Types of Distribution Boxes Used

Overview

What Is a Distribution Box?

Types, Components & How A distribution box, also called an electrical distribution box, distributes incoming power to Distribut.

Key Takeaways

Distribution boxes come in various types, including main and sub-distribution boards, single-phase and three-phase boxes, indoor and outdoor enclosures, and specialized control or lighting boxes.Overview

A distribution box (DB box) is a central hub that distributes electrical power from a main supply to multiple circuits while protecting against overloads and short circuits. They house components like circuit breakers, fuses, busbars, RCCBs, and isolators to ensure safety and efficient power management .

Common Types of Distribution Boxes

1. Main Distribution Board (MDB)

• Primary control panel for an entire building or facility.

• Receives high-voltage supply and distributes it to sub-distribution boards and major loads.

• Used in large commercial buildings, industrial plants, and high-rise complexes . 2. Sub Distribution Board (SDB)

• Receives power from the MDB and distributes it to smaller circuits.

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• Common in residential buildings, offices, and smaller commercial setups . 3. Single-Phase DB Box

• Designed for residential properties or small commercial loads.

• Handles lower power requirements and simpler circuit layouts . 4. Three-Phase DB Box

• Used in industrial or large commercial facilities requiring higher power capacity.

• Supports heavy machinery and complex electrical systems . 5. Lighting Distribution Box

• Dedicated to managing lighting circuits with appropriate protection.

• Ensures safe operation of lighting systems in buildings . 6. Power Distribution Box

• Supports sockets, equipment, and heavy electrical loads.

• Common in workshops, factories, and commercial spaces . 7. Control Distribution Box

• Integrates control components like relays, contactors, and timers.

• Used in automation and industrial control systems . 8. Meter Panel

• Houses meters for monitoring electricity consumption.

• Often installed in residential or commercial buildings . 9. Panel Fuse Bank / Unitized Panel

• Contains multiple fuses or breakers in a compact unit.

• Provides modular protection for circuits . 10. Transfer Switch

• Allows switching between main power and backup generators.

• Essential for critical facilities requiring uninterrupted power . 11. Indoor vs Outdoor Boxes

• Indoor boxes: Wall-mounted or flush-mounted for residential and commercial interiors.

• Outdoor boxes: Pole-mounted or weatherproof enclosures with IP ratings for dust and water protection . 12. Material-Based Types

• Metal enclosures: Durable, often used in industrial settings.

• Plastic enclosures: Lightweight, corrosion-resistant, suitable for residential or light commercial use .
Selection Considerations

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When choosing a distribution box, consider:

• Installation environment (indoor/outdoor)

• Electrical load and number of circuits

• Phase type (single or three-phase)

• Enclosure material (metal or plastic)

• IP protection rating for dust and water resistance

• Special features like smart monitoring or control modules . By understanding these types and their applications, you can select the right distribution box to ensure safety, efficiency, and long-term reliability in any electrical system.

Article Content

Complete Guide For Distribution Boxes Types

The correct choice and installation of distribution boxes are crucial for electrical safety, efficiency, and reliability. This guide provides

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