

RIVO MULTITRADE OPTICAL SYSTEMS

Floor-mounted power distribution box enclosure model and specifications



Overview

Floor Box Design and Electrical Floor Outlet Browse specifications, literature, drawings, videos and tools that make floor box planning and installation FI.

Key Takeaways

Floor-mounted power distribution enclosures are heavy-duty, freestanding units designed for industrial and data center applications, available in modular designs with NEMA/IP ratings, multiple materials, and capacities up to 4000A.

Key Features and Materials

Floor-mounted enclosures are engineered to house large electrical assemblies that cannot be wall-mounted due to size, weight, or thermal requirements. Common materials include 304/316 stainless steel, carbon steel, and fiberglass (FRP), with enclosure thickness typically ranging from 1.5 mm for the body to 2 mm for doors and mounting plates . They are designed for motor control centers, PLC panels, VFDs, bus bar systems, and power distribution units (PDUs) .

Ratings and Standards

- NEMA Ratings: NEMA 1 through NEMA 4X, suitable for indoor and outdoor industrial environments .
- IP Ratings: IP65 to IP67 for dust and water protection .

- **Seismic Resistance:** Some models, like Yespan's D and E series, are tested for Zone 4 seismic conditions and high-current applications up to 4000A .

- **Standards Compliance:** Many enclosures comply with IEC 62208 for empty enclosures and are certified by independent labs such as DEKRA .

Design and Configuration

- **Doors:** Single or double doors, with optional rear access panels.

- **Internal Layout:** Multi-tier DIN rail layouts, mounting plates, and bus bar systems. A 20% free space allowance is recommended for heat dissipation and future expansion .

- **Modularity:** Modular structures allow for flexible configuration and future expansion, supporting capacities from 630A to 4000A .

- **Accessories:** Cable entry knockouts, gland plates, integrated HVAC, and intelligent monitoring systems for PDUs .

- **Data Center PDUs:** Floor-standing PDUs like Eaton's PowerPak and PowerHub series support up to 1.25 MVA, with intelligent monitoring and branch-level distribution .

Applications

- **Industrial:** Manufacturing floors, substations, and process plants.

- **Data Centers:** Distribution of three-phase power to server racks, with monitoring and voltage regulation.

- **Custom Solutions:** OEM/ODM options for hazardous areas, ATEX-certified enclosures, and project-specific dimensions .

Summary

When selecting a floor-mounted power distribution enclosure, consider material, NEMA/IP rating, internal layout, modularity, and current capacity. Proper sizing based on the bill of materials and future expansion is critical to ensure serviceability, compliance, and thermal management. Leading manufacturers like TopCabinet, nVent HOFFMAN, Eaton, Yespan, and Ritm Industry provide a wide range of standard and custom enclosures suitable for industrial and data center applications .

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

