

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 .

- 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.

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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