What are the standard plugs for data center PDUs



Overview

Data Center PDU Power Connector Guide: CEE Industrial Plug As rack densities increase, the demand for reliable, high-current connectors—especially CEE indu.

Key Takeaways

Data center PDUs commonly use IEC C13/C14, C19/C20, and industrial plugs like L5/L6 and Commando for reliable power distribution.

Common IE

C ConnectorsC13/C14: The most widely used plug-receptacle pair in data centers. C13 plugs connect to C14 inlets on servers, switches, and storage devices, typically rated for 10–15 amps at 250V. Ideal for standard IT equipment and lower-power devices.

C19/C20: Designed for higher-power applications, such as high-density servers and enterprise storage arrays. C19 plugs mate with C20 inlets and support up to 16 amps, providing robust connections for demanding loads. North American and Industrial PlugsNEMA L5/L6 series: Locking plugs and receptacles used for single-phase (L5) and three-phase (L6) power distribution.

Common ratings include L5-20, L5-30, L6-20, and L6-30, supporting 20–30 amps at 120–250V.

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NEM

A L14 series: Often used for three-phase 120/240V connections, such as L14-30, providing 30 amps for higher-capacity PDUs. Commando/CEE industrial plugs: Heavy-duty connectors for three-phase power, typically rated 16A, 32A, or higher, suitable for modular PDUs and high-density racks. These are common in European and industrial environments.

Key Considerations

Current and voltage rating: Choose plugs that match the PDU's input and the connected equipment's power requirements. Phase type: Single-phase plugs (L5, C13) are common for standard servers, while three-phase plugs (L6, L14, C19, Commando) are used for high-density or high-power racks. Locking vs non-locking: Locking plugs (L-series) prevent accidental disconnection, which is critical in mission-critical environments.

Environmental robustness: Industrial-grade plugs are preferred in high-density or harsh environments to ensure safety and reliability.

Summary

Modern data centers typically deploy a mix of IEC connectors (C13/C14, C19/C20) for standard IT equipment and industrial or NEMA locking plugs (L5, L6, L14, Commando) for high-power or three-phase PDUs. Selection depends on equipment power requirements, rack density, and operational safety considerations. Proper plug choice ensures reliable, scalable, and safe power distribution across all racks.

Article Content

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A data center power cord is a cable that connects IT equipment or rack PDUs to the power source. It delivers electrical power safely and reliably within the data center environment,

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