

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:

- 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 $\pm 10\%$, 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.

Article Content

028028_Rev23_4-26-23

This document provides specifications, ordering information, illustrations, and application instructions for the various sizes of non

Secondary Distribution Box

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

Electrical Box Dimensions: Find the Right Size for Any

Learn standard electrical box dimensions for outlets, switches, and junction boxes.

Secondary Distribution Boxes

Modular zone distribution system for raised floors, improving cable management and installation.

Distribution Box and Selection Guide: Internal Structure, Components ...

Learn how to choose a distribution box and understand its internal structure, including MCBs, busbars, neutral bars,

Secondary unit substations design guide

Secondary windings are either full height sheet conductors or wire conductor dependent on the voltage and kVA

Electrical Boxes

Below are the most common electrical boxes, like the outlet box, junction box, light switch box, and fan box, as well as different gang

Individual Meter Sockets

Browse our products and documents for Individual Meter Sockets - Ring and ringless type meter sockets.

NEC Reference Metallic Boxes

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

Distribution Box

Amphenol LTW's distribution boxes facilitate efficient cable management, easy installation with pre-wired configuration, and provides

Electrical Boxes

Electrical Boxes: Junction Box, Outlet Box, Single Gang, 2 Gang Electrical Boxes vary in size, material,

5 Types of Electrical Boxes

Learn about the types of electrical boxes you can use for your home wiring project. From junction boxes to work

Primary and secondary power distribution systems

Primary distribution systems Primary distribution systems consist of feeders that deliver

Electrical Box Dimensions: Find the Right Size for Any

Learn standard electrical box dimensions for outlets, switches, and junction boxes.

Secondary Pedestals | Nordic

Secondary Pedestals Plastic Pedestals: PSP, Pedestals with connectors, Convertible, PSPF and PSPS Series

12 Types of Electrical Boxes and How to Choose

Learn about the many common types of wall and ceiling electrical boxes for switches, outlets, light fixtures, ceiling

PRLiX switchboard design guide

Application Considerations and Definitions Eaton's Pow-R-LineT family of distribution switchboards incorporates new design

What is the difference between primary, secondary and tertiary ...

1. The first-level distribution box is relative to a certain building or factory, which is the first-level distribution box of the

The Meaning and Function of Primary, Secondary, and Tertiary ...

Follows the principle of "one machine, one switch, one RCD, one box, one lock," ensuring no single switch controls

Area distribution boxes with connectors

4.1 Characteristics of the materials The area distribution box associated with the copper or optical feedthrough sockets allows total

Types of Electrical Sockets

Learn all about different types of electrical outlets for your home or property! This guide covers standard, GFCI, USB,

Choosing Electrical Boxes

There is a huge selection of electrical boxes, varying by size, shape, mounting device, and composition. One of the first distinctions

NEC Reference Metallic Boxes

NEC® Reference Article 314 of the National Electrical Code® covers the installation and use of boxes. The article includes table

Specifications for Electrical Underground Distribution Systems

6.19 For Secondary Service Accounts fed from subsurface secondary/ service boxes or meter pedestals, the Contractor is to (1)

Types of Electrical Sockets

Learn all about different types of electrical outlets for your home or property! This guide covers standard, GFCI, USB,

Choosing Electrical Boxes

There is a huge selection of electrical boxes, varying by size, shape, mounting device, and composition.

NEC Reference Metallic Boxes

NEC® Reference Article 314 of the National Electrical Code® covers the installation and use of boxes. The article includes table

Specifications for Electrical Underground Distribution Systems

6.19 For Secondary Service Accounts fed from subsurface secondary/ service boxes or meter pedestals, the Contractor is to (1)

Distribution board

A distribution board (also known as a panelboard, circuit breaker panel or box, electric panel, fuse box or

Electrical Outlet Types

Compare electrical outlet types to find the right size wall plug or socket for your home or business. Choose

Information Bulletin 2025-003: Revised ES54 S0-04 Secondary

This is a relatively common type of hot-style secondary underground service for residential and small commercial services and

Electrical Plugs & Sockets

Electrical plugs and sockets are essential tools that allow us to safely connect electrical devices to power sources.

Secondary Distribution Boxes

For building owners, architects, construction managers, facilities engineers, and network administrators alike, ACS modular zone

NEMA Plug Charts | Americord | NEMA Configurations

Check out the Nema plug chart and know all the configurations related to it. Know the voltage, amperage, and much more. Get

WORLD WIDE WEB JOURNAL Home

O'Reilly & Associates, Inc. 103A Morris St. Sebastopol, CA United States

Floor Box Design and Electrical Floor Outlet Specification Center ...

