

Cable Tray Application Classification Standard

Article Overview

Cable tray systems are classified based on material, construction, load capacity, environmental resistance, and compliance with standards such as NEMA VE 1, IEC 61537, UL 568, NEC, and CEC.

Types of Cable Trays

Cable trays are categorized by their structural design and intended application:

- Ladder Tray: Features side rails with rungs; ideal for heavy power cables and long spans. Provides excellent ventilation and heat dissipation .
- Ventilated Trough/Channel Tray: Solid or partially perforated bottom; used for medium-weight cables and applications requiring some protection from dust or electromagnetic interference .
- Solid Bottom Tray: Fully enclosed; suitable for sensitive instrumentation and control cables where protection from environmental factors is critical .
- Wire Mesh Tray: Lightweight, welded steel mesh; used for light cabling, easy to install, and adaptable to complex routing .

Material and Environmental Classification

Cable trays are manufactured from various materials, each with specific environmental and mechanical properties:

- Steel: Pre-galvanized or hot-dip galvanized for corrosion resistance; suitable for industrial and outdoor environments .
- Stainless Steel (AISI 316L): High corrosion resistance, especially in marine or chemical environments .
- Aluminum: Lightweight, corrosion-resistant, suitable for indoor and outdoor applications .
- Fiberglass/Nonmetallic: UL 568 compliant; resistant to corrosion and chemical exposure, used in specialized industrial settings .

Standards and Compliance

Cable tray systems must comply with national and international standards to ensure safety, performance, and compatibility:...

Article Content

Apr 25, 2026

CABLE TRAY INSTITUTE

The Cable Tray Institute (CTI) was founded in 1991 to support the cable tray industry by engaging in research, development,

Nov 23, 2025

Understanding NEMA Standards for Cable Trays: A Professional

The official guidelines that provide information about how strong a cable tray should be are the NEMA standards.

Feb 13, 2026

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

The Canadian Electrical Code, which publishes standards for electrical applications. Articles 12-2200 to 12-2210 cover various

Dec 21, 2025

Cable Tray

This Standard applies to single conductor cables and multi-conductor cables, without metal sheath or armour, suitable

May 30, 2026

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

Nov 22, 2025

IEC 61537:2023

This document specifies requirements and tests for cable tray systems and cable ladder systems intended for the support and

Jun 12, 2026

Technical information

Technical information CSA and NEMA loading classes The standard classes of cable trays, as related to their maximum design loads

Jan 17, 2026

Codes and Standards | Cable Tray Institute

IEEE 576 – This standard describes recommended practice for installation, termination and testing of insulated power cables in cable

Sep 25, 2025

Cable Trays Selection Guide: Types, Features, Applications

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

Nov 22, 2025

Microsoft Word

Cable Tray Type Selection With all the choices in cable trays styles, ladder, ventilated, solid bottom and wire basket, it can be difficult

Nov 22, 2025

Cables Allowed in NEC Tray Applications

Cables Allowed in NEC Tray Applications Cable tray is one of the most common methods of supporting wire and cable. There are

Jul 20, 2026

Non-Metallic Cable Tray Load Guidelines | PDF | Snow | Cable

This document provides information on selecting cable tray classes and load capacities. It includes tables that define the standard

Nov 28, 2025

IEC 61537:2023 | IEC

IEC 61537:2023 specifies requirements and tests for cable tray systems and cable ladder systems intended for the support and

Jul 10, 2026

222 MANUFACTURING LTD

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

May 25, 2026

NEMA vs IEC vs BS: Global Cable Tray Standards Comparison

When specifying cable trays for an international project, the first question is always: Which standard applies?

Jun 17, 2026

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

Learn about the seven types of cable trays and their respective applications.

Jul 27, 2025

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]

May 18, 2026

CABLE TRAY INSTITUTE

The Cable Tray Institute has several standards and guidelines for the construction, testing, performance, and installation of cable

Mar 10, 2026

Cable tray manual

Type MI and Optical-Fiber cables are special application cables that are desirable cables for use in some cable tray wiring systems.

Oct 24, 2025

Type of Cable Tray

They also offer the advantages of being light weight (approximately 50% that of a steel tray) and maintenance free, and since

Jan 17, 2026

Types of Cable Trays – Purpose, Advantages, Disadvantages

Cable tray is alternatives to wire ways and electrical conduits, which completely enclose cables. Study types of cable

Jan 07, 2026

IEC 61537:2023 | IEC

revised classification for corrosion, revised SWL test types and procedures, new tests for lengths mounted vertical running horizontal

Mar 11, 2026

NEMA BI 50015: Cable Tray Standards & UL Classified | CAT VAN LOI

Learn what NEMA BI 50015 stands for, the role of BI 50015, and how UL Classified certification ensures electrical products truly

Nov 25, 2025

B-Line series Cable Tray Design Considerations

Cable tray support locations are defined by the NEMA VE-1 and VE-2 Manufacturing & Installation Standards, which specify the

Sep 09, 2025

Cable tray

Cable tray Electrical installations Wiring practice by region or country North American practice United Kingdom practice Regulation of

Nov 06, 2025

Cable Tray Standards | Cable Management | Metsec

Cable tray lengths have been tested generally in accordance with the standard under 10.2 and 10.3 for

Jul 31, 2025

GUIDE CABLE TRAYS TECHNICAL

In summary, since there is no point in issuing a classification of finishes which apply in all cases, due to the huge diversity of

Mar 15, 2026

Understanding NEMA Standards for Cable Tray Systems

We partnered with the Eaton B-Line series experts for this article detailing the NEMA

Sep 23, 2025

Types of Cable Typically Used in Cable Tray

Types of Cable Typically Used in Cable Tray The purpose of a cable tray system is to support, route, and protect cable as part of the

Jan 16, 2026

CABLE TRAY SYSTEMS GUIDE

Cable Tray Systems Guide HUBBELL Hubbell Wiring Device-Kellems and Hubbell Premise Wiring are divisions of Hubbell

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://www.iiss.co.za>

Email: sales@iiss.co.za

Phone: +27 63 174 2895

Address: Unit 8, Innovation Park, 15 Rivonia Road, Sandton, Johannesburg,
2196, South Africa

This document is for informational purposes only. Specifications subject to
change without notice.

