

Current transformer installed inside the cable tray

Article Overview

A current transformer (CT) can be installed inside a cable tray if properly secured, oriented, and grounded, with secondary leads separated from power conductors to ensure safety and measurement accuracy.

Physical Installation

When installing a CT inside a cable tray, the primary conductor must pass through the CT toroid opening, and the CT should be securely mounted to the tray to prevent vibration, which can affect measurement accuracy (Optim-Elec) . For retrofit applications, split-core CTs can be used, allowing the existing conductor to remain connected while the CT is installed, though they may have slightly lower accuracy ($\pm 1-2\%$) compared to solid-core CTs .

Orientation and Polarity

CTs have marked terminals: P1/P2 for primary and S1/S2 for secondary. The current direction through the primary determines the secondary polarity. Incorrect orientation can cause negative meter readings or relay malfunctions, so verify the CT orientation before energizing the circuit .

Secondary Wiring and Grounding

- Secondary leads should be routed separately from power conductors, maintaining a minimum distance of 200 mm to reduce electromagnetic interference (EMI) .
- Keep secondary runs short (



Article Content

Mar 14, 2026

Cable tray manual

Where cable tray wiring systems with current carrying conductors are installed in a dust environment, ladder type cable trays should

Mar 27, 2026

B-Line series Cable Tray Design Considerations

Our wind certification report provides you with list of acceptable B-Line series cable tray supports, fittings and covers based off of the

Apr 01, 2026

Cable Tray Types & Installation Guide | Enagalxy

Learn cable tray types, uses, and installation basics to support safe, efficient electrical and water supply pipe systems in your project.

Jun 05, 2026

Current Transformer Installation

The Details What is a Current Transformer? A current transformer is similar to the more common voltage transformer that we are all

Jan 06, 2026

Guide to selection of current transformers and wire

Current transformers Ubiquitous current transformers are the foremost interface devices

Dec 15, 2025

Document DICOS

To install the cable tray supports, first find the required elevation from the floor to the bottom of the cable tray and establish a level

Oct 15, 2025

CT Cabinets: Meaning, Types, Fabrication & Uses

Current transformer cabinets or CT Cabinets are part of an electrical distribution system and house the current transformers which

Jul 18, 2026

Equipment Grounding Conductors for Cable Tray Systems

A comparison is made below for an installation where the single conductor EGC isn't electrically paralleled with the cable tray and for

Nov 27, 2025

Ampacity of Power Cables Installed in Cable Trays

The cables in trays are typically installed in close groups or bundles, causing strong mutual heating effects. Metal trays also have

May 03, 2026

Current Transformer Installation

This video showing how to install current transformer at electrical power panel

Jan 06, 2026

Current Transformer Installation Guide

Current transformer installation is very important to ensure accurate and safe operation. This guide will introduce the

Apr 27, 2026

Selecting and sizing a current transformer

This blog post explains how current transformers work, the different types, how to size them,

Oct 05, 2025

Practices for grounding and bonding of cable trays

If an EGC cable is installed in or on a cable tray, it should be bonded to each or alternate cable tray sections via grounding clamps

Feb 13, 2026

Current Transformer Connection: The Complete Wiring

Master Current Transformer (CT) connections with our complete guide. Learn wiring diagrams for P1/P2

Mar 09, 2026

Where to install current transformers

Physical installation : - Route primary conductor through CT toroid opening. - Secure CT to cable tray, DIN rail, or cabinet wall

Apr 20, 2026

Technical Guidelines for Cable Tray Installation and

1. Route Planning and Layout Principles Coordinate with Building Structure: Cable tray routing should align

Dec 20, 2025

Installing current transformers

Parallel operation / summation current transformer If the current is measured via two current transformers (e.g. 2 transformers), the

May 17, 2026

CURRENT TRANSFORMER (CT) INSTALLATION INSTRUCTIONS

CTs are installed in systems where lethal voltages are present. CTs should only be installed or maintained by competent individuals.

May 17, 2026

Cable Tray Installation Rules (NEC 392) – Electrical Trader

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

Apr 03, 2026

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

A practical guide to product selection and installation This guide for engineers and installers has been developed by ABB as a

Jul 22, 2026

CT Installation and Wiring

SAFETY WARNING! Current transformers (CTs) are typically installed in electrical equipment with lethal high voltage levels. Before

Feb 04, 2026

Current Transformers (CT) | Eaton PSEC

Current transformers are used extensively in metering and circuit protection. Eaton's

Dec 08, 2025

Guidelines for installing transformers, part 1.

When viewing transformer product literature, you'll probably find that one manufacturer's units will have differences from that of a

Jan 15, 2026

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

May 04, 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

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.

