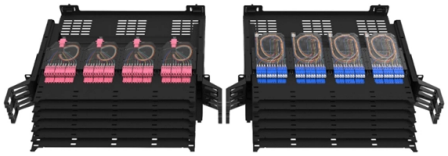
How to install the lights in the distribution box



Overview

Find out how to properly wire an electrical panel box with a comprehensive diagram and step-by-step instructions.

Key Takeaways

To install lights on a distribution box, you need to connect a low-power lighting circuit to the distribution board using proper protective devices, ensuring correct phase, neutral, and earth connections.Safety First

Before starting, turn off the main power supply to the distribution board to prevent electric shock. Use insulated tools and wear protective gloves. Ensure the distribution box is properly earthed, as this is critical for safety when adding any electrical device .

Choosing the Light and Circuit
• Use low-wattage LED or indicator lights suitable for 230V AC (or your local supply voltage) to minimize heat and power draw .

• Decide whether the light will be internal (inside the DB for visibility) or external (mounted above or near the DB).

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• The light should be connected to a dedicated lighting subcircuit or an existing lighting circuit with an appropriate MCB rating .

Wiring Steps

• Identify the Phase, Neutral, and Earth terminals in the distribution box. The phase wire comes from the output of an MCB, the neutral from the neutral link, and the earth from the earth link .

• Connect the phase wire from the MCB to the live terminal of the light.

• Connect the neutral wire from the neutral bus bar to the neutral terminal of the light.

• Connect the earth wire to the metallic body of the light or its earth terminal to maintain grounding.

• Secure all connections using proper terminal blocks or connectors to prevent loose contacts.

• Mount the light inside the DB using brackets or clips, ensuring it does not touch live components or obstruct breaker operation.

Testing

• After wiring, turn on the main supply and the corresponding MCB.

• Verify that the light illuminates correctly and that there is no flickering or overheating.

• Check that all protective devices (MCBs, RCCBs) function properly and that the earth connection is intact .

Additional Tips

• Use cable conduits or protective sleeves to route wires neatly inside the DB.

• Avoid overloading the circuit; the light should draw minimal current.

• Consider using a switch or sensor if you want the light to operate only when the DB door is open. By following these steps, you can safely install lights on a distribution box while maintaining compliance with standard electrical safety practices .

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