

Permissible distance for electrical cables exiting the cable tray

Article Overview

Cables exiting a cable tray should not have an unsupported span exceeding 6 feet (approximately 1.8 meters) to prevent undue mechanical stress and ensure compliance with NEC and BS 7671 standards.

Key Guidelines

Unsupported Span: When cables leave a tray to connect to equipment, raceways, or junction boxes, the unsupported distance should generally not exceed 6 feet (1.8 meters). If the span is longer, additional supports such as cable clamps, brackets, or conduit must be installed to prevent mechanical strain on the conductors and terminations ().

Support Intervals Within Trays: Horizontal cable trays typically require supports every 3 to 5 meters (10–16 feet) along straight runs, with closer spacing at bends, T-junctions, or heavy cable loads (). Vertical runs should have supports preferably less than 2 meters apart ().

Mechanical Strain Considerations: According to BS 7671, cables must be supported to avoid undue mechanical stress, particularly at terminations. This includes accounting for the cable's own weight and any additional loads ().

Bend Radius and Strain Relief: When exiting a tray, cables should maintain their minimum bend radius as specified by the manufacturer to prevent damage. Strain relief devices or clamps are recommended at the exit point to secure the cable and protect terminations ().

Fire Safety: All supports used for cables, including those at tray exits, should be fire-resistant to prevent premature failure in case of fire ().

Practical Tips:...

Article Content

Aug 11, 2025

Cable Support Distances

Cable Support Distances Although BS 7671 touches on the subject of cable supports, it does not detail specifically what these

Sep 07, 2025

Cable Tray Installation Rules (NEC 392) – Electrical Trader

Here's what you need to know: Cable Types: Only use conductors rated for open-air environments, such as Tray

Oct 07, 2025

Cable Tray Type Selection

The only reason to select a ventilated trough cable tray over a ladder type cable tray is aesthetics. No drooping of small cables is

Jun 11, 2026

Cable Tray Manual: NEC Article 392 Guide

In-depth guide to cable trays, focusing on NEC Article 392. Covers types, selection, installation, and safety standards for electrical

Apr 19, 2026

Cable Tray Support Spacing: Key Guidelines Explained

Explore the essential cable tray support spacing requirements for safe and efficient

Nov 21, 2025

Safety Distances Between Cable Trays and Pipes

The required safety distance between cable trays and pipes varies depending on the type of

Feb 13, 2026

Cable tray separation | Automation & Control Engineering Forum

Trays for cables of different voltage levels should be stacked in descending order with the higher voltage.

May 31, 2026

Cable Tray Questions | Cable Tray Institute

Answer: No. Cable trays are a support system for electrical cables, power, signal, and communication and optical fiber cables. NEC

Dec 06, 2025

Cable tray manual

Instead of large conduits, cable channel may be used very effectively to support cable drops from the cable tray run to the equipment

Nov 03, 2025

Cable Tray Fill Rules (NEC 392)

Power cables rated 600V or less and Class 2 or Class 3 signal cables may share a tray if separated by a fixed barrier

Mar 30, 2026

Core Principles for Electrical and Instrumentation Cable Tray Layouts

2. Minimum Spacing and Segregation Spacing Standards: Electrical (power) and instrumentation (signal/control) cable trays should

Jun 12, 2026

Cable Tray Width Selection for Installations with 600 Volt Single

Cable Tray Width Selection for Installations with 600 Volt Single Conductor Cables
National Electrical Code (NEC) Section 318-11

Mar 04, 2026

Cable Tray Fill Calculator — IEC 61537 | ECalPro

Cable tray fill percentage calculator per IEC 61537. Multi-cable derating factors, ventilated/non-ventilated tray types,

Dec 22, 2025

Cable Tray SHIB NAL

Overloading cable trays can lead to a breakdown of the tray, its connecting points and/or supports, causing hazards to persons

Jan 08, 2026

Best Practice Guide to Cable Ladder and Cable Tray Systems

This guide covers cable ladder systems, cable tray systems, channel support systems and associated supports intended for the

Oct 03, 2025

Cable Tray Technical Guide A practical guide to product selection and ...

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

Aug 14, 2025

Cable Tray Sizing Requirements | PDF | Cable | Electrical Wiring

This section states that if cable tray wiring systems are installed in hazardous (classified) locations, the cables that they support must

Mar 03, 2026

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

The codes I quoted are for distances between conductors on the tray as that is what I thought you were asking. The

Jul 07, 2026

Cable Tray Installation and Cable Handling Method Statement

Efficient cable tray installation and proper cable handling are critical for ensuring the reliability and safety of electrical systems.

Jul 07, 2026

Cable Tray Clearance Standards | PDF | Manufactured Goods

This document outlines clearance requirements for cable trays. It provides a table with clearance dimensions labeled a through k for

Jun 20, 2026

Cable tray manual

INTRODUCTION The B-Line series Cable Tray Manual was produced by our technical staff. We recognize the need for a complete

Nov 13, 2025

Cable Tray Segregation and Clearance Rules

Cable Tray clearances as per Shell DEP - Free download as PDF File (.pdf), Text File (.txt) or read online for free. This document

Aug 14, 2025

Cable Tray Spacing Standards for Installation and Safety

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

Apr 20, 2026

CABLE TRAYS GENERAL INFORMATION AND INSTALLATION

Using cable trays as walkways can cause personal injury and also damage cable tray and installed cables. Performances of cable

Jan 26, 2026

Cable Support Distances

This provides distances for cables based on their diameter and cable type. Prysmian was instrumental in providing this information

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