

Article Overview

Cable tray supports in shafts should generally be spaced according to manufacturer specifications, typically every 6 to 10 feet for standard trays, with closer spacing for vertical runs or heavy loads.

General Guidelines

For standard cable trays, supports are usually installed every 6 to 10 feet along the tray length, while heavy-duty or long-span trays can extend up to 20 feet between supports, depending on the tray's load capacity and material strength (NEC 392.30(A)). The exact spacing must be determined by consulting the manufacturer's load chart, which accounts for the total weight of the cables and the tray type.

Vertical and Shaft Installations

In vertical shafts, cable trays are subject to additional mechanical stress due to gravity. Cables should be fastened to the tray's transverse members to prevent sagging and maintain proper alignment. Unsupported vertical spans should generally not exceed 6 feet; if longer, additional supports are required to prevent undue stress on the conductors. This ensures both safety and compliance with electrical codes.

Rung and Tray Considerations

- o Ladder trays: For small-diameter control and instrumentation cables, rung spacing of 6 to 12 inches is recommended to prevent drooping, while larger power cables may require 9 inches or more.
- o Solid-bottom trays: May require weep holes every 3 feet if installed in humid or outdoor environments to prevent water accumulation.
- o Cable bending radius: Ensure that rung spacing does not violate the minimum bending radius of the cables; sometimes rungs may need to be removed or repositioned to accommodate proper cable routing.

Additional Considerations

- o Clearance: NEC 2026 requires at least 12 inches of vertical clearance above the tray for installation and maintenance access.
- o Cable ties: Use listed and approved ties to secure cables, especially in plenum spaces, to maintain spacing and improve heat dissipation.
- o Transitions: At points where cables exit the tray or enter equipment, provide strain relief and additional support to prevent mechanical stress.
- o Thermal expansion: For long outdoor runs, expansion splice plates should be installed to accommodate temperature-induced expansion and contraction. By following these guidelines, cable trays in shafts can be



Installation spacing of cable tray supports in shaft

installed safely, maintain proper cable support, and comply with NEC and manufacturer requirements.

The drawing shows proper installation methods for LV cable trays and SAS (Security Access System) cable routing with vertical

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

Introduction This publication is intended as a practical guide for the proper and safe* installation of cable ladder systems, cable tray

Cable support systems are generally designed with at least 50 % reserve space available for each tray. Cable tray types, supports

Understanding the IEC Standard for Cable Tray Cable trays play a vital role in supporting

Proper installation is not just about placing the cable tray in the right position; it also involves correct selection and layout, ensuring

Discover efficient cable tray support structures for optimal cable management. Learn about

Cable tray length is selected based on the load to be supported, the distance between the supports (also referred to as the span),

2.2 Structural characteristics When considering the installation of the cable supports system it is imperative to avoid the cutting or

Center hung tray supports allow for quicker and easier cable installation by allowing cables to be deposited into tray systems from

Discover the essential cable tray spacing requirements for safe and efficient installation.

A professional guide to installing electrical cable tray systems per NEC Article 392. Covers support,

Where separated with a fixed solid barrier of a material compatible with the cable tray Dedicated cable tray installation

Our wind certification report provides you with list of acceptable B-Line series cable tray supports, fittings

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and covers based off of the

The following recommendations are intended to be a practical guide to ensure the safe and proper installation of

Generally, standard trays require supports every 6 to 10 feet, while heavy-duty, long-span trays can handle distances

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