

Article Overview

Large-span ladder-type cable trays are designed to support heavy cables over long distances with high load capacity, excellent ventilation, and corrosion resistance.

Overview

Large-span ladder cable trays are a type of cable management system used to carry heavy power, control, and communication cables across industrial, commercial, and harsh environments. Unlike standard cable trays, they are engineered for long support spans and high loading capacities, making them suitable for applications such as factories, hospitals, data centers, and outdoor installations .

Design and Structure

- o Ladder Configuration: Composed of two side rails connected by rungs, forming a ladder-like structure. The rungs provide support while allowing air circulation to prevent overheating of cables .
- o Materials: Commonly made from stainless steel (304/316), aluminum alloy, galvanized steel, or fiberglass reinforced plastic (FRP). These materials offer corrosion resistance, heat resistance, and long service life .
- o Rung Spacing and Width: Rung spacing typically ranges from 6 to 18 inches, with tray widths from 6 to 48 inches. Wider trays and larger rung spacing reduce overall strength, so design must account for load and span .
- o Thickness: Tray thickness varies from 3mm to 8mm, depending on the support span and loading requirements .

Load Capacity and Span

- o Large-span trays are designed to carry heavy cables over spans of 20 to 40 feet or more, reducing the number of supports required in outdoor or industrial installations .
- o The support span and placement of splice plates are critical for maintaining structural integrity. Only one splice plate is recommended per support span to ensure strength .

Installation and Accessories

- o Supports: Corbels, hangers, and brackets are used to secure the tray. Proper support spacing is essential for safety and durability .
- o Fittings: Straight runs, horizontal bends, tees, crosses, reducers, and vertical bends allow flexible routing of cables .
- o Surface Finish: Options include pre-galvanized, hot-dipped galvanized, or powder-coated finishes to enhance corrosion resistance .

Advantages

- o Ventilation: Ladder design allows heat dissipation, reducing the risk of cable overheating .
- o Durability: Resistant to deformation, corrosion, and harsh weather conditions.
- o Maintenance: Easy access for inspection, repair, or cable addition.
- o Versatility: Suitable for indoor and outdoor applications, including heavy industrial environments.

Applications

- o Industrial plants and factories
- o Data centers and communication hubs
- o Hospitals and large commercial buildings
- o Outdoor installations crossing roads or open areas Large-span ladder-type cable trays provide a robust, flexible, and long-lasting solution for managing heavy and sensitive cables in demanding environments, combining structural strength with efficient cable ventilation and easy maintenance .

Our wide-span cable ladders are available in heights of 100, 120 and 150 mm, in widths of 200, 300, 400, 500 and 600 mm and come

The Ultimate Guide to NEMA cable ladder sizes (NEMA 1, 2, 3, 4). Compare essential specifications, including side rail

This product line is designed for applications with extremely heavy loads and long spans. Tray systems are available in

The length of the ordinary bridge is about 2M, and the length of the large span bridge can be customized,

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

Eaton

Committed to delivering reliable and efficient cable management products, we specialize in ladder-type cable trays that meet the

Wide Span Cable Ladder Load chart: q = equally distributed load (tested acc. to DIN EN IEC 61537) Support span (m) The load

Wide-span cable ladders and trays guide control and power cables in industrial halls, production facilities and



Large Span Ladder Cable Tray Models

power plants or in plant

Our Cable Ladder Tray portfolio extends beyond the standard model to ensure optimal performance for

Ladder cable tray is available in widths of 6, 9, 12, 18, 24, 30, 36, 42 and 48 inches with rung spacings of 6, 9, 12 or 18 inches. Note

Cable Ladder Specifications: A. CABLE TRAY DESIGN Cable Tray shall be made of straight sections, fittings and accessories as

The Ladder Tray features light, rugged, tubular steel construction. It is designed for mechanical support and strain relief in long runs

Choose from our selection of ladder cable trays, including cable and hose trays, heavy duty open cable and hose carriers, and more.

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

Imperial cable tray and ladder Eaton's B-Line series imperial cable tray system is designed to significantly

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