

# Wiring terminal connection diagram for distribution box

## Article Overview

A typical single-phase distribution box arranges the main MCB, RCCB, output MCBs, neutral link, and earth link in a structured sequence to safely distribute power to multiple circuits.

### Key Components and Terminal Arrangement

#### o Main MCB (Double Pole)

- o Acts as the main switch controlling the entire supply.
- o The incoming phase (live) and neutral wires from the energy meter are connected to the input terminals of the main MCB.
- o Output terminals feed the RCCB or directly to the busbars for distribution .

#### o RCCB / RCD (Double Pole)

- o Provides protection against leakage currents, electrical shocks, and insulation faults.
- o The input terminals of the RCCB are connected to the output of the main MCB.
- o The output terminals supply the single-pole MCBs for individual circuits .

#### o Output MCBs (Single Pole or Double Pole)

- o Each MCB protects a specific load or circuit (e.g., lights, fans, sockets).
- o The phase wire from the RCCB output is connected to the input of each MCB.
- o The neutral wire of each load is connected to the neutral link .

#### o Neutral Link / Busbar

- o A common terminal strip distributing neutral to all output circuits.
- o Connected to the neutral output of the RCCB and to the neutral wires of all loads .

#### o Earth Link / Busbar

- o Provides grounding for safety.
- o All earth wires from the supply and connected loads are terminated here and linked to the building's earth electrode .

## Wiring Flow Summary

- o Incoming supply -> Main MCB -> RCCB -> Output MCBs -> Loads
- o Neutral wire -> Neutral link -> Loads
- o Earth wire -> Earth link -> Loads

## Color Coding and Safety

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- o Phase (Live): Red or brown
- o Neutral: Black or blue
- o Earth: Green/yellow
- o Ensure all connections are tight, and the power supply is turned off before wiring .

## Visual Representation

A simplified terminal arrangement diagram:

Incoming Supply L --> Main MCB --> RCCB --> Output MCBs --> Loads N --> Main MCB --> RCCB --> Neutral Link --> Loads E -----> Earth Link --> Loads

This layout ensures safe distribution, proper protection, and easy maintenance. For more detailed diagrams, including specific MCB ratings and RCD connections, refer to single-phase distribution box wiring guides .

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

When we start a project of electrical wiring the first and main control point of wiring is the distribution board.

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