

Specifications and dimensions of embedded nuts for cable trays

Article Overview

Embedded nuts for cable trays include DIN934 hex nuts, channel nuts, and spring nuts, available in standard sizes M6 to M12, made from carbon steel, stainless steel, or alloy steel, and designed to meet mechanical and environmental requirements of cable tray systems.

Types of Embedded Nuts

1. **DIN934 Hex Nuts:** These are standard hexagonal nuts used with bolts to secure cable tray accessories and components. They are commonly used in wire mesh and solid cable trays for general fastening purposes .
2. **Channel Nuts (Unistrut Nuts):** Designed to fit into channel rails of cable trays, these nuts allow adjustable positioning of bolts and accessories. They are often paired with roofing bolts or threaded rods to assemble cable trays and support systems .
3. **Spring Channel Nuts:** These nuts include a spring mechanism to hold the nut in place within the channel, facilitating easier installation and alignment. They are available in T-shaped or square designs for versatile applications .

Sizes and Threading

- o Standard metric sizes: M6, M8, M10, M12 .
- o Threading corresponds to the bolt used for tray assembly, ensuring secure fastening.
- o Custom sizes and designs are available for specialized applications or heavy-duty installations .

Materials and Finishes

- o Carbon Steel: Common for general indoor applications; may be zinc-plated for corrosion resistance.
- o Stainless Steel (e.g., AISI 316L): Used in corrosive or outdoor environments for enhanced durability.
- o Alloy Steel and Spring Steel: Provide higher strength and resilience for heavy loads or vibration-prone installations .
- o Finishes may include hot-dip galvanization, mill galvanization, or electroplated coatings to protect against corrosion and wear .

Standards and Compliance

- o Nuts and fasteners for cable trays typically comply with ANSI/NFPA 70, ASTM A123, ASTM A653, and NEMA VE 1/VE 2 standards .



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o Material selection and mechanical properties are chosen to meet environmental and load requirements, including resistance to corrosion, stress, and temperature variations .

Applications

Embedded nuts are used to:

- o Secure cable tray sections, bends, tees, and elbows.
- o Attach covers, splice plates, and support brackets.
- o Facilitate modular assembly and adjustment of cable tray systems.
- o Ensure compliance with electrical and mechanical safety standards .

By selecting the appropriate type, size, and material of embedded nuts, cable tray systems can achieve reliable mechanical stability, corrosion resistance, and ease of installation across various industrial and commercial environments.

2.01 General: Except as otherwise indicated, provide metal cable trays, of types, classes and sizes indicated; with splice plates,

SPECIFICATIONS FOR METALLIC CABLE TRAY SYSTEMS This document contains proprietary information developed by and for

NEMA VE 1-2017 Specifies requirements for metal cable trays and associated fittings designed for use in accordance with the rules

Eaton

To install the cable tray supports, first find the required elevation from the floor to the bottom of the cable tray and establish a level

Cablofil Wiremesh Cable Tray concept based upon performance, safety and economy; three qualities which make Cablofil Wiremesh

The IEC standard for cable tray recognizes multiple tray types depending on application and

Cable Tray Technical Specifications The document provides a technical data sheet for cable trays including ladder and perforated

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Technical specifications All calculations and data are based on 36 in. wide cable trays with tray supported as simple spans with

In accordance with its continuous improvement policy, Legrand reserves the right to change the specifications and illustrations

2.2 CABLE TRAY SECTIONS AND COMPONENTS General: Except as otherwise indicated, provide metal cable trays, of types,

IEC Standard for Cable Tray: Complete Technical Guide The International Electrotechnical

Specification data for engineering software systems As part of its ongoing commitment to customer support, Legrand's cable

Discover Legrand's Swifts Cable Tray, designed for efficient cable management with innovative, sustainable solutions for various

3.0 TECHNICAL REQUIREMENTS 3.1 Cable trays & accessories shall be of two types, namely ladder type and perforated type.

With over 20 years of experience T&B Cable Tray provides a complete solution in cable management systems including design,

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