

RIVO MULTITRADE OPTICAL SYSTEMS

Eps centralized power distribution box



Overview

Intelligent Centralized EPS Power Supply for Emergency Lighting
Centralized EPS Power Supply for Emergency Lighting, Find Details and Price about.

Key Takeaways

An EPS centralized power distribution box is a critical component of emergency power systems, providing reliable AC power to essential loads during grid failures while managing battery charging and inverter operation.

An EPS (Emergency Power Supply) centralized power distribution box is designed to ensure uninterrupted power to critical systems such as fire safety equipment, emergency lighting, hospitals, traffic systems, and security installations . It integrates inverters, chargers, and controllers into a single unit, allowing seamless switching between grid power and battery backup during outages .

Key Features

- **Automatic Switching:** When the AC grid is normal, the system supplies power directly to the load and charges the battery. If the grid fails or voltage deviates beyond safe limits, the system automatically switches to inverter output from the battery .
- **Digital Control:** Modern EPS boxes use DSP (Digital Signal Processor) and ASIC control, along with IGBT power modules, to provide precise, stable, and low-distortion AC output .



- **Protection Mechanisms:** Includes short-circuit protection, over-voltage protection, under-voltage battery protection, overload protection, and surge protection to ensure safety and reliability .
 - **Modular Design:** Many units are modular, making maintenance and expansion easier, and allowing customization for specific project requirements .
 - **Output Options:** Can provide single-phase or three-phase sine wave output, with some models supporting frequency conversion for specialized loads .
- Applications

EPS centralized power distribution boxes are widely used in:

- Buildings and commercial complexes for fire emergency lighting and security systems .
- Hospitals and laboratories to maintain critical equipment operation during power interruptions .
- Transportation infrastructure such as tunnels, subways, light rail, and airports .
- Industrial and production facilities requiring uninterrupted power for sensitive equipment .

Example Models

- **5-Channel Centralized Power Distribution Box:** Suitable for small security projects or independent zone power supply, offering flexibility for customized setups .
- **Intelligent EPS Control Host DC36V Central Power Supply Box:** Provides centralized emergency lighting control with integrated battery management and inverter functionality .

Summary

An EPS centralized power distribution box is essential for ensuring continuous, reliable power to critical systems. Its combination of automatic switching, digital control, modular design, and protective features makes it suitable for a wide range of emergency and security applications, from small-scale security zones to large commercial or industrial facilities .

Article Content

(PDF) Centralized, Distributed, and Module-Integrated Electric Power ...

The EPS mainly incorporates solar panels (generation), power electronic converters (shaping and distribution), and

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

