

Article Overview

Power distribution boxes in Guinea, such as ZGS type combined transformers, feature compact, fully enclosed designs with detailed dimensions and busbar arrangements suitable for 30-1600 kVA capacities.

General Structure

The ZGS series combined transformers, commonly used in Guinea, integrate the transformer, switching equipment, fuses, tap changers, and low-voltage distribution devices into a single compact unit. They are suitable for both indoor and outdoor installation and are widely used in industrial parks, residential areas, commercial centers, and road lighting projects . The boxes are fully enclosed and insulated, ensuring safe operation and protection against environmental factors.

Dimensions and Layout

While exact dimensions vary by capacity, typical low-voltage distribution boxes (LTDBs) follow these specifications:

- o Material: 2 mm galvanized steel sheet with reinforced channels for structural stability .
- o Roof: Slightly slanted with a 50 mm overhang for water runoff .
- o Protection: IP-55 rated for dust and water ingress .
- o Busbars:
 - o 63/100 kVA: 72 x 50 x 8 mm aluminum strips
 - o 160/315 kVA: 120 x 50 x 15 mm aluminum strips
- o Incoming and outgoing droppers: 50 x 8 mm for smaller boxes, 50 x 15 mm for larger boxes .
- o Earthing: Two solid earthing points on either side, with zinc-plated bolts and clamps .
- o Doors and Hinges: Four hinges per door, right door resting on left door, concealed hinges for security .
- o Cable Entry: Bottom plate with rubber glands for incoming and outgoing cables, internal diameter ≥ 1 mm, color-coded insulation for phases RYB .
- o Internal Mounting: Components mounted on 2 mm CRCA MS strips with bends or ribs for stability .

Installation and Operation Features

- o Flexible wiring: Suitable for terminal and ring network systems .
- o Overload capacity: Can handle loads beyond nameplate rating with low noise and temperature rise .
- o Maintenance: Doors allow easy access, and internal layout ensures safe operation and convenient maintenance .

- o Locking: Godrej 3-position locking system with galvanized manual lock provision .

Diagram Reference

Although a direct diagram is not provided in the sources, the general arrangement can be inferred from the specifications:

- o Front view: Two doors with hinges, earthing points on sides, cable entry at bottom.
- o Internal layout: Busbars running horizontally, MCCBs mounted on CRCA strips, phase separation with insulating sleeves.
- o Top view: Slanted roof with overhang, internal spacing for ventilation and cable routing. For CAD modeling or detailed planning, 3D models of power distribution boxes are available in formats like SOLIDWORKS, Inventor, CATIA, STEP, and STL, which can be adapted to Guinea-specific ZGS or LTDB configurations . This information provides a comprehensive reference for dimensions, layout, and installation of power distribution boxes in Guinea, suitable for engineering, procurement, or CAD design purposes.

Secondary Distribution Board Specifications, PDF This document provides specifications for secondary distribution boards. It

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Guinea power distribution box dimensions and specifications

frequency when travelling

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The above are only some common distribution box specifications and features. When

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Guinea power strips and PDU power distribution units for surface mount, rack mount and general purpose applications. Multiple

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