# What are the components of a junction box accessory



## Overview

A small metal, plastic or fiberglass junction box may form part of an or (TPS) wiring in a building. If designed for surface mounting, it is used mostly in ceilings, concrete or concealed behind an access panel—particularly in domestic or commercial buildings. An appropriate type (such as that shown in the gallery) may be buried in the of a wall (although full conceal.

## Key Takeaways

A junction box typically consists of an enclosure, cover plate, knockouts, mounting brackets, and grounding components, all designed to protect and organize electrical connections.Main Components



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1. Enclosure: The enclosure is the primary body of the junction box, usually made of metal or plastic, which houses and protects electrical connections from physical damage, dust, and moisture. It prevents accidental contact with live wires and provides a secure space for splices and terminations . 2. Cover Plate: The cover plate acts as a protective lid, securing the enclosure and keeping internal wiring out of reach. It can be screw-on or snap-fit and may include features to prevent dust or moisture infiltration, ensuring safety and accessibility for maintenance . 3. Knockouts: Knockouts are pre-scored apertures in the box that can be removed to allow cables or conduits to enter. They provide flexibility for wiring installation and help accommodate different circuit configurations . 4. Mounting Brackets: These are hardware components used to secure the junction box to walls, ceilings, or other surfaces. They can be fixed or adjustable, ensuring the box remains stable during installation and use . 5. Grounding Screws/Terminals: Grounding screws provide a connection point for ground wires, directing excess electrical current safely into the earth. Proper grounding reduces the risk of electrical shock and fire hazards . 6. Internal Connectors or Terminal Blocks: Some junction boxes include built-in terminals or connectors to join wires securely. These components help organize wiring and ensure firm electrical connections without relying solely on wire nuts or tape .

Additional Features
• Fireproofing: Certain boxes are designed to contain sparks and prevent fire spread.

• Weatherproofing: Outdoor or waterproof boxes protect against moisture and flooding.

• Accessibility: Junction boxes provide easy access for repairs, upgrades, or troubleshooting without disturbing the entire wiring system . By combining these components, a junction box ensures safety, organization, and reliability in electrical systems, making it an essential accessory in residential, commercial, and industrial installations.

## Article Content

Junction box

A small metal, plastic or fiberglass junction box may form part of an electrical conduit or thermoplastic-sheathed cable (TPS) wiring system in a building. If designed for surface mounting, it is used mostly in ceilings, concrete or concealed behind an access panel—particularly in domestic or commercial buildings. An appropriate type (such as that shown in the gallery) may be buried in the plaster of a wall (although full conceal

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