

Using cable trays as cover plates to cover cable trays

Article Overview

Cable trays are not designed to serve as cover plates for other trays; proper covers or solid trays should be used to ensure safety, heat management, and NEC compliance.

Structural and Safety Considerations

Cable trays are engineered to support and organize cables, not to act as protective covers for other trays. Using a tray as a cover can compromise:

- o Mechanical stability: Trays are designed to bear vertical loads of cables, not to span or shield another tray. Improper use may lead to sagging or collapse under weight .
- o Heat dissipation: Solid covers or ventilated trays are specifically designed to allow airflow and prevent heat buildup. Using a tray as a cover may trap heat, reducing cable ampacity by 20-50% .
- o Electromagnetic interference (EMI) protection: Solid-bottom trays provide shielding for sensitive circuits. A tray used as a cover may not provide continuous EMI protection .

NEC Compliance and Installation Rules

According to NEC Article 392, cable trays must remain accessible and should not be permanently enclosed unless using approved covers. Covers are designed to:

- o Protect cables from physical damage
- o Maintain proper spacing and separation between high-power and low-power circuits
- o Allow maintenance access and inspection

Improperly using a tray as a cover could violate NEC requirements, particularly regarding clearances, fill limits, and grounding . Metallic trays can serve as grounding conductors only if installed according to NEC standards, which may not be guaranteed if a tray is repurposed as a cover .

Recommended Alternatives

- o Solid or ventilated tray covers: Designed to fit standard tray widths and provide protection while allowing airflow .
- o Custom cover plates: Flat metal plates or splice plates can be used to shield sections of a tray without compromising structural integrity .
- o Ladder or channel trays with covers: Some trays come with integrated covers for EMI-sensitive or aesthetic applications .

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Conclusion

While it may seem convenient to use a cable tray as a cover plate, it is not recommended due to safety, heat, and compliance concerns. Always use purpose-built covers or solid-bottom trays to ensure proper protection, airflow, and adherence to NEC standards .

Learn how to install cable trays correctly. Get the ultimate step-by-step guide on setting up a seamless and reliable

Hot dip galvanized and stainless-steel cable trays can be stored without cover but should be loosely stacked, elevated off the ground

Equipment Grounding Conductors for Cable Tray Systems Cable tray wiring systems have excellent safety and dependability

These guidelines are not intended to cover all details or variations in cable ladder and cable tray installation and do

Cable Tray Learn with flashcards, games, and more -- for free.

Explore cable tray cover types, materials & standards to optimize safety and system ROI.

Hot dipped galvanized after fabrication (H.D.G.A.F.) (see ASTM A123) steel, aluminum, and stainless steel cable tray and fiberglass

In industrial facilities where maintenance and supervision conditions ensure that only qualified persons service the installation, cable

Cable tray covers provide protection for cables in the tray system from mechanical damage, falling objects, environmental damage

MP Husky offers a wide variety of cable tray covers to provide protection for the cables contained within the system from sunlight,

A complete guide to cable tray cover types: Compare 9+ designs, material specifications (NEMA/IEC), selection

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NEC Article 392 explains cable trays, their components, appropriate wiring methods for

OSHA Regulations and Industry Consensus Standards that Apply to Cable Trays The use and installation of cable trays is covered

Ladder and ventilated trays may have solid covers to protect cables from falling objects, dust, and water. Tray covers for use

Corson Fabricating offers cable tray cover fabrication for indoor and outdoor that protects both the cables

Protect your cables with Spina Group cable tray covers. Available for ladder and perforated trays in HDG,

Web: <https://morwarreconst.co.za>

