

How to Make a Light-Controlled Switch Module



AI Overview

You can build a light-controlled switch module using a microcontroller (ESP8266/ESP32), a light sensor, and a relay to automate lighting based on ambient light levels.

Core Components

- **Microcontroller:** ESP8266 or ESP32 is ideal due to built-in Wi-Fi, low power consumption, and easy integration with smart home systems ().
- **Light Sensor:** A photoresistor (LDR) or a digital light sensor (like BH1750) detects ambient light levels.
- **Relay Module:** Controls AC or DC lights safely. A solid-state relay is recommended for silent and reliable switching ().
- **Power Supply:** A regulated 3.3V or 5V supply for the microcontroller, often using modules like Hi-Link or LM1117 voltage regulators ().
- **Optional Enclosure:** A 3D-printed or plastic case to safely house the electronics.

Circuit Design

- Connect the light sensor to an analog input on the microcontroller.
- Use a transistor or MOSFET to drive the relay from the microcontroller's GPIO pin, ensuring the microcontroller is not exposed to high current.

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Tutorial: Making of Light Controlled Switch

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A lighting control module is the “control center” for your lighting system. It acts as a bridge

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You can obtain a relay module from anywhere. here is a link to the Amazon seller: Relay Module for ESP-01 These units operate

Voltage Controlled Switch : 5 Steps

Voltage Controlled Switch: This is a little circuit that i designed that could be used for a charging controller or voltage limiter. Its very

12 Types of Light Switches and How to Choose

Knowing the basic types of light switches and their functions makes it easy to choose the right one. Learn about the

Arduino Remote Control Light Switch: Code and Wiring Diagram

Arduino UnoIR ReceiverIR Remote ControlSingle Channel Relay ModuleSchematic DiagramCodeHere is the wiring diagram arduino remote control light switch. The red wire of the lamp is connected to the COM terminal and to NO terminal of the relay. The relay itself is powered using the 5V power of the Arduino. Signal pin of the relay is connected to the digital pin 6 of the Arduino. The IR receiver is connected to the digital pin 7 of the A...See more on itsourcecode Instructables

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This video will show you how to make a 12v light controlled switch circuit. Materials used:

Lighting Control Modules Explained: Features, Types,

What is a Lighting Control Module? A lighting control module is the “control center” for your

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If you are looking to add features to your home lighting, a dimmer light switch can provide the

Remote Controlled On-Off Switch Project

This tutorial will guide you through building a simple remote-controlled on-off switch that will

Contact Us

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