Specifications of Umbrella Nuts for Cable Trays

Overview

This tray bolt and flange nut set is ideal for electrical, mechanical, and construction applications where quick, safe, and durable cable tray fastening is required.

Key Takeaways

Umbrella nuts for cable trays are typically M12 fasteners made of zinc-plated, stainless steel, or hot-dip galvanized material, designed to secure cable trays to channels while complying with BS 3382 and BS 6946 standards.

Material and Finish

Umbrella nuts are commonly manufactured from mild steel, stainless steel (grade 316L), or hot-dip galvanized steel to ensure corrosion resistance and mechanical strength in industrial environments. The standard finishes include: Zinc-plated for general indoor useStainless steel (S) for high-corrosion or outdoor environmentsHot-dip galvanized (G) for enhanced protection against moisture and chemical exposure Size and ThreadingStandard umbrella nuts for cable trays are M12, compatible with M12 channel bolts and setscrews. Threads are designed to match hexagon head setscrews for secure fastening.

The umbrella shape allows the nut to self-align and distribute load evenly across the channel surface.

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Standards Compliance

Umbrella nuts and associated channels are manufactured according to BS 3382 Part 2 and BS 6946, ensuring structural integrity and compatibility with metal channel cable support systems. Channels and nuts are designed to handle maximum load conditions, with M12 nuts recommended for heavy-duty installations.

Installation and Usage

Umbrella nuts are inserted into the slots of strut channels and rotated to lock in place. They are used in combination with hexagon head setscrews to secure cable trays, ladders, or mesh trays to the support structure. Proper torque should be applied to prevent loosening while avoiding damage to the channel or tray.

They are suitable for horizontal and vertical mounting, as well as for supporting bends, T-pieces, and crossovers in cable tray systems.

Advantages

Load distribution: The umbrella shape spreads the clamping force over a larger area. Ease of installation: Can be inserted and rotated into position without disassembling the channel. Corrosion resistance: Available in finishes suitable for indoor, outdoor, and industrial environments.

Standards compliance: Ensures safety, reliability, and compatibility with IEC 61537 and other cable tray standards. In summary, umbrella nuts are essential fasteners for cable tray systems, providing secure, standardized, and corrosion-resistant connections between trays and support channels, with M12 size being the most common for industrial applications.

Article Content

GUIDE CABLE TRAYS TECHNICAL

NEMA VE 1-2017 Specifies requirements for metal cable trays and associated fittings designed for use in accordance with the rules of Canadian Electrical Code, Part I and the National Electrical Code®

M6 x 16mm Cable Tray Bolt & Flange Nut – Box of 100

This tray bolt and flange nut set is ideal for electrical, mechanical, and construction applications where quick, safe, and durable cable tray fastening is required.

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

Cable tray installed in a hazardous location must contain only those cables that are appropriate for this type of environment as defined in Chapter 5 of the NEC.

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STANDARD SPECIFICATION E-30-11

Each length of cable tray shall be supplied with a set of joining pieces, bolts and nuts for fixing at one end with an adjacent length of cable tray. When fitting bends, tees, crossovers, couplers/connectors

Full cable tray systems specification document

The drawings which constitute a part of these specifications indicate the general route of the cable tray systems. Data presented on these drawings is as accurate as preliminary surveys and planning can

CABLE TRAY SYSTEMS GUIDE

Some applications may require the cable tray to support the weight of a single, dead object in addition to the cable loads. Specifications typically require this to be applied at the midpoint of the span between

Guide to cable support systems

Four different mesh cable tray types are available, depending on the requirements, area of application and cable quantity. The innovative Magic connection system of the GRM and G-GRM mesh cable

Product Catalogue Cable Management Solutions

Cable ladder is a more reliable, less expensive solution for supporting cable, which is easier to maintain, proves more adaptable to changing needs, and is more suitable for harsh and corrosive environments.

Cable Tray Specifications and Standards | PDF | Screw | Nut (Hardware)

Cable Tray Specifications and Standards The document outlines the specifications for cable trays and accessories, including materials, construction, dimensions, and loading capacities.

LEGRAND CABLE TRAYS TECHNICAL GUIDE

Not all cable trays are equivalent. The mechanical and electrical characteristics, tests, certifications, overall quality management, recommendations mentioned in this technical guide only apply to our

Cable Tray Technical Specifications | PDF | Galvanization ...

Cable Tray Technical Specifications The document provides a technical data sheet for cable trays including ladder and perforated types. It lists specifications for material, thickness, dimensions,

Cable Tray Specifications and Sizes

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The data sheet provides specifications for standard cable trays and accessories. Standard cable trays are 2.5 meters in length with a maximum thickness deviation of 0.01mm and dimensional deviation of

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Cable Tray Specifications and Sizes | PDF | Galvanization

The document specifies requirements for cable trays, including that they be fabricated from galvanized sheet steel in standard lengths and widths. It provides details on perforated and ladder cable tray

PDF document

PDF document PDF document Read this PDF document online, download the original file, and browse related details on device.report. Additional coding instructions can be found in the Article File chapter

CT Cable Tray Fittings Guide

The document provides specifications for CT perforated cable trays and fasteners, including dimensions, weights, and ordering codes for various widths. It also outlines available fittings, such as bends and

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

Cable Tray Technical Guide A practical guide to product selection and installation This guide for engineers and installers has been developed by ABB as a practical reference regarding cable tray

Full cable tray systems specification document

B. Cable tray systems are defined to include, but are not limited to straight sections of [ladder type] [trough type] [solid bottom type] [channel type] cable trays, bends, tees, elbows, drop-outs, supports

Related Video Reference

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

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

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