

Central computer room power distribution box circuit breaker



Summary of Content

A central computer room power distribution box (DB box) safely distributes electricity from the main supply to multiple circuits, using circuit breakers to protect IT equipment from overloads and faults.

Function of a Distribution Box in a Data Center

A distribution box (DB box), also known as a power distribution unit (PDU) in some contexts, serves as the central hub for electrical power in a computer room or data center. It receives power from the main supply or UPS system and distributes it to multiple downstream circuits, including servers, networking equipment, and other critical devices . The DB box ensures that power is delivered safely, efficiently, and in an organized manner, preventing electrical hazards such as short circuits or overloads .

Circuit Breakers in a DB Box

Circuit breakers are the primary protective devices within a DB box. They automatically trip to interrupt the electrical flow when excess current or faults are detected, preventing damage to connected equipment . In a data center, circuit breakers are typically installed at multiple levels:

- Main load breaker (LB): Protects the entire DB box and upstream power source.
- Branch circuit breakers: Protect individual circuits or groups of equipment, ensuring that a fault in one branch does not affect others .

Article Content

10 Distribution Board Types Explained [July 2026]

Key Takeaways A distribution board safely distributes electrical power from a main source to

Electrical Distribution Boxes -ZHENGKAI

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

Power distribution and server room power supply | Optimal FA solution ...

We propose a more stable power receiving and distribution system with DC high voltage circuit breakers, highperformance air circuit

Circuit Breaker Box, Electical Panel, Sub Panel, Load Centers, GFCI ...

How Does a Breaker Box or Load Center Work? A circuit breaker box (also known as a load center) is the component of a residential

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

What Is a Distribution Box? A distribution box, also called a distribution board, DB box, breaker box, consumer unit,

Power Distribution Boxes Explained Simply

Key Takeaways A power distribution box (also called PDU or distro) directs electricity from a main source to multiple

Distribution Box Guide: Types, Components & Solutions

Distribution boxes are equipped with circuit breakers or fuses that protect individual circuits from overcurrent, short

Distribution Board Design: Standards, Surge Protection & Smart Power ...

A distribution board relies on several critical components to ensure safety, reliability, and efficient power distribution.

Box Power Distribution & Circuit Protection at Lowes

Find Box power distribution & circuit protection at Lowe's today. Shop power distribution & circuit protection and a variety of electrical

Power Distribution Boards: Understanding their role

What is a Power Distribution Board? Power distribution boards, also known as a panelboard

DB BOX(Electrical Distribution Box): Everything You Need to Know

Wiring: Next, the electrical cables will be connected to the incoming power source (like the main distribution panel) and

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,

What is the Internal Structure of The Distribution Box

What is a Distribution Box? Definition A distribution box is an essential electrical component

Distribution Box: Types and Functions | Axis-Electricals

The distribution box serves as the load centre and distributor of electrical power. A distribution box ensures that electrical supply is

Circuit Breaker Wiring Configurations in Distribution Boxes

Learn circuit breaker wiring configurations for distribution boxes: 1P and 3P layouts, RCD/RCBO neutral paths, phase balance, cable

Ultimate Guide To Distribution Boxes Db Boxes Types

What Does a Distribution Box Do? A Distribution Box, commonly known as a DB Box, serves as the central

Solutions for Data center application

The Power distribution unit full fills the requirement of single incomer, Dual incomer and Dual incomer with bypass and static transfer

Inside Your Main Electrical Service Panel

Warning: The main circuit breaker shuts off the power to all of the branch circuits but does not shut off the power from

A Guide to Data Center Circuit Breaker Design and Deployment

To optimize the use of data center circuit breakers, this guide covers how they function, the challenges they may

A Definitive Guide To Distribution Boxes

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

Main Panel vs Distribution Panel: Key Differences

The main panel is the central power intake from the utility, distributing electricity to your

AC & DC Power Distribution | Fuses, Panels & Distribution Boxes

We have your power distribution needs covered from DC fuse and breaker panels to datacenter quality AC power distribution units

Distribution Box: Key Functions, Components, and Selection Tips

Each circuit can only handle a limited amount of power, and if exceeded, it may cause overheating or damage side

Electrical Distribution Boxes -ZHENGKAI

Each circuit is safeguarded by a protective fuse or circuit breaker. Inside a distribution box are components like circuit

What is a DB Box? Types, Wiring, Selection Guide

What is a DB Box In the world of electrical installations, the term DB box —short for Distribution Board box —refers to the central unit

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://benniedesignstudio.co.za>

Email: sales@benniedesignstudio.co.za

Phone: +27 82 391 4765

Address: The Towers, 1 St Georges Mall, Cape Town, 8001, South Africa

This document is for informational purposes only. Specifications subject to change without notice.

