

What type of switch should be used in the power distribution box of the computer room



Article Overview

For a computer room, a main switch with overcurrent protection, such as an MCCB or a switch disconnecter combined with MCBs and RCD/RCBOs, is typically the best choice for a power distribution box.

Key Considerations

1. Main Switch Type The main switch in a distribution box should provide both isolation and protection. In small to medium computer rooms, a switch disconnecter or Molded Case Circuit Breaker (MCCB) is commonly used. MCCBs offer adjustable overcurrent protection and can handle higher currents, making them suitable for critical IT loads (). 2. Outgoing Circuit Protection Each branch circuit should be protected with Miniature Circuit Breakers (MCBs) for overload and short-circuit protection. If residual-current protection is required to prevent electric shock or fire hazards, RCCBs, RCDs, or RCBOs should be integrated (). 3. Solid-State vs Mechanical Switches For high-reliability environments, solid-state relays (SSRs) or high-side load switches can be used for silent operation and longer lifespan, especially in automated or remotely monitored systems. Mechanical switches are simpler and cost-effective but may wear out faster under frequent operation (). 4. Integration with PDUs In computer rooms, the main switch should coordinate with Power Distribution Units (PDUs). PDUs often include built-in breakers and monitoring capabilities. Using a main switch upstream ensures that the entire PDU and connect...

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Chapter 1: Overview of The Power Distribution System

In this chapter, we will give an overview of the Power Distribution System starting from the Medium Voltage transmission line through

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://khanimamboguesthouse.co.za>

Email: sales@khanimamboguesthouse.co.za

Phone: +27 64 852 1973

Address: Unit 7, Greenway Business Park, 8 Innovation Drive, Centurion, 0157, South Africa

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