# Does the cable tray have a bridging function

Article Overview

Cable trays do not always need to be bridged, but metal trays often require grounding connections to ensure electrical continuity and safety.

General Guidelines

For galvanized steel cable trays, bridging is not strictly required at the ends of connecting plates; however, each connection should have at least two fixing bolts with anti-loosening nuts or washers to maintain mechanical stability . For stainless steel and aluminum alloy trays, dedicated grounding bolt holes must be used to achieve proper conductive bridging between sections . This ensures that the tray system maintains electrical continuity and can safely carry fault currents if necessary.

Connection Methods

o Galvanized trays: Use at least two sets of galvanized steel bolts with anti-loosening gaskets for conductive connections, or insulated multi-strand copper wires with crimped tinned copper connectors (cross-sectional area >= 4.0 mm2) for bridging .
o Stainless steel/aluminum trays: Use special grounding bolt holes; avoid using bridge connection plates to fix bolt holes .
o Crimping: Wire ends should be crimped with copper or tin-plated copper connectors, secured with galvanized steel bolts and anti-loosening washers .

Support and Grounding Considerations

Cable tray supports should provide sufficient strength for the load and allow for future cable additions . Electrical continuity between trays is recommended, and the system should be grounded to structural steel at intervals of at least 18 meters . This ensures both mechanical stability and electrical safety.

Practical Recommendations

o When purchasing trays, request anti-loosening nuts for connecting bolts rather than washers for easier installation and maintenance .
o Ensure that all conductive connections are properly crimped or bolted to maintain grounding integrity.
o Plan for future expansion by leaving adequate space and considering additional load requirements . In summary, bridging is material-dependent: galvanized trays may not require electrical bridging at every connection, while stainless steel and aluminum trays require dedicated grounding connections. Proper installation with anti-loosening hardware and crimped connections ensures both mechanical and electrical

safety.

Discover over 100 expert answers about cable trays, covering key topics like material selection, load capacity,

What is Cable Tray Systems? An electrical cable tray is a type of containment system used to support insulated electrical cables for

What is the main function of a cable tray in electrical installations? It is used to support, organize, and protect electrical

Cable Trays Definition A cable tray is a structural system used to support insulated electrical cables used

Cable trays are components of support systems for power and communications cables and wires. A cable tray system supports and

With their different types, installation options, and benefits, they offer a functional and efficient solution for cable management.

Often unheralded, cable trays play a vital role in tray cable installations throughout industrial, commercial, and residential projects.

A practical guide to product selection and installation This guide for engineers and installers has been developed by ABB as a

When it comes to powering, automating and protecting facilities?from factories and petrochemical plants to data

Cable Tray Systems Guide HUBBELL Hubbell Wiring Device-Kellems and Hubbell Premise Wiring are divisions of Hubbell

The function is to provide a continuous, supported pathway that prevents cables from lying loose and vulnerable to physical damage.

Cable tray systems are engineered support structures designed to route, support, and protect insulated electrical

Cable trays are not raceways, but they are treated as a structural component of a facility"s electrical system. Cable trays are a part of

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A fiberglass cable tray, also called an FRP cable tray or cable bridge in some regions, is a structural support system

Discover the essential guide to cable tray systems. Learn about ladder, trough, and wire

"A cable tray is a support structure that seems to be a bridge that supports wires in the air". This misconception leads

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