

Method for disassembling the high-voltage compartment of the distribution box



Overview

The -125 variants offer a unique solution for the termination of offshore umbilical cables or onshore distribution systems.

Key Takeaways

Disassembling high-voltage distribution boxes requires strict adherence to safety protocols, proper PPE, and systematic step-by-step procedures to prevent electrical hazards and equipment damage.

Before starting, ensure the following safety measures:

- De-energize the system: Confirm that the box is completely powered down and verify with a voltage tester. Never assume it is safe without double-checking .
- Personal Protective Equipment (PPE): Use 1,000V+ insulated gloves, safety goggles, flame-resistant clothing, and insulated tools .
- Danger notices: Display “Danger Live Equipment” signs if other personnel are nearby .



- Work area preparation: Ensure adequate lighting, clear space, and stable surfaces for tools and components .

Step-by-Step Disassembly

- Initial Inspection: Examine the box for modifications, damaged components, or unusual sounds (e.g., humming) that may indicate residual voltage or faulty parts .
- Disconnect External Connections: Remove all input and output cables, ensuring that gland plates or connectors are compatible with removal .
- Remove Protective Covers: Carefully unscrew and lift covers, shielding, or panels to access internal components. Avoid touching busbars or terminals directly .
- Module Removal: For battery or capacitor modules, follow the “egg carton” approach—remove one module at a time to prevent mechanical stress or short circuits .
- Busbar and Circuit Handling: Use insulated tools to detach busbars and connectors. Avoid bending or forcing components, as they may be fragile and tightly packed .
- Component Labeling and Storage: Label each part and store in anti-static or insulated containers to prevent accidental contact or damage .
- Final Inspection: Check for residual charge using a multimeter and ensure all components are safely isolated before leaving the work area .

Tools and Equipment

- Insulated screwdrivers and wrenches
- Voltage tester/multimeter
- Insulated lifting tools for heavy modules
- Anti-static mats and containers for sensitive components

Best Practices

- Work methodically: Treat the disassembly like a controlled operation, similar to disarming a high-risk device .
- Training and simulation: Use 3D system replicas or virtual disassembly practice to familiarize with the box layout before handling live components .
- Documentation: Record each step and component location for safe reassembly or maintenance reporting . By following these procedures, technicians can safely disassemble high-voltage distribution boxes while minimizing the risk of electrical shock, thermal incidents, or component damage.

Article Content

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

