

Do galvanized cable trays need to be bridged

Article Overview

Galvanized cable trays do not require grounding bridging at the connecting plate ends, but proper mechanical connections with anti-loosening hardware are recommended.

Mechanical Connection

For galvanized cable trays, bridging is generally not required for grounding purposes at the ends of connecting plates. Each end of the connecting plate should, however, be secured with at least two fixing bolts using anti-loosening nuts or washers to maintain structural integrity and prevent movement of the trays. This ensures the trays remain mechanically stable without the need for additional bridging for electrical continuity.

Electrical Considerations

Unlike stainless steel or aluminum alloy trays, galvanized trays do not require dedicated grounding bolt holes for bridging at the connection points. Conductive connections can be achieved using galvanized steel bolts with anti-loosening gaskets or, alternatively, insulated multi-strand copper wires with crimped tinned copper connectors if cross-connection is needed. The cross-sectional area of the copper wire should be greater than 4.0 mm² to ensure proper conductivity.

Installation Best Practices

- o Use anti-loosening nuts or washers provided by the manufacturer to secure bolts. Avoid using only anti-loosening washers without nuts for convenience.
- o Ensure that the rung spacing and tray support are appropriate for the cable type and load to prevent sagging or excessive deflection.
- o For stainless steel or aluminum trays, special grounding bolt holes are required, but this is not necessary for galvanized trays.

Summary

In summary, galvanized cable trays do not require bridging for grounding at the connecting plate ends, but proper mechanical fastening with anti-loosening hardware is essential. Bridging may still be used in specific applications for structural reinforcement or cross-connection, but it is not a mandatory requirement for electrical continuity in galvanized systems.

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Avoid common cable tray installation mistakes to ensure safe, compliant, and efficient electrical infrastructure.

GALVANIZED CABLE TRAYS Cable Tray is simply a bridge-like structure that carries electrical and data cable throughout a project.

Accessories for cable trays like bends, tees and reducers are also described. The document also outlines the

Common cable trays are made of galvanized steel, stainless steel, aluminum, or glass-fiber reinforced plastic. The material for a

Cablofil® Products Cablofil is the global gold standard for total cable management. Explore the one-stop shop for innovative, fast,

Discover the best practices for Cable Tray Grounding Wire installation. Learn key

Both ends of the connecting plate must be bridged with a protective bonding conductor (commonly using a copper

Cable Tray Technical Guide A practical guide to product selection and installation This guide for engineers and installers has been

However, if cable tray is not properly designed to be compatible with its application and environment, electrical system failures can

If you must earth a tray for functional reasons (static discharge, RFI), do it at one end only. Bonding both ends can form

This article provides a comprehensive framework that governs various aspects of cable tray installations, including

Metallic cable tray systems can become energized under fault conditions, making an effective grounding path

Cable Trays are rigid structural system, comprising of unit or assembly of units/sections and associated fitting for

If an EGC cable is installed in or on a cable tray, it should be bonded to each or alternate cable tray sections via grounding clamps

Master cable tray systems with our expert guide covering structural engineering, material selection, and NEC

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A cable tray is a material used as the bridge, which helps carries electrical and data cables throughout the project. It is

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