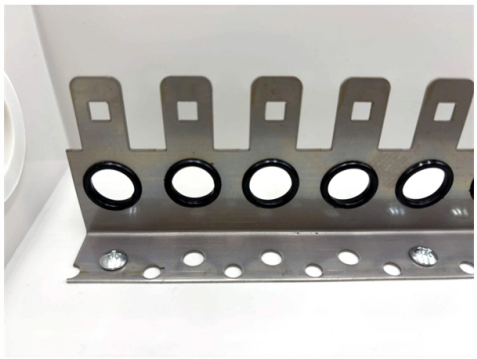
How to calculate the seismic cable tray support



Overview

Cable tray support quantity can be calculated using a simple formula: Support Quantity = Total Length ÷ Support Spacing + 1 20 ÷ 2 + 1 = 11 supports In a typical project, a 20-meter cable tray with 2-meter spacing requires 11 supports. This appendix provides the design criteria for seismic Category I cable trays and their supports. 1 Codes and Standards The design of cable trays and their supports conform to. A number of shake table tests on portions of cable tray and conduit systems confirm these observations from past earthquakes and demonstrate that typical configurations perform well under repeated high- level seismic input test spectra on the order of 1. Fully compliant with IEC, BS, NEC, VDE, and AREI standards. Our cable tray, bolted framing, and seismic bracing are approved as one system through third party testing.

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Seismic forces for the cable trays, including the cable weights, were calculated using the nonstructural component seismic provisions of the 1994 UBC, which was the applicable design code in effect.

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Strap cables, either individually or in bundles, to the cable tray at a spacing equal to one half the support spacing to spread the seismic loads evenly to all restraint points.

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How to Calculate the Cable Tray Support Quantity

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(PDF) Performance-Based Earthquake Engineering …

This study presents not only material and geometry frequently used for cable tray but also the formula to estimate the maximum cable load which can …

Cable Tray and Conduit System Seismic Evaluation Guidelines

The post channels suffered local buckling during the earthquake, which caused the cable tray system to collapse. There was no reported loss of cable electrical function. The guidelines presented below …

Appendix 3F Cable Trays and Cable Tray Supports

The major factors which affect the damping ratio of the cable tray systems are the input acceleration level, cable fill ratio, and the ability of the cables to move within the trays during a safe shutdown …

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Cable Tray Checklist for High-Seismicity Projects

The seismic performance of a cable tray system depends just as much on the building connection as on the tray itself. Every hanger, trapeze, beam clamp, concrete insert, and post …

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