

Color of the center line in the distribution box



Article Overview

The center line in a distribution box, typically representing the neutral conductor, is usually colored white or gray in AC systems according to IEC and NEC standards.

Neutral (Center) Conductor Color

In most electrical distribution systems, the center line corresponds to the neutral or grounded conductor. Its primary function is to complete the circuit by returning current to the source and maintaining voltage balance across phases. The standard color coding is as follows:

- IEC (International Electrotechnical Commission) standard: Neutral wires are blue for AC systems, while protective earth is green/yellow striped .
- NEC (National Electrical Code, USA): Neutral wires are white or gray, while hot (live) wires are black, red, or other colors .
- DC systems: The neutral or grounded conductor is often white or gray, while positive and negative lines use other colors such as red and black .

Regional Variations

- Europe and UK: Blue is standard for neutral in AC distribution boxes, following IEC 60446 .
- North America: White or gray is used for neutral in both residential and commercial AC systems

Article Content

Distribution Box Guide: Types, Components & Solutions

Understand distribution boxes (DB boxes) in 5 minutes. Learn about types, components, functions, and uses. Find

Wiring of the Distribution Board with RCD (Single Phase Home Supply)

Below is the given wiring diagram of Single Phase Distribution Board with RCD in both NEC and IEC electrical wiring color codes.

What Is a Distribution Box? Types, Uses & How to Choose

A distribution box, also known as a power distribution box or electrical distribution box, is

How to Install a Cable Distribution Box Safely and Correctly?

In modern electrical systems, cable distribution boxes (also known as electrical distribution boxes or distribution

Electrical Distribution Boxes -ZHENGKAI

A distribution boxes acts as the load center and main distributor of electrical power within a

Global Electrical Wiring Color Code Standards

This blog covers everything you need to know about electrical wiring color code, including the standards used in

Distribution Box Wiring Steps

Wiring and Binding Wiring Direction: Wiring between the main circuit breaker and each

Single Phase Distribution Box (DB) Wiring Diagram and Connection

A neutral link is used to distribute a neutral supply to all the output loads. When single-pole MCBs are used for output

What is an Electrical Distribution Box? A

Discover everything you need to know about electrical distribution box! Learn about types,

Understanding NEC Wire Color Codes for Electrical Wiring

A complete guide to standard (and NEC-required) wire color codes for 120/240V and 3-phase systems. Avoid dangerous mix-ups on

Electrical Wiring Color Codes for AC & DC - NEC & IEC

These color codes are used for electrical distribution systems, and while some are mandatory, others are optional. Using the correct

How To Read The Distribution Box System Diagram

Check electrical parameters: First understand the basic electrical parameters of Distribution

Distribution Box: Types and Functions | Axis-Electricals

A distribution box ensures that electrical supply is distributed in the building, also known as a distribution board, panel board, breaker

IEC 60446 Explained: Wiring Colors & Terminal Identification Guide

Learn wiring color codes, terminal identification, and conductor labeling for compliant installations. Download free PDF

A Definitive Guide To Distribution Boxes

The distribution box acts as the center of power distribution, distributing electricity to all connected devices. A

Understanding Distribution Boxes:A Comprehensive Guide

A distribution boxes is an essential device that manages the safe and efficient flow of

The Ultimate Guide to Distribution Box Types

Discover the key types of distribution boxes with NUOMAK's comprehensive guide. Learn about Main Distribution Boards (MDB),

Size determination, installation method and wiring mode of distribution ...

The distribution box is the central hub of the home circuit and the general control of our daily power consumption. It is an

Distribution Box Installation: A Complete Guide to Safe and Efficient ...

The distribution box, often referred to as a breaker box, fuse box, or electrical panel, is a critical component of any electrical system.

Panel Wire Color Code Chart

Read this guide to NEC power wiring and NFPA 79 control wiring color codes. Covers hot, neutral, ground, AC/DC

12 types of distribution boxes and how to choose them

How to Choose the Right Distribution Box: Your Step-by-Step Guide So, you've seen the options—now what?

Where Is the Distribution Box Located and How to Find It

Bottom Line Up Front: Your home's distribution box (electrical panel) is typically located in

Three Phase Electrical Wiring Installation in Home

In our today electrical wiring installation tutorial, we will show how to wire and install a Three Phase distribution board and Consumer

Distribution Box and Selection Guide: Internal Structure, Components ...

Learn how to choose a distribution box and understand its internal structure, including MCBs, busbars, neutral bars,

Electrical Wiring Color Codes for AC & DC - NEC & IEC

Using the correct wiring color codes is crucial for identifying line, neutral, and ground wires, which saves

Your Complete Guide to Wiring Color Codes and Safety

The wiring color codes are the standard safety language of electricity. They make it easy to identify immediately which

How Does a Power Distribution Box Work

Learn how a power distribution box works step by step—from incoming power to circuit protection and smart monitoring—for safe,

What is the Internal Structure of The Distribution Box

Learn about the internal structure of a distribution box, its components, functions, and key types. Understand its role

Understanding Distribution Boxes: Your Guide to Power

What are Distribution Boxes and Their Importance? What are Distribution Boxes and Their

The Essential Guide to Understanding Electrical Distribution System ...

Learn about the components and layout of an electrical distribution system diagram, including transformers, circuit breakers, and

A Guide to Electrical Wiring Colors Coding | DuraLabel

The sections below break down how wire color standards differ by system and voltage, where confusion most often

What Is The Internal Structure Of The Power Distribution Box And ...

What is the internal structure of the power distribution box and distribution cabinet? The most detailed explanation,

Distribution Board Schematic Diagram

Distribution board schematic diagrams can also be used to identify potential problems in the

Distribution board

A distribution board (also known as panelboard, circuit breaker panel, breaker panel, circuit breaker, electric panel, fuse box or DB

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