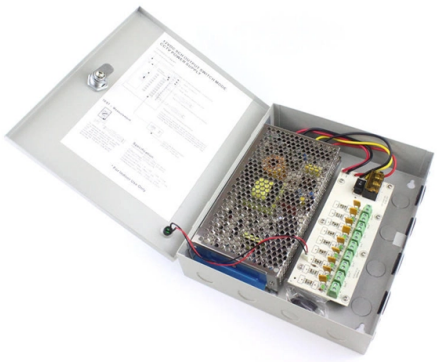
ZITHA TECH SPECIALTY CABLES (Pty) Ltd

Which cable tray should the elevator cables run through



Overview

A Guide to Installing and Supporting Electrical Cable TraysThis guide covers the critical steps, from selecting the right electrical cable tray and perform.

Key Takeaways

Elevator cables should typically run through ladder-type or ventilated trough cable trays, sized and installed according to NEC fill and support requirements.Recommended Cable Tray Types

Ladder trays are the most common choice for elevator power and control cables because they provide excellent ventilation, which helps dissipate heat from high-current conductors, and allow easy attachment points for securing cables along the rungs . Ventilated trough trays are also suitable, especially for smaller control or instrumentation cables, as they provide continuous support and prevent sagging between rungs . Solid-bottom trays are generally avoided for elevator cables unless protection from debris or liquids is required, as they limit airflow and reduce ampacity .

Material Considerations

Cable trays for elevator systems are commonly made from aluminum or steel, with aluminum preferred for its corrosion resistance and lighter weight . In corrosive or high-moisture environments, fiberglass-reinforced plastic (FRP) trays may be used for their non-conductive and corrosion-resistant properties .

© 2026 ZITHA TECH SPECIALTY CABLES (Pty) Ltd - All rights reserved

Installation Guidelines
• Fill limits: NEC guidelines recommend that cable trays should not exceed 40–50% of the tray's cross-sectional area to prevent overheating and allow future expansion .

• Support spacing: Ladder trays can span up to 20 feet between supports depending on load, while ventilated troughs may require closer spacing for smaller cables .

• Cable securing: Cables should be tied loosely to avoid jacket deformation, and power cables should be separated from control or signal cables to prevent electromagnetic interference .

• Routing: Minimize bends and use rollers or sheaves during installation to prevent damage to cable jackets .
Safety and Compliance

Elevator cable installations must comply with NEC Article 392 and any local building codes. Proper tray selection, fill management, and secure installation reduce risks of overheating, mechanical damage, and fire hazards . Always consult the manufacturer's installation guides and NEC requirements for the specific cable type and voltage rating. In summary, ladder trays are preferred for elevator power cables, while ventilated trough trays are suitable for control and instrumentation cables. Proper sizing, material selection, and adherence to NEC fill and support rules ensure a safe, reliable, and maintainable installation .

Article Content

A Guide to Installing and Supporting Electrical Cable Trays

This guide covers the critical steps, from selecting the right electrical cable tray and performing accurate

Cable Tray Fill Rules (NEC 392)

This guide covers the cable tray types and their appropriate applications, the fill rules for each configuration, ampacity

Cable Tray Installation Rules (NEC 392) – Electrical Trader

In vertical or angled tray runs, cables should be fastened to the tray''s transverse members to keep them secure. In

FactSheet

The type of cable tray (e.g., solid, ven-tilated), ampacity requirements, and the type and voltage rating of cable used determines the

Cable Tray Systems: NEC Article 392 Installation Guide

© 2026 ZITHA TECH SPECIALTY CABLES (Pty) Ltd - All rights reserved

Complete guide to cable tray systems per NEC Article 392. Learn about ladder, solid bottom, ventilated trough, wire mesh, and

Cable Tray Installation | UpCodes

Each tray run should be finished before cable installation, and protective covers must be compatible with the tray material. Trays can

Ladder Tray Vs. Solid Bottom Cable Tray: NEC 392.22 Fill Rules

When designing a cable tray system, the tray type can directly affect how many cables can be installed safely. The most

OESC 620.37 Wiring in Hoistways, Machine Rooms, Control Rooms ...

In Oregon, Raceways and conduits for the connection of elevator devices shall only enter the machine room to the extent necessary

Cable ladder vs tray vs trunking: how to specify for your project ...

