Model and Specifications of Secondary Temporary Distribution Box



Overview

Secondary boxes used for temporary power supply must feature a rain-proof design, and leakage protection is of paramount importance.

Key Takeaways

A secondary temporary distribution box must provide safe, reliable power distribution with proper circuit protection, environmental resistance, and compliance with construction or event site standards.

Classification and Purpose

A secondary distribution box, also known as a Class II or sub-box, is responsible for supplying power to a specific area or group of equipment on a site. It is part of a three-level distribution system: primary (main site supply), secondary (area supply), and tertiary (individual equipment supply) according to construction site standards (JGJ46-2005). The secondary box consolidates multiple tertiary boxes and distributes power safely to the designated area.

Electrical Requirements

Main Circuit Protection: Must include a main isolation switch and a main fuse or circuit breaker to protect the incoming supply. Shunt Circuit Protection: Each outgoing circuit should have a shunt isolation switch and individual fuses or breakers. Residual Current Protection: Incorporation of RCDs or GFCIs is recommended to prevent electric shock, especially in outdoor or wet environments.

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Voltage and Current Ratings: Should match the load requirements of the area, typically configurable for 20 kVA or 40 kVA setups depending on energy demand. Monitoring: Optional multifunction meters can be installed to record energy consumption and ensure symmetrical load distribution.

Environmental and Mechanical Requirements

Ingress Protection (IP): Must be resistant to dust and water, with IP ratings ranging from IP54 to IP69 depending on exposure. Material: Robust enclosures made from GRP, stainless steel, or copper-free aluminum provide corrosion resistance and durability in harsh conditions. Mobility and Installation: Should allow easy mounting, pluggable connections, and quick assembly/disassembly for temporary setups.

Outdoor Use: Units must be mounted off the floor and protected from rain, mud, and other environmental hazards.

Safety and Compliance

Must comply with local electrical codes and standards such as IEC 61439 for low-voltage switchgear. Protective earthing and bonding should be properly configured to prevent shock hazards, especially when multiple supplies operate in proximity. Explosion-proof or chemical-resistant designs may be required in industrial or hazardous environments.

Additional Considerations

Modularity: Scalable configurations allow the system to grow with project requirements without full replacement. Maintenance: High-quality components and proper sealing reduce inspection frequency and downtime. Energy Efficiency: Well-designed boxes minimize electrical losses, which is important for long-term temporary installations.

In summary, a secondary temporary distribution box must combine electrical protection, environmental resistance, mobility, and compliance to ensure safe and reliable power distribution for temporary installations, whether on construction sites, events, or industrial setups.

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Article Content

Temporary Power Secondary Distribution Box-FINEN

Secondary boxes used for temporary power supply must feature a rain-proof design, and leakage protection is of paramount importance. It further distributes the electricity routed from the primary

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FuzzList/List-1 at main · KiRaaDz/FuzzList · GitHub

Contribute to KiRaaDz/FuzzList development by creating an account on GitHub.

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Distribution Boards

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secondary distribution box,Class IIdistribution box-Ayump Electric

Power Distribution Box 1□ Classification The technical code for safety of temporary electricity on construction site (JGJ46-2005) clearly stipulates that the electricity on construction site must be three

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