

Optocoupler Module Relay



Article Overview

An optocoupler relay module allows microcontrollers to safely control high-voltage or high-current devices by electrically isolating the control circuit from the load using an optocoupler.

Overview

An optocoupler relay module combines a relay with an optocoupler to provide electrical isolation between the low-voltage control side (e.g., Arduino, PIC, AVR, ARM) and the high-voltage load side. This prevents damage to sensitive microcontroller circuits while switching AC or DC loads safely .

Key Features

- **Voltage and Current Ratings:** Common modules operate at 5V for control and can switch loads up to AC 250V 10A or DC 30V 10A .
- **Channel Options:** Available in single-channel, dual-channel, 4-channel, or 8-channel configurations, allowing multiple devices to be controlled independently .
- **Triggering:** Modules can support high-level or low-level triggers, meaning the relay can be activated by applying a positive or zero voltage to the input pin .
- **Indicators:** Most modules include LED indicators to show relay status, enhancing safety during operation .
- **Compatibility:** Works with a wide range of microcontrollers and logic levels (1-5V), making them suitable for Arduino, Raspberry Pi, PIC, AVR, ARM, and PLC systems .

Applications

- **Home Automation:** Controlling lights, fans, and appliances remotely.

Article Content

How to Connect a Relay through an Opto-Coupler

The following concepts show how a relay driver can be configured with an optocoupler using transistors. As shown in the following

Relay Module and Optocouplers?

How to wire the relay input to be controlled with the optocoupler. but still being powered with 5v. I have literally tried

Interface relays and optocouplers

The interface relays and optocouplers are widely used in various industrial applications like linking the electronic controlling to the

Relay and Optocoupler Modules | WAGO

Explore WAGO's relay and optocoupler modules for efficient signal transmission and voltage minimization in various applications.

Relaismodule und Optokopplermodule | WAGO

Relais- und Optokoppler Ganz gleich, ob Relaissockel oder steckbare Relais- und Optokopplermodule – die vielfältigen

Contact Us

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