

## Cable trays and power cables



### Overview

Choose from our selection of cable trays, including over 850 products in a wide range of styles and sizes. Same and Next Day Delivery.

### Key Takeaways

Tray cables (TC) and TC-ER cables are the primary types of power cables designed for installation in cable trays, offering durability, safety, and compliance with NEC standards. Types of Power Cables

Tray Cable (TC) is a multi-conductor cable designed for power, control, and lighting circuits in industrial and commercial environments. It features enhanced insulation and jacketing to withstand mechanical stress, moisture, oil, sunlight, and chemical exposure, making it suitable for harsh conditions. TC cables are rated for 600 volts and are UL listed for tray installation, ensuring compliance with NEC Article 336. Tray Cable with Exposed Run Rating (TC-ER) is similar to standard TC but is specifically rated for exposed runs outside the tray for distances up to six feet, provided the cable is properly supported and secured. TC-ER cables are also UL listed and designed for industrial power and control circuits. Other cable types sometimes used in trays include Metal-Clad (MC) cables, which can also serve as 600-volt motor power cables, offering additional mechanical protection.

#### Installation Considerations

- Cable Tray Types: Power cables can be installed in ladder, ventilated, solid-bottom, or wire-mesh trays depending on environmental conditions and heat dissipation requirements.

- **Ampacity and Derating:** Cables in trays have reduced ampacity compared to free-air installations due to restricted airflow and mutual heating effects from bundled cables. Metal trays can also induce eddy currents, further affecting conductor resistance .
- **Spacing and Support:** Proper spacing, securing, and support are essential to prevent overheating and mechanical damage. Rung spacing of 6–9 inches is recommended for optimal cable management .
- **Environmental Ratings:** Tray cables are available for indoor, outdoor, corrosive, hazardous, or high electrical noise environments. Many are exposure-rated (ER) and undergo crush and impact testing .

#### Standards and Compliance

All power cables installed in cable trays should be UL listed and marked as cable tray rated. Installation must comply with NEC Section 392 and related articles, which cover fill capacity, ampacity, splicing, and securing requirements . Following manufacturer specifications and local codes ensures safe and reliable operation.

#### Summary

For power distribution in cable trays, TC and TC-ER cables are the most commonly used, offering flexibility, durability, and compliance with NEC standards. Proper installation, spacing, and consideration of ampacity derating are critical to maintain safety and performance in industrial and commercial electrical systems .

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### Cable Tray & Accessories

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### 7 Types of Cable Trays: How to Choose the Right One

Cable tray systems are engineered support structures designed to route, support, and protect insulated electrical

### Types of Cable Typically Used in Cable Tray

Communication Cables – types CMP, CMR, CMG, CM, CMX Fire Alarm Cables – type NPLF – NPLFP, FPL-FPLP (CI) Type TC –

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### Cable tray

In the electrical wiring of buildings, a cable tray system is used to support insulated electrical cables used for power distribution,

Types of Cable Trays: Ladder, Perforated, Basket, Solid & Channel

Cable trays support insulated electrical cables in industrial and commercial settings. There are several types of cable

### Ampacity of Power Cables Installed in Cable Trays

The most common method of installing power cables in tunnels is mounting them on metal brackets or cable trays attached to the

### The Complete Guide to Cable Trays | Snake Tray

The 801 Series is a high capacity preconfigured cable tray system for data centers, hospitals, and industrial applications where large

### How to Install Cable Tray: A Comprehensive Guide to Different Cable ...

Welcome to our step-by-step guide on installing cable trays! In this video, we'll explore the different types of cable trays

### Types of Cable Trays: Benefits and Uses

Cable trays are support structures used in the electrical wiring of buildings and other structures, designed to secure

### Cable Tray Selector

Channel Cable Trays consist of a one-piece, ventilated or solid bottom channel section, providing an economical support for cable

### Types of Cable Trays - Advantages, Applications and Sizes

Electrical cable trays are the backbone of cable management systems. Designed to support and organize power and

### What Is A Cable Tray? 5 Types Of Cable Trays

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

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Cable Trays | Cable Management Systems | Snake Tray

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Cable Tray Systems

Our cable tray systems securely hold and protect cables and come in many models and sizes, solid bottom and ventilated.

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