

Primary Distribution Box Model and Specifications



Overview

Distribution Box and Selection Guide: Internal Structure, Components. Learn how to choose a distribution box and understand its internal structure, inclu.

Key Takeaways

Primary distribution boxes (DB boxes) come in various types and models, including low-voltage fixed and withdrawable switchgear, surface, flush, and pole-mounted enclosures, each designed for specific residential, commercial, or industrial applications. Overview of Distribution Boxes

A distribution box (DB box) is a central hub that safely distributes electrical power from a main supply to multiple circuits. It houses protective devices such as circuit breakers, fuses, residual current circuit breakers (RCCBs), isolators, and bus bars, ensuring safe and efficient power management in homes, offices, factories, and industrial plants . Modern DB boxes may also include energy monitoring units and communication modules for smart control .

Common Types and Mounting Styles

- Surface Mounted DB Boxes: Installed directly on walls, suitable for retrofits and industrial environments .
- Flush Mounted DB Boxes: Embedded into walls for a clean appearance, commonly used in residential and commercial buildings .
- Pole Mounted DB Boxes: Designed for outdoor applications such as street lighting and utility distribution .

- Single Phase DB Boxes: Ideal for residential properties and small commercial loads .
- Three Phase DB Boxes: Used in industrial and large commercial facilities requiring higher power capacity .
- Lighting Distribution Boxes: Dedicated to lighting circuits .
- Power Distribution Boxes: Support sockets, equipment, and heavy machinery .
- Control Distribution Boxes: Integrate control components like relays, contactors, and timers .

Primary Models and Specifications Low-Voltage Fixed Switchgear

- GGD Series: High breaking capacity, stable performance, AC 50Hz, rated voltage 380V, used in substations and power plants .
- GDH Series: Similar to GGD, with manufacturer-specific parameters .
- PGL Series: Widely used in locations requiring stable power supply .

Low-Voltage Withdrawable Switchgear

- GCK Series: Composed of power distribution center cabinets and motor control centers, AC 60Hz, working voltage ~660V, suitable for motor control and lighting equipment .
- GCS Series: AC 50Hz, rated voltage 400V, used in power plants, oil facilities, and high-rise buildings .
- MNS Series: Compact, stable, suitable for low-voltage distribution in small power plants, industrial enterprises, buildings, and hotels .

Other Models

- TOP Series: Includes TOP-TS, TOP-TF, TOP-LS, TOP-PS, TOP-PF, and TOP-S, ranging from 1-way to 36-ways, with detailed dimensions and mounting sizes .

Key Components

- Circuit Breakers: Protect circuits from overloads and short circuits .
- Residual Current Circuit Breakers (RCCB): Detect imbalances between phase conductors for enhanced safety .
- Isolators: Allow safe maintenance by cutting off power to specific circuits .
- Bus Bars: Conduct electricity within the box and serve as central connection points .
- Neutral Link: Provides a return path for current .
- Fuse Boxes: Older type using fuses instead of breakers, less common in modern installations .
- Transfer Switches: Switch between primary and backup power sources, including Automatic Transfer Switches (ATS) for critical infrastructure .

Conclusion

Primary distribution boxes vary widely in type, model, voltage rating, and application, from residential single-phase boxes to industrial low-voltage switchgear. Selecting the right DB box depends on load requirements, installation environment, and safety standards, with modern options offering smart monitoring and enhanced protection features .

Article Content

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

Distribution Box Specifications & IEC Protection Standards

Evaluate distribution box parameters, bus bar configurations, and overcurrent protection requirements for industrial

Distribution Box Guide: Types, Components & Solutions

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

Distribution Boxes Technical Data

Wiring diagram shows both PNP and NPN wiring. Actual units use PNP status indicator, NPN status indicator, or neither. Dimensions

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This document provides specifications for various distribution boxes including dimensions, mounting sizes, and number of ways. It

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A distribution box receives power from a main supply source and splits it into multiple individually protected output

Distribution Box Specifications And Models

There are many specifications and models of Distribution box. The following are some

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Depending on the environment, application, and safety requirements, various types of distribution boxes are designed

Main Distribution Box

The Main Distribution Box (MDB) is the heart of the Global IFS Cable System Modular Wiring System. It provides power to the Floor

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The equipment distribution box is designed with the primary function of collecting electrical

Electric power distribution

A 50 kVA pole-mounted distribution transformer Electric power distribution is the final stage in the delivery

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Follows the principle of "one machine, one switch, one RCD, one box, one lock," ensuring no single switch controls

Distribution board

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

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A distribution box, also called an electrical distribution box, distributes incoming power to

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A Definitive Guide To Distribution Boxes

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

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RANGE & SPECIFICATIONS: Sr. No. Product Code Inside Dimensions (mm] H x W x D
Typical Applications

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Types of Distribution Boxes The electrical power distribution boxes are distribution boards or breaker panels.

The difference between the first, second, and third levels of ...

(1) **Primary distribution box** The construction power distribution cabinet is designed specifically for the special situation

Types of Distribution Boxes: Applications and Selection Guide

Compare distribution box types, their applications, and selection tips. Find the best fit for your project with this

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The complete power distribution box guide: 6 chapters on enclosure types, IEC 61439 ratings, IP/IK and NEMA protection, busbar

Requirements And Specifications For Installation Of Distribution Boxes ...

In flammable and explosive environments, explosion-proof distribution boxes should be selected and explosion-proof

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