026

392.44 Expansion Splice Plates.

A bonding jumper is required where cable tray systems are mechanically discontinuous. Code Change Summary: New code section with requirements for

Jul 25, 2026

Microsoft Word

It is not necessary to install bonding jumpers at standard rigid galvanized steel or aluminum splice plate connections or offset reducing splice plate connections or any Classified connections. The use of

Aug 26, 2025

Cable Tray Thermal Expansion Guidelines

Thermal expansion and contraction of cable trays must be accounted for through the use of expansion joints. Proper installation of expansion joints is

Dec 16, 2025

Thermal Contraction and Expansion of Cable Tray

For a 100° F differential (winter to summer), a steel cable tray will require an expansion joint every 128 feet and an aluminum cable tray every 65 feet. The temperature at the time of installation will dictate

Dec 04, 2025

Grounding Inspection of Steel and Aluminum Cable Tray Systems

Steel and aluminum cable tray systems are excellent equipment grounding conductors if they are properly designed, specified, installed, and inspected. The NEC requirements for cable tray

May 31, 2026

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 designed and placed so as to maximize the rigidity of the cable tray, unless

Oct 25, 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 splice plates that are the connections between the cable tray sections.

Jul 21, 2026

Cable tray manual

There are several sections which cover the requirements for the use of single conductor cables in cable tray even though they only comprise a small percentage of cable tray wiring systems.

Oct 12, 2025

Thermal Contraction and Expansion of Cable Tray

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

Jul 01, 2026

Cable Tray Systems: Requirements and Best Practices

Connect cable trays to the building grounding system at regular intervals, particularly at feed points and where tray routes cross building expansion joints. If cable trays are intended to serve

Aug 27, 2025

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

Aug 28, 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 expansion joints where

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: https://khanimamboguesthouse.co.za
Email: sales@khanimamboguesthouse.co.za
Phone: +27 64 852 1973
Address: Unit 7, Greenway Business Park, 8 Innovation Drive, Centurion, 0157, South Africa

This document is for informational purposes only. Specifications subject to change without notice.