

RIVO MULTITRADE OPTICAL SYSTEMS

Power switch for secondary distribution box



Overview

Dual Power Switching Box Introduction: Principle Analysis and Wiring. This device simultaneously connects a primary energy supply and a secondary energy.

Key Takeaways

To connect the power switch in a secondary distribution box, connect the incoming phase and neutral wires to the main MCB, then route the output through the RCCB to the branch MCBs, ensuring proper earthing throughout.

1. Identify Components:

- Main Switch (DP MCB): Acts as the isolator for the secondary distribution box.
- RCCB (Residual Current Circuit Breaker): Provides protection against leakage currents.
- Branch MCBs (SP or DP): Protect individual circuits or loads.
- Neutral and Earth Links: Central points for neutral and earth connections.

2. Connect Incoming Supply:

- Connect the phase (live) and neutral wires from the main supply to the input terminals of the main DP MCB.
- Ensure the main switch rating matches the total load of the secondary distribution box (commonly 63A for domestic setups).

3. Connect to RCCB:

- Connect the output of the main DP MCB to the input terminals of the RCCB.

• This ensures that all downstream circuits are protected against leakage currents .

4. Connect Branch Circuits:

- For single-pole MCBs, connect the phase wire from the RCCB output to the input of each SP MCB.

• Connect the neutral wire from the RCCB output to the neutral link, which then connects to all SP MCBs' neutral terminals.

• For double-pole MCBs, connect both phase and neutral from the RCCB output to the MCB input .

5. Connect Loads:

- Connect the phase terminal of each load to the output of its respective MCB.

• Connect the neutral and earth wires of the load to the neutral and earth links in the distribution box .

6. Earthing:

• Connect the earth wire from the supply and all metallic parts of the distribution box to the earth link.

• Ensure proper grounding to prevent electric shock and comply with safety standards .

7. Wiring Organization:

- Route wires neatly: incoming wires on the left, outgoing wires on the right.

• Use plastic ties to bind wires, keeping spacing uniform and wires straight .

8. Safety Check:

- Before powering the box, verify all connections with a voltage tester.

• Ensure no short circuits, loose connections, or exposed conductors.

• Perform a safety inspection to confirm proper earthing and correct MCB/RCCB operation . Following these steps ensures that the power switch in the secondary distribution box is safely and correctly connected, providing reliable protection and distribution to all downstream circuits.

Article Content

Secondary Distribution Box

The Secondary Distribution Box (SDB) receives power from Main Power Distribution box via an extender cable and provides a

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

