

## Article Overview

Pre-branched cables are multi-conductor tray cables designed for direct installation in cable trays, raceways, or supported by messenger wires, simplifying distribution to multiple devices.

## Overview

Pre-branched cables are a specialized type of tray cable (TC) engineered for use in cable tray systems. Unlike standard electrical cables, they come with pre-terminated branches that allow direct connection to equipment or devices without additional splicing, reducing installation time and improving reliability. These cables are particularly useful in industrial and commercial environments where multiple power or control points need to be served from a main cable tray run.

## Key Features

- o Multi-conductor design: Includes multiple insulated conductors, often with grounding conductors, under a protective jacket.
- o Direct tray installation: Rated for installation in cable trays, raceways, and channels, including hazardous locations if appropriately rated.
- o Exposed Run (TC-ER) capability: Certain types can extend up to six feet outside the tray without continuous support, provided they are secured and protected from physical damage.
- o Compliance: Must meet UL listing and NEC requirements (NFPA 70, Section 392.10) for flammability, mechanical resistance, and temperature limitations.

## Advantages

- o Simplified installation: Pre-branched points eliminate the need for field splicing, reducing labor and potential errors.
- o Improved safety: Factory-assembled branches ensure consistent insulation and mechanical protection.
- o Flexibility: Can be used in both horizontal and vertical tray runs, with supports at branch points to prevent stress on the cable.
- o Compatibility: Works with various cable tray types, including ladder, perforated, solid-bottom, and channel trays, depending on the application and cable size.

## Installation Considerations

- o Support and fastening: Branches should be secured to tray rungs or transverse members to prevent strain.
- o Environmental suitability: Select cables rated for indoor, outdoor, corrosive, or high electrical noise environments as required.

# Pre-branched cables and cable trays

o Spacing and bend radius: Maintain proper bend radius at branch points and ensure adequate spacing to avoid overheating or mechanical damage .

## Applications

Pre-branched cables are ideal for:

- o Power distribution to multiple machines or panels in industrial plants.
- o Control and instrumentation wiring in commercial buildings.
- o Situations requiring rapid deployment with minimal field labor. By using pre-branched cables, engineers and installers can achieve efficient, code-compliant, and reliable cable tray installations while reducing installation complexity and potential errors .

Cable Trays are rigid structural system, comprising of unit or assembly of units/sections and associated fitting for

Discover cable tray systems, including tray types, sizes, duty ratings and materials, and learn how to choose the right solution for

ABB designs and manufactures cable tray systems, including perforated tray, cable ladder, channel tray and strut (metal framing).

SFSP manufactures a wide range of products capable of providing the characteristics which respond to the proposed application,

Eaton

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

Delivering engineered solutions in cable management ABB manufacturers a comprehensive range of cable tray systems and

Build a cable management system with Cablofil wire mesh cable tray, ladder cable tray, prefab assemblies for branch circuit wiring,

7) Finished packaging of prefabricated branch cables The prefabricated branch cables are

Cable tray installed in a hazardous location must contain only those cables that are appropriate for this type of

## Pre-branched cables and cable trays

environment as

Learn about the benefits and applications of cable trays, and the specific advantages of using Snake Tray

The versatile OBO cable tray systems stand for efficiency, stability and safety. This applies to the screw-on

Our product range includes stainless steel cable trays, galvanised cable trays, and wire cable trays,

Thomas & Betts offers a wide range of cable tray wiring systems for you to choose from. They are Reliable, Adaptable, Low

EAE cable trays are mass produced with the "Roll Forming" method on automatic production lines. The standard tray length is 3m.

Installation configuration The term installation configuration, when applied to prefabricated

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