

What are the two types of electrical distribution boxes



Overview

Distribution Boxes Types - The Complete Guide A commonly used distribution box contains doorbells, earth leakage devices, timers, or Types of Distribution.

Key Takeaways

Electrical distribution boxes come in various types, including main panels, subpanels, meter panels, fuse boxes, and smart distribution boxes, each designed for specific applications and load requirements.

Overview
An electrical distribution box is a protective enclosure that receives power from the main supply and distributes it to multiple circuits while providing overcurrent protection and safe disconnection points for maintenance . They are essential for managing electricity safely in homes, offices, and industrial facilities.

Main Types of Distribution Boxes

1. Main Distribution Panel (Main Circuit Breaker Panel / MDB)

- Serves as the primary point where electricity enters a building from the utility .
- Contains the main breaker to shut off all power in emergencies.
- Best for residential, commercial, and industrial buildings as the central hub for power distribution.

2. Sub-Distribution Panel (Subpanel / SDB)

- Receives power from the main panel and distributes it to specific areas or floors .
- Useful in large homes, workshops, garages, or commercial buildings to reduce long cable runs and localize control. 3. Meter Panel
- Houses electrical meters to monitor power consumption .
- Common in residential and industrial setups to track electricity usage and manage billing. 4. Fuse Box
- An older type of distribution box using fuses instead of circuit breakers .
- Provides overcurrent protection but requires replacement of fuses after a fault. 5. Main Lug Panel
- Lacks a main breaker and connects directly to a breaker from the main panel .
- Often used as a subpanel in larger systems or outbuildings. 6. Lighting Panel
- Specialized for lighting circuits, often with lower amperage breakers and sometimes contactor controls .
- Ideal for commercial buildings, warehouses, and large facilities with extensive lighting systems. 7. Power Panel (Appliance Panel)
- Designed to supply power to heavy appliances or equipment .
- Common in industrial or commercial settings. 8. Industrial Distribution Box / Enclosed Switchgear
- Built for harsh environments with high electrical loads .
- Includes reinforced casings, multiple breaker slots, motor protection devices, and sometimes remote monitoring. 9. Surface-Mounted and Flush-Mounted Boxes
- Surface-mounted: Installed on walls, easier to access, suitable for industrial or outdoor use .
- Flush-mounted: Embedded in walls for a cleaner indoor appearance, common in modern homes and offices. 10. Smart Distribution Boxes
- Equipped with energy monitoring, remote control, and automation features .
- Useful for advanced energy management and integration with smart building systems.

Choosing the Right Distribution Box

Selection depends on:

- Power load: Single-phase for residential, three-phase for commercial/industrial .

- Installation environment: Indoor vs outdoor, exposure to dust or moisture.
- Application needs: Lighting, appliances, or advanced monitoring.
- Future expansion: Consider additional circuits or smart features. By understanding these types, you can ensure safe, efficient, and code-compliant electrical distribution tailored to your building's requirements .

Article Content

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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

Electrical Distribution Box: Complete Panel Types

An electrical distribution box combines two essential elements: a distribution system and a

Electrical Distribution Boxes: Types, Components

A distribution box (distribution board/DB box) distributes incoming power to multiple circuits

Ultimate Guide To Distribution Boxes Db Boxes Types

Surface Mounted Distribution Boxes – Installed directly on walls, ideal for retrofits and industrial

Electrical Distribution Box Explained: Composition, Key

Below is a detailed breakdown of the most common types of electrical distribution boxes used today.

Electrical Control Panels & Distribution Boxes: Sizes, Types, and ...

Electrical control panels and distribution boxes are the backbone of modern electrical systems. From powering homes

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

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

12 Types of Electrical Boxes and How to Choose

Most electrical devices need a suitable electrical box, except those that enclose their own wires. By knowing the

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Learn what an outdoor electrical junction box is, NEC 314 requirements, types like pull boxes

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Electrical Enclosure vs Distribution box vs Distribution board

A distribution box (DB) is a type of electrical enclosure specifically designed for the distribution of electrical power. It

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Learn about the many common types of wall and ceiling electrical boxes for switches, outlets, light fixtures, ceiling

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Learn how electrical distribution boxes work, their key components, common types, and how to choose the

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Learn the differences between distribution boxes, control boxes, and junction boxes.

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Distribution boards are an essential part of any electrical installation as they act as a central

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A power distribution box electrical captures electricity from the primary power supply and allocates it securely to

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In IEC industrial and commercial work, distribution board or distribution box is more common. For adjacent

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Choosing the right distribution box is crucial for the safety, efficiency, and reliability of any electrical system.

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Learn about the types of electrical boxes you can use for your home wiring project. From junction boxes to work

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

What is an Electrical Distribution Box? A

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What Is a Distribution Board? Types, Uses, and Installation Best

What Is a Distribution Board? Types, Uses, and Installation Best Practices In every modern building whether residential, commercial,

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