

## Article Overview

Recent Electrical CDA updates have expanded the types of cables accepted in cable trays and clarified testing, marking, and installation requirements to ensure compliance with the Canadian Electrical Code.

## Key Changes in Cable Tray Specifications

1. **Expanded Cable Acceptance** The updated CSA C22.2 No. 230:17 standard now allows additional cables to be certified as tray cables if they meet specific requirements, including wet-rated cables from CSA C22.2 No. 38, No. 49, No. 75, No. 96, No. 96.1, No. 239, and No. 68.10. This change increases flexibility in cable selection for tray installations while maintaining safety and performance standards .

2. **Testing and Marking Requirements** The standard clarifies impact testing, oil resistance testing, and marking of tray cables. These requirements ensure that cables installed in trays are durable, properly identified, and suitable for their intended environment, including industrial and commercial applications .

3. **Installation and Grounding** Cable trays must be listed for their location and purpose, and continuous grounding is required. Wire mesh, ladder, and solid-bottom trays must follow manufacturer instructions and maintain proper clearances: typically 12 inches above and below overhead trays, 3 inches above drop ceilings, and 1 inch under raised floors . Multiple tiers of trays require at least 12 inches of separation .

4. **Sizing and Load Considerations** Trays should accommodate all horizontal and backbone cabling with a 10% growth allowance. Rung spacing is generally 6 to 8 inches (152-203 mm) for proper cable support, and trays must support the weight of installed cables without deformation .

5. **Material and Corrosion Resistance** Cable trays are manufactured from steel, aluminum, stainless steel, or fiberglass, with finishes selected based on environmental conditions. Aluminum offers corrosion resistance due to its natural oxide layer, while stainless steel (AISI 316L) provides enhanced resistance to chlorides and other corrosive agents. Fiberglass trays offer high resistance-to-weight ratios and chemical resistance .

6. **Compliance with Codes and Standards** Cable trays must comply with NEMA VE 1, CSA C22.2 No. 230, UL 568, and IEC-61537 standards. These standards cover construction, testing, performance, and installation practices, ensuring that trays meet both Canadian and international safety requirements .

## Practical Implications

- o Engineers and contractors must verify that all tray cables meet the updated CSA requirements before installation.
- o Proper grounding, clearances, and support spacing are critical to maintain safety and code compliance.
- o Material selection should consider environmental exposure, corrosion potential, and mechanical load.
- o Documentation and labeling of tray systems are essential for inspection and maintenance. These updates ensure that cable tray systems are safer, more versatile, and compliant with the latest Canadian Electrical Code requirements, supporting both power and control cabling in modern installations .

# Electrical CDA changes cable tray specifications

How to design cable tray? Most projects are roughly defined at the start of cable tray design. For projects that are not

FDG CABLE TRAY ng; Power, Data, and Audio Visual. A quick and easy system to install without the need for specialised tools or

Many electrical systems employ cable trays. They route cables safely & efficiently. NEC defines minimum cable tray

Description: This product category covers metal cable trays and metal cable tray systems intended for field assembly and for use in

Cable trays are components of support systems for power and communications cables and wires. A cable tray system supports and

In designing supports for a cable tray system, consideration should be given to the loads associated with future cable additions and

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Not all cable trays are equivalent. The mechanical and electrical characteristics, tests, certifications, overall quality management,

Aluminum Aluminum cable trays are fabricated from structural grade "copper free" (marine grade) aluminum extrusions. Aluminum"s

This standard specifies the requirements for nonmetallic cable trays and associated fittings designed for use in accordance with the

A generic guideline developed by the Cable Tray Institute indicates that cable trays should not be filled in excess of 40-50% of the

Understanding the IEC Standard for Cable Tray Cable trays play a vital role in supporting

Attaching a channel cable tray by using the method illustrated in Figure 3-88 maintains the electrical requirements, and the bolted

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The drawings which constitute a part of these specifications indicate the general route of the cable tray systems. Data presented on

The following are some of the changes in Article 318, Cable Trays, that we can expect in the 1999 NEC. These changes are based

Core rules for selecting, installing, grounding, and filling cable trays--clearances, materials, separation, and bonding

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