

Civil Engineering Floor Distribution Box



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 distribution boxes are modular units installed in floors to provide flexible, safe, and accessible electrical, data, and communication connections in buildings. Overview

Floor distribution boxes, also known as floor boxes, are integral components of modern building electrical systems. They allow power, data, and telecom services to be distributed directly from the floor, providing flexibility in office layouts, raised floors, and prefabricated buildings . These boxes are designed to integrate with floor trunking systems or underfloor cable management solutions, enabling easy reconfiguration and maintenance without major structural changes .

Types and Materials

Floor boxes come in various types and materials to suit different applications:

- Metallic boxes (e.g., Steel City®) for durability and heavy-duty use .
- Non-metallic boxes (e.g., Carlon®) for cost-effective residential or light-commercial applications .



- Customizable units made from stainless steel or polyamide for corrosion resistance and high-traffic areas . They can be rectangular, square, or round, and are often equipped with 6 to 12 outlets, depending on the system requirements .

Installation Systems

Two common underfloor distribution systems are:

- Scattoplast: Suitable for traditional and raised floors, integrated into the floor itself, and compatible with junction boxes and floor boxes .
- Undernet: Designed for raised floors and false ceilings, offering reversible installation and easy access for maintenance . These systems allow modular installation, enabling boxes to be repositioned along the floor plane using flexible conduits, which is particularly useful when the final layout is not predetermined .

Features and Benefits

- Flexibility: Boxes can be relocated without major construction work, supporting dynamic office layouts .
- Safety: Removable covers and standardized materials (PVC trunkings, ABS accessories) ensure safe access and compliance with electrical standards .
- Durability: Resistant to heavy loads, dust, and moisture, with options for IP-rated boxes for wet environments .
- Aesthetic Integration: Floor boxes are designed to blend with the floor, appearing nearly invisible while providing high functionality .

Applications

Floor distribution boxes are widely used in:

- Commercial offices for flexible workstation setups.
- Data centers for direct access to power and network connections.
- Prefabricated buildings where modular and reversible installation is required.
- Residential projects for in-floor power and media outlets .

Conclusion

Civil engineering floor distribution boxes provide a versatile, safe, and aesthetically integrated solution for distributing electrical and data services in modern buildings. By combining modular boxes with underfloor trunking systems, engineers can design flexible layouts that accommodate future changes, simplify maintenance, and meet both functional and aesthetic requirements .

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

