

Connection of metal components in junction box



Article Overview

Metal components in a junction box must be properly grounded and securely connected to ensure electrical safety and prevent short circuits or shocks.

Metal Junction Box Overview

A metal junction box is a durable enclosure used to house electrical connections, protecting wires from physical damage, moisture, and accidental contact while providing a safe environment for splices and terminations . These boxes are commonly made from steel or aluminum and are suitable for residential, commercial, and industrial applications, especially in high-stress or outdoor environments . They typically include a metal enclosure, cover plate, knockouts for wiring, and grounding screws .

Grounding Metal Components

Proper grounding is essential when working with metal junction boxes:

- **Grounding Screw:** Most metal boxes have a dedicated green grounding screw. All bare or green-insulated grounding wires from circuits entering the box should be connected to this screw .
- **Bonding the Box:** If the box itself is part of the electrical path, the grounding wire should be looped around the screw and tightened securely to ensure the box is electrically bonded to the system ground

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