

A Comprehensive List of Standard Household Electrical Distribution Box Models



Overview

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

Key Takeaways

Home electrical distribution boxes come in multiple types, including single-phase, three-phase, modular, and smart DB boxes, each designed to safely distribute power and protect circuits. Key Types of Home Distribution Boxes Single-Phase Distribution Boxes Designed for standard residential use, these boxes handle typical household loads and are compatible with single-phase AC supply. They usually include MCBs, RCCBs, busbars, neutral and earth bars, and surge protection devices (SPDs) for safety and reliability.

Three-

Phase Distribution Boxes Suitable for larger homes or properties with high-power appliances, these boxes manage three-phase AC supply. They provide balanced power distribution across multiple circuits and often include isolators, RCBOs, and advanced busbar arrangements. Modular Distribution Boxes These boxes allow flexible installation of MCBs, RCDs, and other protective devices.



Modular designs simplify future expansion and maintenance, making them ideal for homes planning upgrades or smart home integration. Smart Distribution Boxes Equipped with energy monitoring units and communication modules, smart DB boxes enable real-time data collection, remote control, and integration with home automation systems. They often include advanced surge protection and status indication lights.

Surface-

Mounted and Flush-Mounted BoxesSurface-Mounted: Installed on walls, easy to access, suitable for retrofits.

Flush-

Mounted: Embedded into walls for aesthetic appeal, commonly used in modern homes. Weatherproof and Outdoor Boxes Designed for outdoor or semi-exposed areas, these boxes have higher IP ratings, UV resistance, and corrosion protection to withstand environmental factors. Common Components Across ModelsMCBs (Miniature Circuit Breakers): Protect individual circuits from overload and short circuits.

RCCBs/RCBOs: Provide shock protection by detecting current imbalances. Busbars: Conduct electricity within the box, connecting multiple circuits. Neutral and Earth Bars: Ensure proper return paths and grounding.

Surge Protective Devices (SPDs): Protect against voltage spikes and lightning strikes.

Isolators/

Main Switches: Allow safe disconnection for maintenance.

Selection Considerations

Number of Circuits: Choose a box with enough ways for current and future expansion. Rated Current & Short-Circuit Capacity: Match the box to your home's load and fault current. Material & IP Rating: Steel, aluminum, or thermoplastics like PC/ASA; select based on indoor/outdoor use.

Compliance: Ensure adherence to IEC, UL, NEC, or local electrical codes.

Notable Models and Brands

While specific model numbers vary by region, popular residential distribution box brands include Schneider Electric, Hager, GEYA, Siemens, ABB, and Legrand. Each brand offers a range of single-phase and three-phase boxes, modular and smart options, with varying numbers of ways (6, 12, 18, 24, etc.) and IP ratings suitable for home installations.

Summary

Home electrical distribution boxes are available in single-phase, three-phase, modular, smart, surface-mounted, flush-mounted, and weatherproof models, each with specific components like MCBs, RCCBs, busbars, and SPDs. Selection should consider load requirements, safety standards, expansion potential, and environmental conditions to ensure reliable and safe power distribution throughout the home.

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.

The Ultimate Guide to Distribution Box Types

Discover the key types of distribution boxes with NUOMAK's comprehensive guide. Learn about Main Distribution Boards (MDB), Consumer Units, Transfer

Electrical Distribution Box: Complete Panel Types Guide 2025

We'll explain what they are, the different panel types you'll encounter, NEC 408 requirements that govern their installation, and common applications for each type.

12 types of distribution boxes and how to choose them

In this guide, we'll break down the 12 main types of distribution boxes in a way that's easy to understand. We'll chat about what each one does, where it shines, and then dive into how to

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Learn the different types of electrical boxes, including outlet, switch, junction, ceiling, weatherproof, and low-voltage boxes, with practical uses and

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An electrical box is a protective enclosure used to contain wiring connections for devices like outlets, switches, and fixtures. Unless the device is one of the few that includes its own enclosed

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Explore standard panel sizes, applications, and key differences for residential, commercial, and industrial use.

How to Choose a Home Distribution Box – Expert Guide

Learn how to choose the right home distribution box with our expert guide. Compare circuit capacity, IP ratings, breaker types & avoid common mistakes.

Distribution Boxes Types – The Complete Guide

A commonly used distribution box contains doorbells, earth leakage devices, timers, or contact breakers. However, the distribution boxes have several sizes and designs suitable for

12 Types of Electrical Boxes and How to Choose

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

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

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Types of Electrical Distribution Boards Explained

Distribution boards are an essential part of any electrical installation as they act as a central point for the distribution of electrical power. They come in

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Electrical Distribution Box: Complete Panel Types

Learn what an electrical distribution box is in simple terms. Complete guide to panel types, NEC 408 requirements, and applications for home and

The installation requirements for the distribution box

Learn how to install a distribution box safely and correctly. Covers wiring, placement, standards, and expert tips for a compliant setup.

What Is a Distribution Box?

In Conclusion Most residential and commercial electrical systems have at least one distribution box. A distribution box is a device that, as the name suggests, is designed to distribute

Overview of household distribution box

Let's introduce what is home distribution box. Many customers don't understand what is home distribution box and what kind of distribution box can be used at home. They won't choose.

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