

Article Overview

An ATS distribution box ensures uninterrupted power by automatically switching between primary and backup power sources during outages or faults.

Overview

A Distribution Box ATS is a dual power distribution system designed to maintain continuous electricity supply by integrating an Automatic Transfer Switch (ATS). It monitors the primary power source and, upon detecting a failure such as a power outage, overvoltage, undervoltage, or phase loss, it automatically transfers the load to a backup power source within milliseconds, minimizing downtime and protecting connected equipment .

Working Principle

The ATS distribution box operates by continuously monitoring key parameters of the primary power supply, including voltage, frequency, and phase sequence. When a fault is detected:

- o The ATS initiates a switch to the backup power source automatically.
- o If the primary source is restored, the system can switch back either automatically or manually.
- o In generator-based setups, the ATS can start the emergency generator after a preset delay (0-10 seconds) and transfer the load once the generator reaches rated speed . The system typically includes components such as a circuit breaker, load disconnect switch, AC contactor, thermal relay, and the ATS itself, all housed in a robust, fully enclosed cabinet with anti-corrosion treatment for durability .

Technical Specifications

- o Voltage Rating: AC 380V/220V, suitable for low-voltage systems below 500V .
- o Current Rating: 16A to 125A for smaller units, up to several thousand amperes for industrial applications .
- o Frequency: 50Hz or 60Hz.
- o Protection Grade: IP40 for dust and safety compliance.
- o Switching Time: Typically milliseconds to a few seconds to ensure minimal interruption .

Applications

ATS distribution boxes are widely used in:

- o Industrial and mining enterprises for power lighting and machinery distribution .
- o Hospitals, data centers, and critical infrastructure where uninterrupted power is essential .
- o Residential and commercial buildings with backup generators or hybrid energy systems .

Features and Benefits

- o Automatic Switching: Seamless transition between power sources without human intervention.
 - o Intelligent Monitoring: Detects faults and provides alarms for abnormal conditions.
 - o Energy Management: Optimizes power usage and ensures reliability.
 - o User-Friendly Control: Interfaces include touchscreens or push buttons for easy configuration .
 - o Durable Construction: Steel or polycarbonate enclosures with anti-corrosion treatment for long-term use .
- In summary, a Distribution Box ATS is a critical component for ensuring reliable power supply in environments where continuous electricity is vital, combining automatic fault detection, rapid switching, and robust construction to protect both equipment and operations.

Discover electrical distribution boxes types, components (MCB, RCCB, RCBO, SPD,

An ATS Panel, or Automatic Transfer Switch Panel, is a critical component in electrical systems that ensures seamless power

Discover the essentials of the ATS Dual Power Distribution Box, a pivotal component in low voltage power solutions.

Feeser GmbH bietet Ihnen eine Reihe von ATS Boxen für Notstromautomatik mit Umschaltschütze,

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

The distribution box acts as the center of power distribution, distributing electricity to all connected devices. A

The ATS Type Dual Power Distribution Box is designed to ensure seamless power switching between

Understanding its significance, this article covers what a distribution box is, how it functions,

A well-chosen distribution box ensures the safety and efficiency of your household electrical system. This article guides

Introduction For procurement professionals, electrical contractors, and project managers, choosing the

The ATS distribution box connects the primary power supply and the backup power supply. Its internal dual

Distribution Box ATS

This article covers the types, features, and advantages of power DB boxes, as well as their manufacturers and frequently asked

A distribution box, also called an electrical distribution box, distributes incoming power to

A distribution box ensures that electrical supply is distributed in the building, also known as a distribution board, panel board, breaker

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