

# Distance between the back panel of the distribution box



## Overview

NEC Requirements for Panelboards and Load Centers  
Clearance: Electrical panels must be installed in a readily accessible area with a minimum clearance of 30.

## Key Takeaways

The back panel of a distribution box should have sufficient clearance to allow safe installation, wiring, and maintenance, typically requiring at least a few inches of space behind the enclosure.

## NEC and Installation Guidelines

According to the National Electrical Code (NEC), the working space in front of a panelboard must be at least 36 inches (914 mm) deep, but the code does not specify a strict minimum distance behind the panel; however, adequate space is required for wiring, grounding, and mounting. The wireway depth for through wiring beyond the front of the panel is limited to 6 inches, and any equipment in front should not extend more than 6 inches beyond the panel. This implies that the back of the panel should be mounted flush or with enough clearance to accommodate conduit, cable entry, and proper grounding.

## Practical Installation Considerations

**Wall Mounting:** Most distribution boxes are mounted directly on a wall. Ensure the wall surface is flat and strong enough to support the box and internal components.  
**Cable Access:** Leave at least 2–4 inches behind the panel for cable entry, conduit connections, and to prevent pinching or damage to wires.

Ventilation and Safety: Adequate spacing behind the box helps prevent overheating and allows for inspection and maintenance. Material and Mounting: Distribution boxes are typically made of steel or thermoplastics. Ensure the mounting method allows the back panel to be securely fastened while maintaining the necessary clearance for wiring.

## Summary

While the NEC focuses on front and side working space, installers should provide at least a few inches of clearance behind the distribution box to allow for safe wiring, conduit connections, and maintenance. This ensures compliance with safety standards and facilitates long-term reliability of the electrical system.

## Article Content

### NEC Requirements for Panelboards and Load Centers

Clearance: Electrical panels must be installed in a readily accessible area with a minimum clearance of 30 inches (762 mm) wide, 3 ft (36 inches or 914 mm) deep, and 6.5 feet ( $\approx$  2 meter) high in front of

### Electrical Panel Clearance Requirements

The document outlines clearance recommendations and requirements for electrical panels based on voltage levels. It provides tables with minimum clearance distances for indoor and outdoor panels,

### NEC Electrical Panel Clearance Guidelines

This document provides safety clearance recommendations for electrical panels. It includes tables outlining minimum clearance distances for various components of indoor and outdoor electrical panels.

### Safe Clearances for Electrical Equipment: Working Space and

The aisle (s) between pieces of such equipment, with live parts on both sides of the aisle, must be at least 4 feet wide. If the voltage exceeds 600, clearance must be increased even further.

### Electrical Panel Clearance Distance FAQs

I have not found such a reference. There is not a standard electrical code requirement that gives the minimum clearance distance between an electrical panel and a plumbing fixture, but you can figure a

### Electrical Clearances: Requirements and Safe Distances

Every electrical panel, breaker box, meter base, and service disconnect needs a clear working zone in front of it so that someone can safely

### Safety Clearance Recommendations for Electrical Panel

One Entrance at each end of the equipment. Get access to premium HV/MV/LV technical articles, electrical engineering guides, research studies and much more! It helps you to shape up

### Electrical Panel & Gear Clearance Guide | NEC 2023

As demonstrated in this guide, the NEC 2023 provides specific and detailed standards for electrical gear and panel clearances that enhance safety during normal operation, maintenance, and

### Minimum distance between electrical enclosures

With a panel either side it would need to be more to stop you being thrown into an open panel behind you. 1.5mtr would seem to be the minimum regardless of any regs.

### Electrical Panel Clearance distance

Electrical panel clearance distances are given by the U.S. NEC specifying working distance. Details are given here.

### Essential Guide: Electrical Panel Access Clearance Requirements

Understanding Electrical Panel Access Clearance Requirements Electrical panels, also known as breaker boxes or distribution boards, are critical components in our electrical systems. They

### Electrical Panel Clearance distance

Electrical panel clearance distances are given by the U.S. NEC specifying working distance. Details are given here. This electrical wiring article series discusses procedures for safe and effective visual

### Navigating the Safe Distance: How Far Away Should You Be From an ...

Understanding Electrical Panels Before diving into the specifics of distance, it's essential to understand what an electrical panel is. Also known as a breaker box, load center, service panel, or

### Size determination, installation method and wiring mode of distribution ...

The distribution box is the central hub of the home circuit and the general control of our daily power consumption. It is an indispensable electrical equipment. If there are some potential safety hazards,

## 2-9-\* Working space around electrical equipment

500 mm (20 inch) actual measured distance between furnace vertical duct and the wall Photo B3 - Washer/dryer stack encroaches on the egress from the working space around electrical panel

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Welcome to Channel Dive. We're Informa TechTarget's new publication, focused on delivering daily news and analysis for executives at North

How to determine the size, installation method and

The distance between distribution box and switch box shall not exceed 30m. The horizontal distance between the switch box and the fixed electrical equipment

IEC Standard for Power Distribution Board Design and

Designing a power distribution board is not just about placing components inside a metal box. It requires a deep understanding of international

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