

# Installation of protective screen for distribution box

## Article Overview

A protective screen for a distribution box should be installed to prevent accidental contact, maintain ingress protection, and ensure safe operation of electrical components.

## Purpose of a Protective Screen

A protective screen acts as a barrier between users and live electrical components inside the distribution box. It helps:

- o Prevent accidental contact with live terminals.
- o Protect internal components from dust, debris, and small objects.
- o Maintain the enclosure's IP rating for water and dust resistance.
- o Facilitate safe maintenance and inspection without removing the entire cover.

## Selection of Protective Screen

- o **Material:** Use non-conductive materials like polycarbonate or acrylic for indoor applications, or corrosion-resistant metal mesh for industrial environments.
- o **Size and Fit:** Ensure the screen covers all live parts while leaving space for ventilation and access to breakers or fuses.
- o **IP/NEMA Compliance:** The screen should not compromise the enclosure's IP rating (e.g., IP65 or higher for outdoor use) .

## Installation Steps

- o **Preparation:** Turn off power and verify the distribution box is de-energized. Gather tools such as screwdrivers, pliers, and mounting hardware .
- o **Mounting:** Attach the screen inside the enclosure using pre-drilled holes or brackets. Ensure it is securely fastened without compressing gaskets or interfering with wiring .
- o **Cable Management:** Maintain proper cable entry and strain relief. Avoid routing wires over the screen or creating tension on terminals .
- o **Clearance and Access:** Leave sufficient space for operating breakers, fuses, or surge protection devices. Label circuits clearly for easy identification .
- o **Testing:** After installation, perform visual inspection and continuity tests to ensure no short circuits or grounding issues are introduced .

## Maintenance

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- o Inspect the screen periodically for cracks, corrosion, or loose fasteners.
- o Clean dust and debris to maintain airflow and prevent overheating.
- o Ensure the protective screen remains properly aligned after any internal modifications or device replacements .

## Safety Considerations

- o Always wear personal protective equipment (PPE) such as insulated gloves and safety glasses during installation.
- o Follow local electrical codes and standards (e.g., NEC, IEC, or national regulations) to ensure compliance.
- o Avoid modifying the screen in a way that reduces its protective function or compromises the enclosure's IP rating . By following these guidelines, the protective screen will enhance safety, maintain the integrity of the distribution box, and ensure reliable operation of the electrical system.

2. The wall mounted distribution box can be fixed on the wall with expansion bolts, but the dovetail bolts shall be embedded in the

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A leakage protector should be installed in the distribution box to provide additional safety protection.  
Installation

The distribution box is the central hub of the home circuit and the general control of our daily power consumption. It is an

The construction and installation points of distribution boxes and switch boxes are summarized as follows: 1. Select qualified

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