Your one-stop shop for resources and information to design and build floor box specs for new constructions, renovations, and more.

Specifications for Electrical Underground Distribution Systems for

Specifications for Electrical Underground Distribution Systems from Pad Mounted Transformation, Secondary Service Accounts

Understanding Primary, Secondary, and Tertiary Distribution Boxes

Learn about primary, secondary, and tertiary distribution boxes, their roles in electrical systems, and how they manage power

Electrical Boxes

Electrical Boxes: Junction Box, Outlet Box, Single Gang, 2 Gang Electrical Boxes vary in size, material,

5 Types of Electrical Boxes

Learn about the types of electrical boxes you can use for your home wiring project. From junction boxes to work

Primary and secondary power distribution systems

Primary distribution systems Primary distribution systems consist of feeders that deliver

Electrical Box Dimensions: Find the Right Size for Any

Learn standard electrical box dimensions for outlets, switches, and junction boxes.

Secondary Pedestals | Nordic

Secondary Pedestals Plastic Pedestals: PSP, Pedestals with connectors, Convertible, PSPF and PSPS Series

12 Types of Electrical Boxes and How to Choose

Learn about the many common types of wall and ceiling electrical boxes for switches, outlets, light fixtures, ceiling

PRLiX switchboard design guide

Application Considerations and Definitions Eaton's Pow-R-LineT family of distribution switchboards incorporates new design

What is the difference between primary, secondary and tertiary ...

1. The first-level distribution box is relative to a certain building or factory, which is the first-level distribution box of the

The Meaning and Function of Primary, Secondary, and Tertiary ...

Follows the principle of "one machine, one switch, one RCD, one box, one lock," ensuring no single switch controls

Area distribution boxes with connectors

4.1 Characteristics of the materials The area distribution box associated with the copper or optical feedthrough sockets allows total

Types of Electrical Sockets

Learn all about different types of electrical outlets for your home or property! This guide covers standard, GFCI, USB,

Choosing Electrical Boxes

There is a huge selection of electrical boxes, varying by size, shape, mounting device, and composition. One of the first distinctions

NEC Reference Metallic Boxes

NEC® Reference Article 314 of the National Electrical Code® covers the installation and use of boxes. The article includes table

Specifications for Electrical Underground Distribution Systems

6.19 For Secondary Service Accounts fed from subsurface secondary/ service boxes or meter pedestals, the Contractor is to (1)

028028_Rev23_4-26-23

This document provides specifications, ordering information, illustrations, and application instructions for the various sizes of non

Secondary Distribution Box

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

Electrical Box Dimensions: Find the Right Size for Any

Learn standard electrical box dimensions for outlets, switches, and junction boxes.

Secondary Distribution Boxes

Modular zone distribution system for raised floors, improving cable management and installation.

Distribution Box and Selection Guide: Internal Structure, Components ...

Learn how to choose a distribution box and understand its internal structure, including MCBs, busbars, neutral bars,

Secondary unit substations design guide

Secondary windings are either full height sheet conductors or wire conductor dependent on the voltage and kVA

Electrical Boxes

Below are the most common electrical boxes, like the outlet box, junction box, light switch box, and fan box, as well as different gang

Individual Meter Sockets

Browse our products and documents for Individual Meter Sockets - Ring and ringless type meter sockets.

NEC Reference Metallic Boxes

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

Distribution Box

Amphenol LTW's distribution boxes facilitate efficient cable management, easy installation with pre-wired configuration, and provides

028028_Rev23_4-26-23

This document provides specifications, ordering information, illustrations, and application instructions for the various sizes of non

Secondary Distribution Box

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

Electrical Box Dimensions: Find the Right Size for Any

Learn standard electrical box dimensions for outlets, switches, and junction boxes.

Secondary Distribution Boxes

Modular zone distribution system for raised floors, improving cable management and installation.

Distribution Box and Selection Guide: Internal Structure, Components ...

Learn how to choose a distribution box and understand its internal structure, including MCBs, busbars, neutral bars,

Secondary unit substations design guide

Secondary windings are either full height sheet conductors or wire conductor dependent on the voltage and kVA

Electrical Boxes

Below are the most common electrical boxes, like the outlet box, junction box, light switch box, and fan box, as well as different gang

Individual Meter Sockets

Browse our products and documents for Individual Meter Sockets - Ring and ringless type meter sockets.

NEC Reference Metallic Boxes

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

Distribution Box

Amphenol LTW's distribution boxes facilitate efficient cable management, easy installation with pre-wired configuration, and provides

Contact Us

Continue your research online:

Website: <https://alfa-pro.co.za>

Technical inquiry: <https://alfa-pro.co.za/contact.html>

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

