What are the specifications and dimensions of cable tray connecting plates



Network Cabinet & Rack

Overview

Full cable tray systems specification document A. General: Except as otherwise indicated, provide metal cable trays, of types, classes and sizes indicated.

Key Takeaways

Cable tray connection plates (splice plates) are typically fabricated from steel or aluminum, with thicknesses ranging from 3/16" to 1/4", and feature pre-drilled bolt holes to join tray sections securely while meeting NEMA and ASTM standards.

Material and Standards

Connection plates are generally made from hot-dip galvanized steel, stainless steel, or aluminum, depending on environmental conditions and load requirements. They must comply with standards such as ASTM A123, ASTM A653, ASTM A1008, and NEMA VE 1 for metallic cable tray systems. Plates are designed to withstand the full cable load with a safety factor of 1.

5, and concentrated loads of up to 200 lb during testing.

Dimensions

Thickness: Commonly 3/16" to 1/4" (4. 8–6. 4 mm) for standard ladder or solid-bottom trays.

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Length and Width: Typically 6–12 inches long and 2–4 inches wide, sufficient to span the side rails of the cable tray. Bolt Hole Pattern: Pre-drilled holes are spaced to match the tray side rails, usually 1/2" to 5/8" diameter, with 2–4 holes per side depending on tray width and load requirements. Edge Design: Edges are often rounded or deburred to prevent cable damage during installation.

Installation Considerations

Plates are used to join straight sections, tees, or bends of cable trays. Bolts and nuts are used to secure the splice plate to the tray side rails, ensuring alignment and structural integrity. For wide trays (over 24 inches), additional or reinforced plates may be required to maintain load capacity.

Splice plates must allow for thermal expansion and contraction, especially in outdoor or long-span installations.

Load and Safety

Each splice plate must support the full rated load of the tray section, including environmental loads such as wind or snow. The design should ensure no protrusions below the tray bottom plane to avoid cable interference. Compliance with NFPA 70 (NEC) and manufacturer-specific guidelines is essential for safety and warranty purposes.

In summary, cable tray connection plates are standardized components designed to securely join tray sections, maintain structural integrity, and comply with industry standards. Proper selection of material, thickness, bolt pattern, and installation method ensures safe and reliable cable management in industrial and commercial applications.

Article Content

Full cable tray systems specification document

A. General: Except as otherwise indicated, provide metal cable trays, of types, classes and sizes indicated; with splice plates, bolts, nuts and washers for connecting units.

Cable Tray Specifications and Sizes | PDF | Sheet Metal

Standard cable trays are 2.5 meters in length with a maximum thickness deviation of 0.01mm and dimensional deviation of 5mm. Accessories include connecting plates and hardware.

Cable Tray Installation Details | PDF

The document outlines specifications for various joint plates and connectors used in cable tray installations, including dimensions and quantities for each component.

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Cable Tray Coupler Plate Connector | Tray Joint Fitting

At PowerCableTray, we provide heavy-duty Coupler Plates (Joint Levers) designed to ensure the maximum mechanical strength and electrical continuity of your cable management system.

KwikRail cable tray specification Document

Product Data: Submit manufacturer''s data on cable tray including, but not limited to, types, materials, finishes, rung spacings, inside depths and fitting radii. For side rails and rungs, submit cross

GUIDE CABLE TRAYS TECHNICAL

NEMA VE 1-2017 Specifies requirements for metal cable trays and associated fittings designed for use in accordance with the rules of Canadian Electrical Code, Part I and the National Electrical Code®

Joint plate A2 | OBO

Product description Wide joint plate for use in all cable trays and wide span cable trays. Including appropriate fastening material.

Cable Tray Dimensions Guide: Standard Sizes, Tray Types & Sizing

Explore standard sizes by tray type, understand width and depth limits, and see how to calculate and choose compliant cable tray sizes for real projects.

Splice plate | Coupler plates | GRP cable tray

Gratemetal offers a full range of Stainless steel splice plates for various cabletray sizes. We provide adjustable, straight as well as degree splice / coupler plates as specified.

Standard Straight Splice Plate

Fiberglass splice plates for cable tray systems. Multiple configurations available for tailored system assembly.

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Fiberglass cable tray manufacturing Specifications The pultruded components are designed to specific dimensional tolerances and load criteria, verified by engineers.

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CableTray Book English

Aluminum cable tray Straight lengths — Tray bottom types: ladder, ventilated and solid trough Ladder Extra wide aluminum rungs are welded to extruded aluminum I-beam side rails. Every second rung is

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

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