

How to select the main power distribution box



Article Overview

Choosing the right power distribution box involves evaluating material, capacity, type, safety features, and installation requirements to ensure safe and efficient power distribution.

Key Considerations

1. Material and Construction Distribution boxes are typically made from plastic (ABS or PC flame-retardant) or metal (cold-rolled steel). Plastic boxes are lightweight, corrosion-resistant, and provide good insulation, making them suitable for residential or low-load environments, while metal enclosures offer superior structural rigidity, fire resistance, and durability for industrial or commercial applications . 2. Capacity and Load Matching Select a box that matches the total power load of your property. Overloading can cause safety hazards, while an oversized box may be inefficient. Consider future expansion, such as adding smart home systems, EV chargers, or high-power appliances like air conditioners, which may require dedicated circuits of 20-32A . 3. Type of Distribution Box

- Single-phase: Ideal for residential or small commercial loads.
- Three-phase: Suitable for industrial or large commercial facilities with higher power demands.
- Surface-mounted: Installed on walls, convenient for retrofits.
- Flush-mounted: Embedded in walls for a clean appearance.
- Pole-mounted: Designed for outdoor applications like street lighting . 4. Safety Fe...

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