

Distribution Box Component Chart



Article Overview

A distribution box contains key components like circuit breakers, RCCBs, isolators, bus bars, neutral and grounding links, surge protection, and indication lights, all working together to safely distribute and control electrical power.

Key Components and Functions

Component	Function
Circuit Breakers (MCBs)	Protect circuits from overloads and short circuits by automatically cutting off power when faults occur.
Residual Current Circuit Breaker (RCCB)	Detects small current imbalances between phase conductors to prevent electric shocks and enhance safety.
Isolators	Manually operated switches that safely disconnect parts of the circuit for maintenance.
Bus Bars	Metal strips that conduct electricity within the box, serving as central connection points for all circuits.
Neutral Link	Provides a return path for current, ensuring proper system operation.
Grounding Bus Bar	Directs excess current safely into the ground during faults, preventing shocks and fires.
Fuse (in older boxes)	Protects circuits by blowing when current exceeds limits; less common in modern DBs.
Transfer Switch / Automatic Transfer Switch (ATS)	Switches power between main supply and backup generator for continuous power in critical systems.
Surge Protective Device (SPD)	Protects the system from voltage spikes caused by lightning or phase faults.
Indication Lights	Show mains power status and availability for quick visual monitoring.
Enclosure	Shields internal components from dust, moisture, and physical damage.
Electrical Wiring	Connects all components and circuits, sometimes including solar or specialized equipment wiring.
Advanced Modules (optional)	Energy monitoring units and communication modules for real-time data collection and remote control.

Notes on Distribution Box Types...

Article Content

The Ultimate Guide to Distribution Box Types

Discover the key types of distribution boxes with NUOMAK's comprehensive guide. Learn about Main Distribution Boards (MDB),

Distribution box | PDF

A distribution board (also known as panelboard or breaker panel) is a component of an electricity supply system which divides an

Distribution Boards & Consumer Units

Distribution boards, together with modular ABB system pro M Compact protection devices and Modular Din Rail Components, can be

Distribution Boxes Technical Data

Wiring diagram shows both PNP and NPN wiring. Actual units use PNP status indicator, NPN status indicator, or neither. Dimensions

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

Electrical Distribution Box Diagrams

This document provides a list of components in an electrical distribution box with their names and associated wiring diagrams. It

Distribution board

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

Contact Us

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