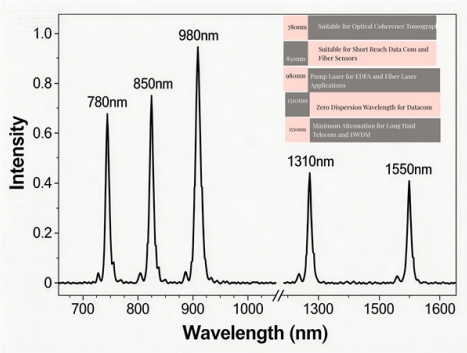
Power Distribution Box 17 Circuits



Overview

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

Key Takeaways

A 17-circuit power distribution box safely manages and distributes electricity across 17 individual circuits, protecting each from overloads and short circuits.

Overview

A 17-circuit distribution box, also known as a 17-way electrical panel, serves as a central hub for electrical power in residential, commercial, or industrial buildings. It distributes electricity from the main supply to multiple circuits, ensuring safe and efficient operation of lighting, outlets, appliances, and machinery. Each circuit is protected by a circuit breaker or fuse, which trips in case of overload or short circuit, preventing damage and reducing fire risk.

Key Components

Main Circuit Breaker: Acts as the central on/off switch for the entire panel, allowing quick shutdown during maintenance or emergencies. Branch Circuit Breakers: Individual breakers for each of the 17 circuits, protecting specific areas or devices. Bus Bars: Conductive strips that distribute power from the main input to each circuit breaker.

Residual Current Devices (RCDs/RCBs): Protect people by cutting power if leakage is detected. Surge Protection Devices (SPDs): Shield connected equipment from voltage spikes. Grounding and Neutral Bars: Provide safe paths for fault currents and return currents.

© 2026 CJC FIBRE CONSULTANTS - All rights reserved

Optional Smart Features: Some modern panels include energy monitoring, fault alerts, and remote control capabilities. Types of 17-Circuit Distribution BoxesMain Distribution Box: Central intake panel where power enters a building; distributes electricity to sub-panels and circuits.

Sub-

Panels: Receive power from the main panel and distribute it to specific zones, such as floors, wings, or high-load areas.

Compact Single-

Door Panels: Space-saving design for small to medium installations, providing access to all breakers through one door.

Double-

Door Panels: Split the panel into two sections for independent access to different circuit groups.

Installation Considerations

Location: Install in dry, accessible areas like basements, utility rooms, or garages, away from plumbing, HVAC ducts, or flammable materials. Clearances: NEC requires at least 3 feet of clear working space in front and a minimum headroom of 6. 5 feet.

Mounting: Securely attach to solid walls using appropriate fasteners depending on wall material. Ingress Protection: For outdoor or humid environments, choose panels with IP54 or higher ratings. Professional Installation: Only licensed electricians should install or maintain distribution boxes to comply with safety codes.

Applications

Residential: Manages circuits for lighting, kitchen appliances, HVAC, and outlets. Commercial: Supports offices, restaurants, and shopping centers with separate circuits for IT, lighting, and high-load equipment. Industrial: Handles heavy machinery, temporary power setups, and critical systems in factories or construction sites.

A 17-circuit distribution box provides a balanced solution between compact size and high circuit capacity, ensuring safe, organized, and efficient power distribution across multiple circuits in any building environment.

© 2026 CJC FIBRE CONSULTANTS - All rights reserved

Article Content

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, earth bars, RCDs, RCBOs, SPDs, enclosure ratings, and wiring layout.

Electrical 17 Way Distribution Box

Shop high-quality electrical 17 way distribution boxes from reliable suppliers. Secure, durable, and efficient power management solutions for various applications.

Distribution Box Guide: Types, Components & Solutions

The primary role of the power distribution box is to provide a safe and organized way to manage electrical circuits. It acts as a protective enclosure that houses several key components,

Electrical Distribution Boxes -ZHENGKAI

Discover electrical distribution boxes types, components (MCB, RCCB, RCBO, SPD, busbar) and functions. Get expert selection guidance and

Electrical Distribution Box Design Guide

The document provides details for designing the electrical distribution box and circuits for a residence. It includes specifications for the main circuit breaker such as size, type, and tripping capacity.

Understanding Distribution Boxes: A Comprehensive

Learn what a distribution box is, its types, and how to choose the right one for your project. Includes clear examples and expert tips.

AGP17 ATEX and IECEx Explosion-protected

AGP17 ATEX and IECEx explosion-protected distribution boards are designed for MCB distribution of lighting circuits, heating circuits and socket distribution in

Electrical Distribution Boxes for Power Distribution | Wieland

From decentralized energy, signal and data distribution to distribution boxes for smart buildings, we offer the right solution. We mount any electronics in the manifolds! All options are open here, and the

Power Distribution Boxes Explained Simply

Learn what a power distribution box is, how it works, key components, types, and why it''s vital for safe and efficient electrical systems.

© 2026 CJC FIBRE CONSULTANTS - All rights reserved

Power Distribution Boards | 16A 32A 63A 125A | Single

With 16A, 32A, 63A, 125A, and Socapex input variants, along with 13A, 16A, 32A, and 63A output combinations, there''s a rugged distro box to suit every

The Ultimate Guide to Distribution Box Types

In any electrical system, the distribution box is the heart and brain, a critical component that safely manages and distributes power from the main source to

Understanding Distribution Boxes: A Comprehensive

A distribution box, also known as a power distribution box or electrical distribution box, is used to distribute electrical power safely to multiple

Complete Guide For Distribution Boxes Types

Distribution boxes, also known as electrical distribution boards or panels, are pivotal components in electrical systems, ensuring the safe and organized distribution of electrical power throughout

Power Distribution Equipment

Power Panelboard: A panelboard having ten percent or fewer of its overcurrent devices protecting lighting and appliance branch circuits. Separated Distribution Panelboard: A panelboard combining

Distribution Boxes Explained: Types, Functions, and

Learn about distribution boxes, their types, functions, and safety features to ensure efficient and secure electrical power distribution in any building.

Power Distribution Boards: Understanding their role

Power distribution boards, also known as a panelboard or fuse box, is a crucial component in both commercial and residential electricity supply

Power Distribution Panels | McMaster-Carr

Choose from our selection of power distribution panels, including square D circuit breaker boxes, electrical wiring and connecting, and more. Same and Next Day Delivery.

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, efficient electricity delivery.

© 2026 CJC FIBRE CONSULTANTS - All rights reserved

Contact Us

Continue your research online:

Website: https://cjcconsultants.co.za
Technical inquiry: https://cjcconsultants.co.za/contact.html

This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

© 2026 CJC FIBRE CONSULTANTS - All rights reserved