

Blue and red wires in the distribution box



Article Overview

In a standard single-phase distribution box, the blue wire is neutral and the red wire is the phase (live) wire, and they should be connected to the neutral and main terminals respectively, following proper safety procedures.

Wire Identification and Color Coding

- Blue wire: Neutral wire, which completes the circuit back to the power source ().
- Red wire: Phase (live) wire, carrying current from the main supply ().
- Ensure that the wire colors comply with local electrical standards; in some regions, brown may be used for live instead of red.

Step-by-Step Connection Procedure

- Turn off the main power supply to prevent electric shock ().
- Secure the distribution box to a wall or mounting surface at an accessible height ().
- Connect the red (phase) wire to the main terminal or input of the main MCB (double-pole if used) ().
- Connect the blue (neutral) wire to the neutral bus bar or terminal inside the distribution box ().
- Connect outgoing circuits: Each branch circuit's live wire goes to its respective MCB, and the neutral wire connects to the neutral link ().
- Earthing: Connect the earth wire from the supply and all loads to the earth terminal or bus bar ().
- Organize and secure wires using plastic ties, keeping wiring neat and avoiding tension or kinks ().
- Label wires and circuits for safety and future maintenance ()....

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Wiring Color Codes

The wire color coding guidance provided below applies to electrical wiring in the United States. Though

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Distribution board

A distribution board (also known as panelboard, circuit breaker panel, breaker panel, circuit breaker, electric panel, fuse box or DB

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