Specifying a 300 mm rung spacing for a run that includes Cat 6A (7.8 mm diameter) means cables need to be tied

Document DICOS

Tray-rated cables are required for cable tray installation, so using a channel cable tray system or wire mesh system for exits may be

Best practice guide to cable ladder and cable tray systems

Cable ladder and cable tray systems The following recommendations are intended to be a practical guide to ensure

NEMA Standards Publication VE 2-2006

If a wire mesh cable tray is supporting cable with a built-in equipment grounding conductor or control or signal cables, then the tray

How to Install Cable Tray: A Comprehensive Guide to Different Cable ...

Welcome to our step-by-step guide on installing cable trays! In this video, we''ll explore the

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

Cable Tray SOP

© 2026 ZITHA TECH SPECIALTY CABLES (Pty) Ltd - All rights reserved

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

Cable Tray Technical Guide A practical guide to product selection

SOLID-BOTTOM CABLE TRAY Providing additional cable protection, solid-bottom cable tray is sometimes preferred to support and

Cable tray vs cable basket vs cable ladder vs cable

This article will discuss the four most common types of cable containment and their uses:

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

Cable routing | Tips for proper cabling | Simply explained

The structures of the mesh cable trays allow flexible and well-ventilated cable routing, especially on

Inspecting Elevator Power Wiring

Cables used for Class 2 power-limited circuits can be used as long as they are properly supported and protected from

Explaining NEC Article 392 on Cable Trays

392.30 securing and supporting Cables and conductors must be secured to the cable tray at

Installation Of Cable In Cable Trays: NEC, Safety

Discussed are the installation in tray of single and multi-conductor insulated cables with design limitations, example calculations,

Cable Tray Fill Rules (NEC 392)

Cable tray is the preferred wiring method for industrial facilities, data centers, and large commercial buildings where

The Complete Guide to Cable Trays | Snake Tray

The 701 Series is a hand-bendable cable tray specifically designed to manage metal clad (MC) cables running overhead or attached

620.21 Wiring Methods.

© 2026 ZITHA TECH SPECIALTY CABLES (Pty) Ltd - All rights reserved

Generally, conductors and cables in or on an elevator or in the hoistway (other than traveling cables) must be installed in rigid metal

7 Types of Cable Trays: How to Choose the Right One

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

Cable Tray Installation | UpCodes

Cable tray systems must be installed as a complete unit, ensuring electrical continuity and support for cables. Each tray run should

Typical Design Philosophy of Cable Trays for Power Plant

Cable tray system shall be used for laying of MV and LV power, control, instrumentation and special cables in the

Cable Tray Technical Guide A practical guide to product selection

SOLID-BOTTOM CABLE TRAY Providing additional cable protection, solid-bottom cable tray is sometimes preferred to support and

Hoistway Wiring

The illumination is only necessary when maintenance, testing, or repair is carried out in these rooms on elevator

Best practice guide to cable ladder and cable tray systems

Cable ladder and cable tray systems The following recommendations are intended to be a practical guide to ensure

NEMA Standards Publication VE 2-2006

If a wire mesh cable tray is supporting cable with a built-in equipment grounding conductor or control or signal cables, then the tray

How to Install Cable Tray: A Comprehensive Guide to Different Cable ...

Welcome to our step-by-step guide on installing cable trays! In this video, we''ll explore the

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

Cable Tray SOP

© 2026 ZITHA TECH SPECIALTY CABLES (Pty) Ltd - All rights reserved

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

Cable Tray Technical Guide A practical guide to product selection

SOLID-BOTTOM CABLE TRAY Providing additional cable protection, solid-bottom cable tray is sometimes preferred to support and

Cable Tray Type Selection

If cable trays are being installed where working space is a problem, hand access through the cable tray bottom may help to facilitate

Cable Tray Questions | Cable Tray Institute

Answer: Yes, there are NEC rules. Instrumentation, signal, and telecommunications cabling should be separated from power cabling.

Understanding Elevator Cable: A Comprehensive Guide

Explore the essentials of elevator cable in our comprehensive guide, covering wire

A Guide to Installing and Supporting Electrical Cable Trays

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

Cable tray vs cable basket vs cable ladder vs cable trunking ...

