

Materials used in distribution boxes

Article Overview

Distribution boxes are typically made from metals like steel or aluminum, and plastics such as polycarbonate, PVC, HDPE, or thermoset plastics, chosen based on durability, insulation, and environmental conditions.

Metal Materials

Steel and aluminum are the most common metals used in distribution boxes. Steel is extremely strong and impact-resistant, making it ideal for industrial or outdoor applications where extra protection is needed. Stainless steel or galvanized steel also provides excellent corrosion resistance, suitable for humid or coastal environments . Aluminum is lighter than steel, resists rust due to its natural oxide layer, and is easier to handle, making it suitable for damp or wet locations . Metal boxes also help block electromagnetic and radio frequency interference, protecting sensitive electrical components .

Plastic Materials

Thermoplastics like PVC, polycarbonate (PC), and high-density polyethylene (HDPE) are widely used for indoor and outdoor distribution boxes. PVC is versatile and can be rigid or flexible, polycarbonate is tough and heat-resistant, and HDPE is strong, UV-resistant, and suitable for outdoor use . These plastics are lightweight, corrosion-resistant, and provide electrical insulation, reducing the risk of electric shock . Thermoset plastics, such as SMC (Sheet Molding Compound) or fiberglass-reinforced plastics, are used in high-voltage or outdoor applications. They offer excellent insulation, high heat tolerance, and flame retardancy, though they are more expens...

Article Content

Jul 06, 2026

DB BOX(Electrical Distribution Box): Everything You Need to Know

Learn everything you need to know about the Electrical Distribution Box (DB Box). Explore types, materials, installation

Jun 01, 2026

DISTRIBUTION BOX

ABS VIOX distribution boxes utilize high-quality ABS plastic, offering exceptional durability and electrical

Oct 23, 2025

Key Material Requirements for Distribution Box

Distribution boxes are commonly made from materials like polycarbonate, fiberglass, and stainless or galvanized

Feb 02, 2026

What is the Internal Structure of The Distribution Box

Learn about the internal structure of a distribution box, its components, functions, and key

Sep 02, 2025

Electrical Distribution Boxes -ZHENGKAI

Discover electrical distribution boxes types, components (MCB, RCCB, RCBO, SPD,

Oct 11, 2025

Metal Vs. Plastic Distribution Boxes: Choosing The

Compare metal vs plastic distribution boxes in terms of durability, fire-safety, corrosion

Mar 05, 2026

The Box Material Of The Distribution Box Is Generally

The box material of Distribution box is generally made of steel plate, insulation board or

Nov 02, 2025

Best Material for LV Distribution Box | Axis Electricals

Learn which material is ideal for your LV distribution box. Axis Electricals explains how to

May 28, 2026

Understanding Distribution Boxes:A Comprehensive Guide

Understanding its significance, this article covers what a distribution box is, how it functions,

Oct 04, 2025

Ultimate Guide To Distribution Boxes Db Boxes Types

This ultimate guide explains what a distribution box does, its internal components, common types, real

May 13, 2026

Junction Box Types and Applications | Electrical

Learn about different junction box types, their materials, and applications across residential,

May 20, 2026

Complete Guide For Distribution Boxes Types

The correct choice and installation of distribution boxes are crucial for electrical safety, efficiency, and reliability. This guide provides

Oct 23, 2025

Distribution Box: Types and Functions | Axis-Electricals

A distribution box ensures that electrical supply is distributed in the building, also known as a distribution board, panel board, breaker

Jul 20, 2026

Top Packaging Materials Used for Box Manufacturing

Discover the best packaging materials for custom boxes. Learn about cardboard, Kraft, corrugated, and rigid packaging types used in

Apr 20, 2026

Power Distribution Box Essentials: Functions, Types

7) Considerations for choosing a power distribution box The context, security needs, and

Oct 30, 2025

What Is a Distribution Box? Types, Uses & How to Choose

Learn what a distribution box is, its types, and how to choose the right one for your project.

Nov 30, 2025

Understanding Distribution Boxes:A Comprehensive Guide

A distribution boxes is an essential device that manages the safe and efficient flow of

Nov 03, 2025

Distribution board

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

Mar 24, 2026

Distribution Box Guide: Types, Components & Solutions

Understand distribution boxes (DB boxes) in 5 minutes. Learn about types, components, functions, and uses. Find

Jan 24, 2026

What Are the Main Materials Used in Distribution Boxes

Distribution box material options include steel, aluminum, PVC, polycarbonate, and SMC, each offering

Aug 02, 2025

Wiring of the Distribution Board with RCD (Single Phase Home Supply)

The above mentioned electrical wiring accessories and protective devices are used to control and distribute electric supply (safely to

Sep 30, 2025

Electrical Distribution Boxes: Types, Uses & Selection Guide

Learn how electrical distribution boxes work, their key components, common types, and how to choose the right enclosure for safe

Mar 18, 2026

14 Types of Packaging Box Materials

Discover 14 types of box materials and their pros & cons. Learn how to choose the right custom packaging for

Dec 20, 2025

1. An Ultimate Guide for Metal Distribution Boxes

2. Types of Electrical Distribution Boxes Distribution boxes come in different materials and designs to cater to various applications.

Mar 31, 2026

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,

Feb 28, 2026

The installation requirements for the distribution box

Learn how to install a distribution box safely and correctly. Covers wiring, placement, standards, and expert tips for a

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://www.iiss.co.za>

Email: sales@iiss.co.za

Phone: +27 63 174 2895

Address: Unit 8, Innovation Park, 15 Rivonia Road, Sandton, Johannesburg, 2196, South Africa

This document is for informational purposes only. Specifications subject to change without notice.

