

Classification Standards for 90-degree Elbows in Cable Trays



Overview

GUIDE CABLE TRAYS TECHNICAL Specifies requirements for metal cable trays and associated fittings designed for use in accordance with the rules of Canadian.

Key Takeaways

90-degree elbows in cable trays are classified primarily by NEMA tray class compatibility, side rail flange width, and splice plate configuration.

Overview 90-degree elbows are essential fittings in cable tray systems, allowing cables to change direction smoothly while maintaining mechanical support and proper bend radius. They are available in horizontal and vertical orientations and are designed to match the specifications of the straight cable tray sections they connect to.

Classification by NEMA Classes Cable tray elbows are typically classified into three or four classes based on the NEMA standard of the tray system: Class 1: Compatible with NEMA Classes 12B and 12C. These trays have 1-1/8" wide side rail flanges and 4-hole splice plates. They are suitable for light-duty applications.

Class 2: Compatible with NEMA Classes 20A, 20B, and 20C. These trays feature 2" wide side rail flanges and 4-hole splice plates, supporting medium-duty loads. Class 3: Designed for NEMA Classes exceeding 20C.

These systems have 2-3/8" wide side rail flanges and 8-hole splice plates, suitable for heavy-duty applications. Class 4 (optional, depending on manufacturer): Used with 8" high cable tray systems like A820E, featuring 2-3/4" wide side rail flanges and 8-hole heavy-duty splice plates for very high load capacity.

Additional Considerations

Radius Sizes: Standard elbow radii are typically 12", 24", and 36", allowing for smooth cable bends without exceeding the cable's minimum bend radius.

Orientation: Elbows can be horizontal (changing direction along the same plane) or vertical (changing elevation), and the classification applies to both types.

Material and Finish: Elbows are manufactured to match the tray material (steel, aluminum, or stainless steel) and may have finishes like hot-dip galvanized, bare, or powder-coated to ensure corrosion resistance.

Summary

The classification of 90-degree elbows in cable trays is primarily determined by NEMA tray class, flange width, and splice plate configuration, with additional factors including bend radius, orientation, and material finish. Selecting the correct class ensures mechanical compatibility, proper load support, and safe cable routing in electrical and data installations.

Article Content

GUIDE CABLE TRAYS TECHNICAL

Specifies requirements for metal cable trays and associated fittings designed for use in accordance with the rules of Canadian Electrical Code, Part I and the National Electrical Code®

Classification Standards for 90-degree Elbows in Cable Trays

This standard specifies the requirements for nonmetallic cable trays and associated fittings designed for use in accordance with the rules of the Canadian Electrical Code (CEC) Part 1, and the National

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Elbow 90° for cable tray, 85x102 mm, with unperforated side beams, steel, pre-galvanised according to DIN EN 10346, incl. accessories. EAN 4013339238408. Elbow 90° for cable tray, 85x202 mm, with

NEMA Standards Publication VE 2-2018

Tray-rated cables are required for cable tray installation, so using a channel cable tray system or wire mesh system for exits may be more convenient and economical.

90° Horizontal Elbow | Cable Tray Systems | PUPCO

Standard 12", 24" and 36" radius are available for all fittings. Class 1: Designed for use with NEMA Classes 12B and 12C cable trays. These systems have 1 1/8" wide side rail flanges and 4-hole splice

Cable Tray Design and Components Guide

Tables list standard sizes and specifications for straight and bent cable trays, including width, height, thickness, materials, and finishes. Drawings show different bent cable tray types like 90 degree and

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

Cable Tray Technical Guide A practical guide to product selection and installation This guide for engineers and installers has been developed by ABB as a practical reference regarding cable tray

TECHNICAL AND SIZING DATA

Unitray manufacturers elbows, tees, and crosses in all widths and heights. These products are available in 4 radii (305 mm, 610 mm, 915 mm and 1220 mm) and 4 degrees (30, 45, 60, and 90). With the

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Cable tray manual

Where cable tray wiring systems with current carrying conductors are installed in a dust environment, ladder type cable trays should be used since there is less surface area for dust buildup than in

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GUIDE CABLE TRAYS TECHNICAL

In accordance with its continuous improvement policy, Legrand reserves the right to change the specifications and illustrations without notice. All illustrations, descriptions and technical information

NEMA BI 50016-2024

Foreword 267 For cable tray installers: NEMA BI-50016-2024 (hereinafter referred to as NEMA BI-50016) is intended 268 as a practical guide for the proper installation of cable tray systems. Cable

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