

How to wire an optocoupler quick-connect module



Overview

This tutorial gives an introduction to the HY-M154 / 817 optocoupler module. Moreover, a simple application is programmed that shows how to wire and how to program an Arduino when working with the module. Optocouplers are very useful when you need to isolate different sections of a circuit, for example in power. PC817 is an optoisolator consists of an infrared diode and phototransistor. In electric circuits, we use mostly filters to remove noise. The circuit based on the capacitor and resistor always removes the noise from the incoming signal but the value capacitor and resistor always depend on the. There are many different applications for optocoupler circuits, so there are many different design requirements, but a basic design for an optocoupler providing isolation for example between two circuits, simply involves the choice of appropriate resistor values for the two resistors R1 and R2. Today in this tutorial we will see the interfacing optocoupler with Arduino (4N35 or MCT2E). But before that let's see what an optoisolator or optocoupler is?

Optocouplers or optical isolators are designed to electrically isolate one circuit from another.



Article Content

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Connect pin 1 on the optocoupler to Arduino pin 2 in series with a 220-ohm resistor (remember, you're powering an LED inside, you don't want to burn it out). Connect pin 2 of the

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What Is Optocoupler | Opto-coupler Working And

what is opto coupler Opto-coupler is an electronic component that is used to conduct the electrical signals from one circuit to another circuit without directly being

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How to Build an Optocoupler Circuit

In this project, we will show how to connect an optocoupler chip to a circuit. An optocoupler or optoisolator chip is a chip that allows for electrical isolation

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How to Use Optacoupler: Examples, Pinouts, and Specs

How to Use the Optocoupler in a Circuit Input Side (LED): Connect the anode to the positive voltage through a current-limiting resistor. Connect the cathode to the

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PC817 Optocoupler Module User Guide | Wiring & Setup

Complete PC817 optocoupler isolation module guide. Covers 3.6V–30V wiring, jumper settings, resistor selection, Arduino/ESP32/PLC hookup

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Optocoupler: Its Types and Various Application in

Applications of Optocoupler As discussed before few Optocoupler used in DC circuit and few Optocoupler used in AC related operations. As the

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Interfacing Optocoupler with Arduino

Today in this tutorial we will see the interfacing optocoupler with Arduino (4N35 or MCT2E). Optocoupler is also called an optoisolator. But before

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Optocouplers Guide: Understanding Types,

Learn how optocouplers ensure electrical isolation and signal transfer in circuits. This guide covers their components, working principles, and applications.

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Everything You Need to Know About Optocouplers in

Have you ever heard the word isolation, especially in electronics? As you might guess, isolation is a key factor when it comes to optocouplers. Isolation

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PC817 Adapter Module Optocoupler with Arduino

PC817 galvanic isolation module, how it works, diagram? How Optocouplers work - opto-isolator solid state relays phototransistor 4 channel level shifter/optocoupler from ICStation

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How an Optocoupler Works and Example Circuit

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Optocoupler Circuit Diagram

One of the most commonly used optocoupler circuit diagrams is the transistor output circuit. Here, the output of the optocoupler is connected to the

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Optocoupler Tutorial and Optocoupler Application

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

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PC817 Optocoupler pinout, working and Example with

In this pinout diagram of PC817, pin1 and pin2 are parts of the input side and pin3 – pin4 are output pins. Pin 1 is an anode pin of IR input within the Optocoupler. It

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How to Use an Optocoupler to Pass Signals Between

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

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How to Use 1CH Optocoupler PC817 1 Channel

1CH Optocoupler PC817 1 Channel Isolation Board Documentation Introduction The
PC817 1 Channel Isolation Board is a compact and versatile module designed to

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How to Connect and Configure the DC 3V-24V 4

Connecting the DC 3V-24V 4-Channel Optocoupler Isolation Module to Your System
Connecting the DC 3V-24V 4-Channel Optocoupler Isolation

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Connecting optocoupler to GPIO

PIN 2 and pin 3 are connected to the ground and PIN4 is connected to pull up (5V)
and to the arduino GPIO. My question is how big of a resistor (in

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Using an Optocoupler

So, how does it work? You can think of an optocoupler as a combination of an LED
and a phototransistor. To send a signal, the transmitting side power the internal LED,
just as you would

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Using Opto Couplers

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

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User's Guide: 12V 4-Channel Relay Module with Optocoupler

Overview This module allows microcontrollers to control high-voltage devices (AC or
DC) using opto-isolated relays. Each channel can be triggered by either HIGH or LOW
logic, selectable

Sep 12, 2025

Arduino Tutorial: HY-M154 / 817 / PC817 Optocoupler Module

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

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Optocoupler | Explore Our Workshop | Jameco Electronics

Understand what an optocoupler is and how it works at our electronics workshop at Jameco Electronics. Explore tutorials on how electronic components work today.

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Isolating Circuits From Your Arduino With Optocouplers

Isolating Circuits From Your Arduino With Optocouplers: A Optocoupler also called a photocoupler, optical isolator or opto-isolator is a small chip that transfers signals

Sep 06, 2025

How to Connect a Relay through an Opto-Coupler

In the following post I have explained how to drive a relay by using an isolated method, or through an optocoupler device. We will learn three methods,

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PC817 Optocoupler: Working, Pinout, Circuit,

This guide explains its working principle, pinout configuration, circuit connection, and real-world applications in automation and safety systems.

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