# Optocoupler Triggered Delay Disconnect Module

Article Overview

An optocoupler triggered delay disconnect module is an electronic relay module that isolates the control signal and delays the disconnection of a load after receiving a trigger signal.

Working Principle

This module uses an optocoupler to electrically isolate the input trigger from the output relay, providing strong anti-interference capability and protecting sensitive circuits ( ). When a trigger signal (high or low level) is applied, the internal LED of the optocoupler illuminates, activating the photo-transistor, which in turn drives the relay. The relay then switches the connected load, and after a preset delay, it disconnects automatically ( ). The delay time is adjustable, typically via a potentiometer or by modifying the RC (resistor-capacitor) network. The delay can range from a few seconds up to several minutes depending on the module design. For example, a common formula for delay is T = 1.1 x R x C, where R is resistance and C is capacitance ( ).

Key Specifications

o Operating Voltage: Usually 12V DC, though some modules support other voltages ( ).
o Load Capacity: Can control AC loads up to 250V/10A or DC loads up to 30V/10A ( ).
o Delay Range: Adjustable from 0-25 seconds for small modules, or up to 0-60 minutes for high-capacity modules ( ).
o Trigger Type: Compatible with high-level or low-level pulses, and can be triggered repeatedly ( ).
o Standby Power: Minimal or near-zero, extending battery life in automotive or low-power applications ( ).

Applications

o Automotive: Delayed turn-off for reversing radar, lights, or alarms ( ).
o Industrial Automation: PLC systems, actuator control, and process automation ( ).
o Smart Home & Security: Anti-theft alarms, lighting control, and timed device operation ( ).
o Electronics Development: Robotics, electronic experiments, and prototyping ( ).

Practical Considerations

o Ensure the relay coil resistance is sufficient (typically above 300 ohms) if connecting directly to the optocoupler to prevent overheating ( ).
o The module can be powered separately from the trigger source, allowing flexible integration into different systems ( ).
o Repeated triggering during the delay period will extend the delay, ensuring the load remains active until the

last trigger completes its timing cycle ( ). In summary, an optocoupler triggered delay disconnect module provides isolated, reliable, and adjustable delayed switching for various AC or DC loads, making it suitable for automotive, industrial, and smart home applications.

Successfully triggered after a delay of 0-25 seconds after disconnecting the relay. Note: if the trigger signal was there,

XY-DJ01 DC6-30V Digital Display One-way Relay Module Delay Power Off Disconnect Trigger Delay

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

The signal end of the module is designed with optocoupler isolation, strong anti-interference ability and can adapt to

Programmable delay disconnect with optocoupler isolation. Ideal for timing control in various applications. Direct current powered,

Time Controller Kit 12v description: One way relay module, time delay power cut off, trigger delay cycle

JK01-30A 12V 0-60Min Trigger Delay Optocoupler Isolation Multi-function Relay Module 30A Timer Relay with good quality and

In order to design a functionally robust and reliable application with optocouplers, it is essential to understand not only the device"s

DC 6V To 30V One Way Relay Module Robocraze DC 6V To 30V One Way Relay Module Relay module,

Optocoupler isolation for good interference resistance Activated by a low-level trigger and released by a high-level trigger. The status

Versatile 5pcs module designed for delay power off and disconnect trigger applications, perfect for various electronic projects. Wide

Optocouplers become an effective replacement for relays, and for transformers for interfacing digital circuits stages.

Features: - The delay length setting requires a soldering iron to be short-circuited according

# Optocoupler Triggered Delay Disconnect Module

How to implement a delay OPTOcoupler input there by the circuit remain on for the next 1 second Ask Question Asked 13 years, 3

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

Consequently, the dominant concern when dealing with standard optocoupler switching time response is the phototransistor. Even if

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