This article will discuss the four most common types of cable containment and their uses: cable tray, cable basket,

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

Cable routing | Tips for proper cabling | Simply explained

The structures of the mesh cable trays allow flexible and well-ventilated cable routing, especially on ceilings or in environments

Inspecting Elevator Power Wiring

Cables used for Class 2 power-limited circuits can be used as long as they are properly supported and protected from

A Guide to Installing and Supporting Electrical Cable Trays

This guide covers the critical steps, from selecting the right electrical cable tray and performing accurate

© 2026 ZITHA TECH SPECIALTY CABLES (Pty) Ltd - All rights reserved

Cable Tray Fill Rules (NEC 392)

This guide covers the cable tray types and their appropriate applications, the fill rules for each configuration, ampacity

Cable Tray Installation Rules (NEC 392) – Electrical Trader

In vertical or angled tray runs, cables should be fastened to the tray''s transverse members to keep them secure. In

FactSheet

The type of cable tray (e.g., solid, ven-tilated), ampacity requirements, and the type and voltage rating of cable used determines the

Cable Tray Systems: NEC Article 392 Installation Guide

Complete guide to cable tray systems per NEC Article 392. Learn about ladder, solid bottom, ventilated trough, wire mesh, and

Cable Tray Installation | UpCodes

Each tray run should be finished before cable installation, and protective covers must be compatible with the tray material. Trays can

Ladder Tray Vs. Solid Bottom Cable Tray: NEC 392.22 Fill Rules

When designing a cable tray system, the tray type can directly affect how many cables can be installed safely. The most

OESC 620.37 Wiring in Hoistways, Machine Rooms, Control Rooms ...

In Oregon, Raceways and conduits for the connection of elevator devices shall only enter the machine room to the extent necessary

Cable ladder vs tray vs trunking: how to specify for your project ...

Specifying a 300 mm rung spacing for a run that includes Cat 6A (7.8 mm diameter) means cables need to be tied

Document DICOS

Tray-rated cables are required for cable tray installation, so using a channel cable tray system or wire mesh system for exits may be

A Guide to Installing and Supporting Electrical Cable Trays

This guide covers the critical steps, from selecting the right electrical cable tray and performing accurate

Cable Tray Fill Rules (NEC 392)

© 2026 ZITHA TECH SPECIALTY CABLES (Pty) Ltd - All rights reserved

This guide covers the cable tray types and their appropriate applications, the fill rules for each configuration, ampacity

Cable Tray Installation Rules (NEC 392) – Electrical Trader

In vertical or angled tray runs, cables should be fastened to the tray''s transverse members to keep them secure. In

FactSheet

The type of cable tray (e.g., solid, ven-tilated), ampacity requirements, and the type and voltage rating of cable used determines the

Cable Tray Systems: NEC Article 392 Installation Guide

Complete guide to cable tray systems per NEC Article 392. Learn about ladder, solid bottom, ventilated trough, wire mesh, and

Cable Tray Installation | UpCodes

Each tray run should be finished before cable installation, and protective covers must be compatible with the tray material. Trays can

Ladder Tray Vs. Solid Bottom Cable Tray: NEC 392.22 Fill Rules

When designing a cable tray system, the tray type can directly affect how many cables can be installed safely. The most

OESC 620.37 Wiring in Hoistways, Machine Rooms, Control Rooms ...

In Oregon, Raceways and conduits for the connection of elevator devices shall only enter the machine room to the extent necessary

Cable ladder vs tray vs trunking: how to specify for your project ...

Specifying a 300 mm rung spacing for a run that includes Cat 6A (7.8 mm diameter) means cables need to be tied

Document DICOS

Tray-rated cables are required for cable tray installation, so using a channel cable tray system or wire mesh system for exits may be

Related Video Reference

This video was associated with the source search result. Verify technical details against current product documentation and project requirements.

© 2026 ZITHA TECH SPECIALTY CABLES (Pty) Ltd - All rights reserved

Contact Us

Continue your research online:

Website: https://zithatech.co.za
Technical inquiry: https://zithatech.co.za/contact.html

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

© 2026 ZITHA TECH SPECIALTY CABLES (Pty) Ltd - All rights reserved