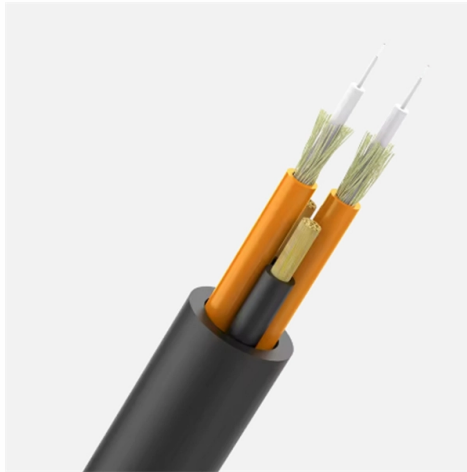


Three-axis power distribution box



Overview

Designed to handle three phases of alternating current, this distribution box ensures a balanced power supply to various connected loads.

Key Takeaways

A three-phase power distribution box safely distributes high-current three-phase electrical power to multiple circuits, providing reliable, balanced power for industrial, commercial, and temporary applications.

Overview

A three-phase power distribution box is an electrical enclosure designed to manage and distribute three-phase power from a single source to multiple outputs. These boxes are commonly used in industrial sites, construction areas, workshops, live events, and temporary outdoor setups where high-current loads need to be safely and efficiently managed. They ensure balanced power delivery across all three phases, reducing the risk of overloads and equipment damage.

Key Features

Voltage and Current Ratings: Typical boxes handle voltages such as 120/208V, 277/480V, or 125/250V, with current capacities ranging from 30A to 800A depending on the application. **Enclosure Protection:** Many units feature NEMA 4/12 or IP-rated enclosures to protect against dust, water, and harsh environmental conditions, making them suitable for outdoor use. **Connectors and Outlets:** Options include Camlock inputs/outputs, twist-lock outlets, GFCI-protected duplex outlets, and RV adapters.

Color-coded assemblies help quickly identify hot, neutral, and ground connections. Safety Features: Integrated main and branch circuit breakers, LED indicators, digital voltage and current meters, and GFCI protection ensure safe operation and monitoring. Portability and Mounting: Some boxes are portable with casters or handles, while others are wall-mounted or rack-mounted for permanent installations.

Rack-mounted units may occupy 2U, 3U, or 0U spaces in server or industrial racks.

Applications

Industrial and Workshop Use: Powering machinery, tools, and equipment in factories or large workshops. Construction Sites: Temporary distribution of high-current power to multiple tools and equipment. Entertainment and Events: Supplying balanced three-phase power to lighting, audio, and stage equipment.

Emergency and Backup Power: Portable units can connect to generators for temporary power distribution.

Selection Considerations

When choosing a three-phase power distribution box, consider: Phase Configuration and Voltage: Ensure compatibility with your power source and equipment. Current Capacity: Select a box rated for peak load without overheating. Enclosure Rating: Choose NEMA or IP-rated enclosures for outdoor or harsh environments.

Connector Type: Camlock for industrial setups, twist-lock for portable or temporary use. Safety and Compliance: Look for GFCI protection, circuit breakers, and adherence to NEC, OSHA, and UL standards. Portability vs.

Permanence: Decide between portable units for temporary setups or wall/rack-mounted units for permanent installations.

Examples

Lex Products PowerHOUSE™ and PowerRACK™: Portable, adjustable output boxes for entertainment, industrial, and military applications.

S

X Power Case 3-Phase Box: 24-way distribution with digital meters and shockproof rack packaging. Marway Optima 3-Phase PDUs: Rack-mounted units with EMI filters, surge suppression, and remote EPO control. Champion and Camlock Boxes: Rugged outdoor boxes with NEMA 4/12 protection for construction and industrial sites.

Three-phase power distribution boxes are essential for safe, efficient, and flexible power management in environments requiring high-current, multi-circuit distribution. Selecting the right box ensures reliability, safety, and compliance with electrical standards.

Article Content

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The power distribution box can be mounted onto the 19" profiles exactly where the customer desires. Benefit: This box allows the electrical switches to be

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Lex products portable power distribution units have NEMA 3R, 3R Weather Resistant or 3R Rainproof environmental ratings depending on the distro box.

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