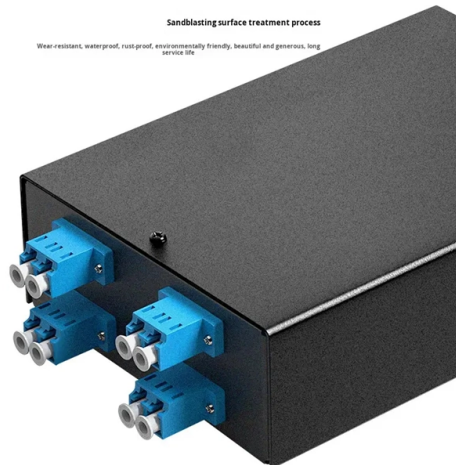


Electrical schematic diagram of the distribution box



Article Overview

A distribution box diagram visually represents how electricity is safely distributed from the main supply to various circuits, showing components like circuit breakers, bus bars, and neutral/ground connections.

Key Components Shown in the Diagram

- **Main Circuit Breaker (MCB or Double Pole MCB):** Acts as the primary switch controlling the entire distribution box, protecting against overloads and short circuits. In single-phase domestic systems, a 63A MCB is commonly used as the main switch .
- **Residual Current Circuit Breaker (RCCB):** Provides protection against leakage currents and electric shocks. It is connected downstream of the main MCB and ensures safety for all connected circuits .
- **Output MCBs (Single or Double Pole):** These breakers control individual circuits, such as lighting, power outlets, or special equipment. Single-pole MCBs are typical for standard loads, while double-pole MCBs may be used for higher-capacity or special loads .
- **Bus Bars:** Conductive bars that distribute electricity from the main supply to the individual circuit breakers. They are usually represented as horizontal or vertical lines in the diagram .
- **Neutral and Ground Bars:** Provide safe return paths for current and grounding, reducing the risk of electric shock and ensuring proper operation of protective devices

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