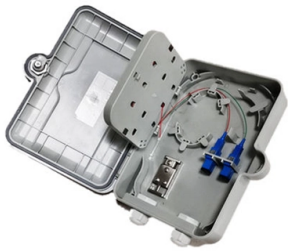
Should the distribution box be installed concealed



Overview

The distribution box should be installed in an area close to the power supply to reduce power loss and ensure safety.

Key Takeaways

A distribution box should be installed in a concealed manner, embedded within the wall, with proper alignment, secure fixing, and clear wiring for safety and compliance.

Installation Method

The distribution box is typically embedded in the wall during construction. A reserved hole should be about 20mm larger than the box's dimensions, with a depth equal to the box thickness plus the plastering layer. When embedding the box in masonry, it can be fixed by filling concrete between the box and the wall to ensure stability.

Alignment and Securing

The box must be installed firmly, horizontally, and vertically, with a vertical deviation not exceeding 3mm. During concealed installation, there should be no gaps around the box, and the edges of the panel should be flush with the wall. The contact surfaces between the box and the building structure should be coated with anti-corrosion paint to prevent deterioration.

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Wiring and Safety

Fuse connections: Power lines for spiral fuses should connect to intermediate terminals, and load lines to threaded terminals to prevent electric shock during fuse replacement. Porcelain plug-in fuses should be installed vertically. Busbars: AC, DC, or different voltage levels should be clearly marked.

Neutral (N) and protective neutral (PE) busbars should be separate, connected without splicing, and numbered for clarity. Cable management: Ensure sufficient space for conductors to prevent overheating and insulation damage. Proper box sizing and neat wiring are essential to avoid fire hazards and maintain compliance with electrical standards.

Additional Considerations

Accessibility: While concealed, the box should remain accessible for maintenance or inspection. Environmental protection: For outdoor or harsh environments, select boxes with appropriate IP ratings to protect against dust, water, and corrosion. Compliance: Follow local electrical codes and standards (e.g., NEC, IEC) to ensure safety and regulatory compliance.

By following these guidelines, a concealed distribution box can be safely installed, providing both aesthetic integration into the wall and reliable electrical performance.

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When concealed, there should be no gaps around the box, and the edges should fit snugly against the wall. Anti-corrosive paint should be applied where the box contacts the building structure.

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The distribution box of household distribution box should not be installed too high. Generally, the installation elevation is 1.8m to facilitate operation; the electric pipe entering the distribution box must

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According to the installation size of wall mounted (surface mounted) terminal combination electrical appliances, first drill bolt holes or embedded wood bricks, then open the upper cover of the

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