A complete list of panel-type electrical distribution box models

Overview

Electrical Distribution Box: Complete Panel Types We'll explain what they are, the different panel types you'll encounter, NEC 408 Electrical Distribution.

Key Takeaways

Electrical distribution boxes come in a variety of types, including main distribution boards, sub-distribution boards, meter panels, fuse banks, unitized panels, transfer switches, consumer units, enclosed switchgear, and smart distribution boxes.Residential Panels
• Main Circuit Breaker Panel (MCB Panel): Central hub for incoming power, houses the main breaker controlling the entire system .

• Sub-Distribution Board (SDB): Feeds power to specific areas like garages or parking lots, often used to manage multiple circuits from the main panel .

• Meter Panel: Tracks electricity usage for billing purposes, includes primary switches, fuses, and circuits .

• Consumer Unit: Common in UK/European homes, combines main switch, circuit breakers, and residual current devices (RCCBs) for safety .
Commercial and Industrial Panels
• Three-Phase Distribution Board: Designed for commercial or industrial three-phase systems, capable of handling higher loads .

• Panel Fuse Bank: Houses multiple fuses for circuit protection in industrial setups .

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• Unitized Panel: Modular panels for industrial or commercial applications, allowing flexible configuration .

• Enclosed Switchgear: High-capacity panels for industrial power distribution, often including MCCBs, bus bars, and isolators .

• Medium Voltage Panels: Used in factories or large buildings for higher voltage distribution .

Specialized Panels

• Transfer Switch Panel: Automatically switches power between utility and backup generators .

• Double Meter Panel: Allows multiple tenants or units to be metered separately .

• Junction Box (Indoor/Outdoor): Protects wiring connections, available for harsh environments or underground cabling .

• Smart Distribution Box: Equipped with energy monitoring, remote control, and automation integration for advanced energy management .

Mounting and Installation Types

• Surface-Mounted Distribution Boxes: Installed on walls, suitable for industrial or outdoor use .

• Flush-Mounted Distribution Boxes: Embedded within walls for a cleaner indoor appearance, common in modern homes and offices .

Key Components Across Panels

• Circuit Breakers: Protect circuits from overloads and short circuits .

• Residual Current Circuit Breakers (RCCBs): Detect imbalances to prevent electric shocks .

• Bus Bars: Distribute current efficiently across multiple circuits .

• Isolators: Allow safe maintenance by disconnecting parts of the circuit .

• Advanced Features: Indication lights, energy monitoring units, and communication modules in smart panels . This list covers the major panel types and models used in residential, commercial, and industrial electrical distribution systems, providing options for standard, high-capacity, and smart energy management applications.

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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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