

Wiring diagram for light-controlled switch module

Article Overview

A light-controlled switch module is wired by connecting the power supply, load (light fixture), and control inputs such as sensors or switches according to the module's wiring diagram to ensure safe and functional operation.

Basic Components and Connections

- o **Power Supply:** The module requires a connection to the main AC power source. Typically, this involves connecting the live (hot) wire to the module's input terminal and the neutral wire to the neutral terminal. Ensure the circuit is turned off before wiring to prevent electric shock ().
- o **Load (Lighting Fixture):** The output terminal of the module connects to the light fixture. The live output from the module goes to the fixture's hot terminal, while the neutral from the power source is shared with the fixture ().
- o **Control Inputs:** Light-controlled modules often include inputs for photocells, motion sensors, or manual switches. These inputs allow the module to turn the light on or off automatically based on ambient light or user control. Wiring typically involves connecting the sensor's output to the module's control input terminal ().
- o **Grounding:** For safety, connect the module's ground terminal to the building's grounding system. This reduces the risk of electrical shock and ensures compliance with electrical codes ().

Wiring Considerations

- o **Switch Loops:** If the power source originates at the light fixture, a switch loop may be used. This involves running a 2- or 3-wire cable from the fixture to the switch module, marking the white wire as hot if necessary ().
- o **Neutral Requirement:** Modern light-controlled modules often require a neutral wire in the switch box to power the module's electronics, especially for timers or smart control features ().
- o **Relay Modules:** Some modules use a relay to switch the load. The relay terminals are wired in series with the light fixture, allowing the module to control high-voltage loads safely while isolating the control circuit ().

Safety and Compliance

- o Always follow the manufacturer's wiring diagram for the specific module being installed ().
- o Ensure all connections are secure and insulated to prevent short circuits or overheating.
- o Verify that the module's voltage and current ratings match the lighting load.
- o Comply with local electrical codes and standards to ensure safe installation ().

Summary

Wiring diagram for light-controlled switch module

Wiring a light-controlled switch module involves connecting the AC power supply, the light fixture, and any control devices according to the module's wiring diagram. Proper grounding, neutral connections, and adherence to safety standards are essential. Using a wiring diagram as a reference ensures correct installation, functional operation, and safe control of lighting systems ().

Expert advice on how to wire a standard light switch, including helpful diagrams. Also covers switch installation,

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This article is all about the light switch wiring diagram. The light switch is an electrical component that is used to control and manage

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Here we have a wiring diagram of a single pole switch where the power supply is connected to a switch and two wires

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