

# How to connect a relay to an optocoupler



## Article Overview

An optocoupler can be effectively used with a relay to provide electrical isolation between the control circuit and the relay circuit. Here are some methods to connect them:

- **Direct Connection:** You can connect the relay directly to the output pins of the optocoupler if the relay's coil current is within the optocoupler's maximum collector current .
- **Using Transistors:** For higher current requirements, you can use an external PNP or NPN transistor to drive the relay from the optocoupler output .
- **Opto-Isolation:** The optocoupler ensures that there is no direct electrical connection between the control circuit and the relay, protecting the control circuit from high voltages .

This setup is beneficial for applications where isolation is crucial, such as in switching high-power devices .



## Article Content

What is the purpose of the optocoupler in this circuit to drive the ...

This circuit appears to a modified version of other similar boards which have the option of an isolated relay power

Optocoupler Tutorial for Beginners

An optocoupler (or opto-isolator) is a component that transfer signals between circuits using light. In this guide, you'll

The Basics of Optocoupler Relay

An optocoupler relay is a type of relay that operates based on opto-isolation technology,

opto isolator

I have already done research on how to turn on a relay with an optocoupler but I am still confused on some aspects.

Relay Module and Optocouplers?

That relay module is made to connect directly to Arduino's 5volt, ground and a digital output. If for some reason you

Optocoupler Tutorial and Optocoupler Application

What is an Optocoupler? An optocoupler (also called an opto-isolator, photo-coupler, or optical isolator) is a solid

How Optocouplers Work

FREE COURSE!! Learn about optocouplers. We'll look at how they are used to control circuits, how they work and

using Optocouples as a Relay

Can we use optocoupler as a electrically controlled relay. I want to turn on another system (switching on a battery in

How to Use an Optocoupler to Pass Signals Between Controllers at ...

How to Use an Optocoupler to Pass Signals Between Controllers at Different Voltages: This tutorial makes use of the 4N25

How to Use One Channel Relay with Optocoupler: Pinouts, Specs,

Learn how to use the One Channel Relay with Optocoupler with detailed documentation, including pinouts, usage guides, and

opto isolator

I have looked at the schematics of a few 5V power relays and noticed different designs. Some use just a transistor to draw the higher

How to design a relay circuit for Arduino and ESP32

Circuit explanation In this relay circuit, we use an optocoupler (PC817x) to separate the high-voltage part of the circuit (relay part)

How to Use Relay with optocoupler: Examples, Pinouts,

Learn how to use the Relay with optocoupler with detailed documentation, including pinouts, usage guides,

Optocoupler Relay Driver with PC817 & 2N3904

In this tutorial, we have made two types of circuits. The first circuit will drive the relay through an optocoupler in the

How to control optocoupler and relay by using microcontroller

I have a question about controlling relays by using optocoupler. I have some optocouplers to isolate MCU's power and

How to make the connections to the 1 channel optocoupler relay

I want to light a bulb connected to the socket by using an 1 Channel Optocoupler Relay Module which accepts an input of 5V. From

Circuit for 12V relay with an optocoupler using 3V3 GPIO

Given that you have the microprocessor ground tied to the relay circuit ground, you don't need an optocoupler at all.

Driving relay directly from optocoupler, what is best?

Typical relay current driver circuit use an optocoupler connected to a transistor which then drives the relay. Since I'm

How to use this 12V Relay with Optocoupler?

My relay looks like this one but 12V: I have seen in other relays something like JVcc (or

How to Use MKE-M05 Optocoupler Relay Module: Pinouts, Specs,

Learn how to use the MKE-M05 Optocoupler Relay Module with detailed documentation, including pinouts, usage guides, and

Powering a 5V Relay from ESP32 using a PC187 optocoupler: how to

When connected this way the optocoupler activates based on the ESP32 output (the LED turns on and off) but no

opto isolator

Regarding my schematic: Originally I used relays because I knew they don't produce a voltage drop on the output.

Relay Module Optocoupler: Schematic and Working Explained

This article shares the Relay Module Optocoupler Schematic and Working principle. Cheap DIY relay module project

5V 2/4/8 Channel Relay Modules with Optocoupler

These relays are usually active low devices (meaning the relays are activated with low

opto isolator

Moreover, the relay itself will provide isolation. The relay will also need more coil current than the optocoupler can

Using Opto Couplers

The main purpose of an optocoupler interface is to completely isolate the input circuit from the output circuit, which normally means

How to Design Relay Module using Optocoupler || Relay Module

"In this video, you'll learn how to design a relay module using an optocoupler, perfect for isolating control circuits from

## Contact Us

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