

Principle of Anti-sway Support for Cable Trays

Article Overview

Anti-sway supports are devices used to prevent lateral movement or swinging of cable trays, ensuring mechanical stability and reducing stress on cables and support structures.

Purpose and Function

Anti-sway supports, also known as anti-sway brackets or braces, are installed on cable tray systems to prevent sway or swinging of the cable bundles. Movement of cables can occur due to wind, seismic activity, or mechanical vibrations, and uncontrolled sway can lead to stress, fatigue, or even failure of the cable tray components and the cables themselves . These supports are particularly important in overhead installations, long spans, or areas exposed to environmental forces.

Types of Anti-Sway Supports

- o Anti-Sway Brackets: These are mounted at tangent points or along the cable tray to secure the bottom of the tray or cable bundle, limiting lateral movement . They are commonly used in transmission, distribution, substation, fiber optic, solar, and EV installations.
- o Seismic Bracing Systems: For areas prone to earthquakes, seismic braces use wire rope or cable assemblies to dampen seismic loads and act like shock absorbers. These systems are flexible, UL-listed, and designed to resist tension forces without length limitations .

Installation Considerations

- o Placement: Anti-sway supports are typically installed at intervals along the cable tray, especially at bends, junctions, or long unsupported spans.
- o Material: Supports are usually made from high-strength steel or corrosion-resistant materials to withstand environmental conditions.
- o Integration: They work in conjunction with other support elements such as wall brackets, ceiling suspensions, or center supports to maintain the overall structural integrity of the cable tray system .

Benefits

- o Reduces mechanical stress on cables and tray components.
- o Prevents fatigue and potential failure of the support system.
- o Enhances safety and reliability of electrical and communication networks.
- o Provides compliance with building codes and standards for seismic or environmental protection .

In summary, anti-sway supports are essential for maintaining the stability and longevity of cable tray

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installations, particularly in environments where external forces could cause lateral movement or vibration. They ensure that cables remain securely routed and protected, minimizing maintenance and operational risks.

A cable tray is a structural system used to support and manage electrical cables in various settings, such as industrial, commercial,

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

For over 60 years, Eaton has manufactured TOLCO seismic bracing and B-Line series cable tray, strut systems, pipe hangers and

Back-analysis of conduit and cable tray support systems in the database indicates that most supports have relatively high, vertical

In designing supports for a cable tray system, consideration should be given to the loads associated with future cable additions and

The design aspects of electrical cable trays and support systems are discussed from the seismic and structural

IEC 61537 is a crucial international standard established by the International Electrotechnical Commission (IEC). The Chinese

Stainless steel Zinc Zinc cable tray and stainless steel accessory Galvanic corrosion must be taken into account within the whole

The cable tray test program conducted by ANCO Engineers Inc. included more than 2000 dynamic tests of representative cable tray

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

Wyr-Grid®; Cable Tray Load Rating Report Limits on deflection from cable loading are set forth in EN 61537:2007. The safe working

The document discusses cable support systems used internationally. It provides information on calculating cable loads using cable

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Not all cable trays are equivalent. The mechanical and electrical characteristics, tests, certifications, overall quality management,

This study investigates how to define the longest cable tray support span considering constructability in order to reduce

This document provides guidance on best practices for installing cable ladder and cable tray systems, including channel support

All our seismic Wire Rope/Cable(TM) bracing, complies with model building codes, and installs in just one-third the time needed for

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