

90kVA Distribution Box Specifications



Overview

STANDBY PRIME 90 ekW 90 kVA Fuel rates are based on fuel oil to specification EPA 2D 89.330-96 with a density of 0.845 – 0.850 kg/L (7.052 – 7.094 lbs/U.S.

Key Takeaways

A 90kVA distribution box typically features a robust outdoor-rated enclosure, IP55 protection, copper bus bars, MCCB protection, and provisions for safe cable entry and earthing.

Enclosure and Material

- Type: Outdoor-rated, fabricated from 2 mm galvanized iron (GI) sheet steel for durability and corrosion resistance .
- Roof Design: Slightly slanting with 50 mm overhang at front and back to prevent water ingress .
- Door and Locking: Equipped with Godrej Type 3-position locking system; hinges concealed for security .
- Protection Rating: IP55, ensuring dust-tight and protection against water jets .
- Earthing: Two solid earthing points on either side of the box .

Electrical Components

- Bus Bars: Copper flat bars, typically 25x4 mm, insulated with color-coded tubing (Red, Yellow, Blue, Black) or phase-colored paint .

- MCCBs: One 4-pole MCCB for main bus bar protection and one outgoing feeder arrangement with 2 sets of 3-pole MCCBs; conforming to IS:13947 standards with magnetic trip release and manual reset .
- Neutral Protection: Provision for neutral unbalance current protection with test certification .
- Cable Entry: Heavy-duty, double compression brass cable glands for incoming and outgoing cables; detachable plates for fixing .
- Insulation: Metallic or heat-resistant insulating barriers between MCCBs to prevent heat damage during faults .

Additional Features

- Lighting: Provision for internal lighting for maintenance .
- Identification: Non-detachable nameplate and punch marks for purchaser identification .
- Standards Compliance: Type-tested at CPRI or government-approved laboratories; conforms to IEC and IS standards .
- Modularity: Some 90kVA systems, such as aircraft ground power units, use pluggable power modules for easy maintenance and rapid replacement .
- Monitoring: Advanced units may include LCD displays and control panels for real-time monitoring of voltage, current, and system status .

Applications

- Industrial and Commercial: Power distribution for factories, commercial buildings, and photovoltaic systems .
- Specialized Systems: UPS systems (e.g., Liebert APM 90kW) and aircraft ground power units, providing high reliability, modularity, and overload protection .

This configuration ensures safe, reliable, and maintainable power distribution for 90kVA loads, meeting both operational and regulatory requirements.

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

