

# Size and Specifications of Small Residential Distribution Boxes

## Article Overview

Small residential distribution boxes typically range from 200 x 200 x 120 mm up to 400 x 400 x 150 mm, accommodating 12-24 circuits for modern homes.

## Typical Dimensions

For small residential applications, wall-mounted distribution boxes generally follow these size ranges:

- o Height: 200-400 mm
- o Width: 200-400 mm
- o Depth: 120-150 mm These dimensions provide sufficient space for standard circuit breakers, bus bars, and wiring while allowing room for heat dissipation and future expansion . Manufacturers often offer these boxes in modular families, so exact dimensions may vary slightly by brand .

## Circuit Capacity

Small residential distribution boxes usually support 12 to 24 circuits, which is adequate for most single-family homes without high-demand appliances. Modern homes with electric vehicle chargers or HVAC systems may require larger panels, typically 40-42 slots, but smaller boxes remain common for secondary or sub-panels .

## Material and Protection Ratings

- o Material: Steel or high-quality plastic
- o Protection: IP20-IP44 for indoor use; higher IP ratings (IP65-IP67) are used for outdoor or wet locations
- o NEMA Ratings: NEMA 1 for basic indoor use; NEMA 4/4X for outdoor or washdown environments Higher protection ratings may slightly increase external dimensions due to thicker walls and seals .

## Practical Considerations

- o Internal Space: Always account for 20-30% extra space for wiring, airflow, and future upgrades .
- o Mounting: Wall-mounted boxes are most common for small residential setups.
- o Code Compliance: Ensure the box meets local electrical codes (e.g., NEC 2026 in North America) and is ETL/UL certified . By selecting a box within these standard dimensions, homeowners and electricians can ensure safe, code-compliant installations while leaving room for future expansion or additional circuits.



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Wiring Accessories for Single Phase Distribution Board Main Distribution Board or Fuse Boards (Consumer

The compact, surface-mounted xComfort Mini and Micro distribution enclosures are designed for residential and commercial

The document discusses the design of a small electrical distribution box including: 1) Details of the main circuit breaker such as size,

There are many specifications and models of Distribution box. The following are some

Our small distribution boxes in the type 10 and type 11 series, in particular, offer a large range of options for

How to Choose the Right Distribution Box: Your Step-by-Step Guide So, you've seen the options--now what?

The power distribution boxes deliver electricity from the main electrical main to other circuits. Several distribution boxes

These distribution boxes are primarily used in electrical distribution panels, control cabinets, and building management systems.

It categorizes enclosures based on their application--ranging from small residential units to large industrial distribution

Distribution boxes, also known as electrical distribution boards or panels, are pivotal components in electrical systems, ensuring the

This report provides a comprehensive analysis of electrical distribution board (DB) box sizes,

Electrical Box Types & Sizes for Receptacles How to choose the proper type of electrical box when wiring electrical receptacles ( wall

Electrical enclosure sizes are not universal, but most manufacturers follow common size families. This guide explains

Construction site distribution box Multipower Robust full rubber housing, impact resistant, oil-, UV- and acid resistant. Stable steel

Learn how to choose a distribution box and understand its internal structure, including MCBs, busbars, neutral bars,



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Introduction Electrical control panels and distribution boxes are the backbone of modern electrical systems.  
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