Secondary Distribution Box Socket Styles and Dimensions

Overview

Bracket material: All brackets except MS style; 16 gauge (.060") hot rolled, pre-galvanized steel AISI C-1008, G-90-U.

Key Takeaways

Sockets in secondary distribution boxes are designed to meet utility and safety standards, with dimensions, mounting, and electrical ratings specified for secure and standardized installation.General Specifications

Material and Construction: Secondary distribution boxes are typically fabricated from galvanized steel or polymer concrete for durability and corrosion resistance. Non-concrete enclosures must meet utility-specific engineering material specifications, while concrete enclosures for vehicular traffic comply with ASTM C-857 standards. Covers are often slip-resistant polymer concrete with manufacturer and utility identification markings, and non-concrete parts are interchangeable for flexibility ( ). Protection and Safety: Boxes are designed to meet IP-55 or higher for dust and water protection. Earthing points are provided on either side of the box, and locking mechanisms (e.g., Godrej 3-position locks) ensure security. Internal barriers and end plates isolate live components, and bus bars are positioned to maintain adequate clearance from the enclosure body ( ).

Socket Dimensions and Mounting

Meter Sockets:

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• Designed for single or multi-meter configurations, with modular slide-in stacks ranging from 100A to 200A.

• Vertical bussing is typically rated at 800A, and main cross bus at 600A or 1200A depending on the configuration ( ).

• Sockets include 5-jaw or straight-in load connections, with silver alloy contacts for high conductivity and durability.

• Mounting provisions include embossed hooks or rails for alignment, allowing pre-installation and easy replacement of modules without altering the full stack ( ). Box Dimensions:

• Dimensions vary by manufacturer and utility requirements, but typical LT distribution boxes are fabricated from 2 mm GI sheet steel with reinforced channels.

• Roofs are slightly slanted with a 50 mm overhang for weather protection.

• Tolerances for dimensions are generally ±10%, and internal space is sufficient to accommodate bus bars, sockets, and wiring with proper clearance ( ). Labeling and Identification:

• Exterior and interior of meter sockets must be permanently marked to indicate each service location.

• Weather-resistant placards or engraved metal labels are used for clear identification, ensuring compliance with utility inspection requirements ( ).
Electrical Ratings
• Interrupting ratings for sockets can reach up to 100 kA, combining thermal and magnetic trip elements.

• Sockets are rated for 240V systems, with individual stack ratings from 100A to 200A, depending on the application ( ).

• Connectors for service laterals are typically compression-type, approved by the utility, and installed on the load side of the socket ( ).
Summary

Secondary distribution box sockets are engineered for modular installation, safety, and compliance. Key considerations include material, IP rating, earthing, bus bar clearance, socket type, amperage rating, and clear labeling. Dimensions and tolerances are standardized but may vary slightly depending on manufacturer or utility specifications, ensuring both ease of installation and long-term reliability.

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Secondary Distribution Box

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