UNIT Relay Module Product Brief

This dual-channel relay module safely interfaces microcontrollers with higher-voltage or high-current loads by separating control from power.

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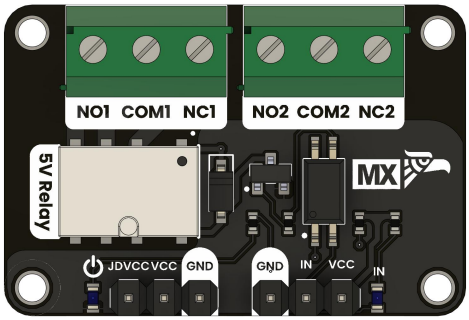
Introduction



This dual-channel relay module safely interfaces microcontrollers with higher-voltage or high-current loads by separating control from power. It features a dedicated 5V rail for the relay coils labeled JDVCC, while the logic supply labeled VCC matches the MCU's operating voltage of 3.3V or 5V. Digital control signals applied to the IN pin trigger an optocoupler that activates the relay contacts. These contacts include normally open, normally closed, and common, labeled NO, NC, and COM respectively.Indicator LEDs labeled LED PWR and LED IN provide visual confirmation of the power and control signal status.

Designed for reliable switching in demanding applications, this two-channel relay module isolates high-power relay operations from sensitive MCU logic. It delivers a consistent +5V to the relay coils via JDVCC, while the logic supply labeled VCC provides the appropriate voltage level needed for input signal processing. When a digital high is applied at the IN pin, the module's optocoupler engages to close the relay contacts among NO, NC, and COM as required. Additionally, the onboard LEDs signal the presence of power and active control, ensuring clear operational feedback.

Functional Description

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Electrical Characteristics

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Features

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Applications

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Settings

Interface Overview

Interface	Signals / Pins	Typical Use
-	-	-

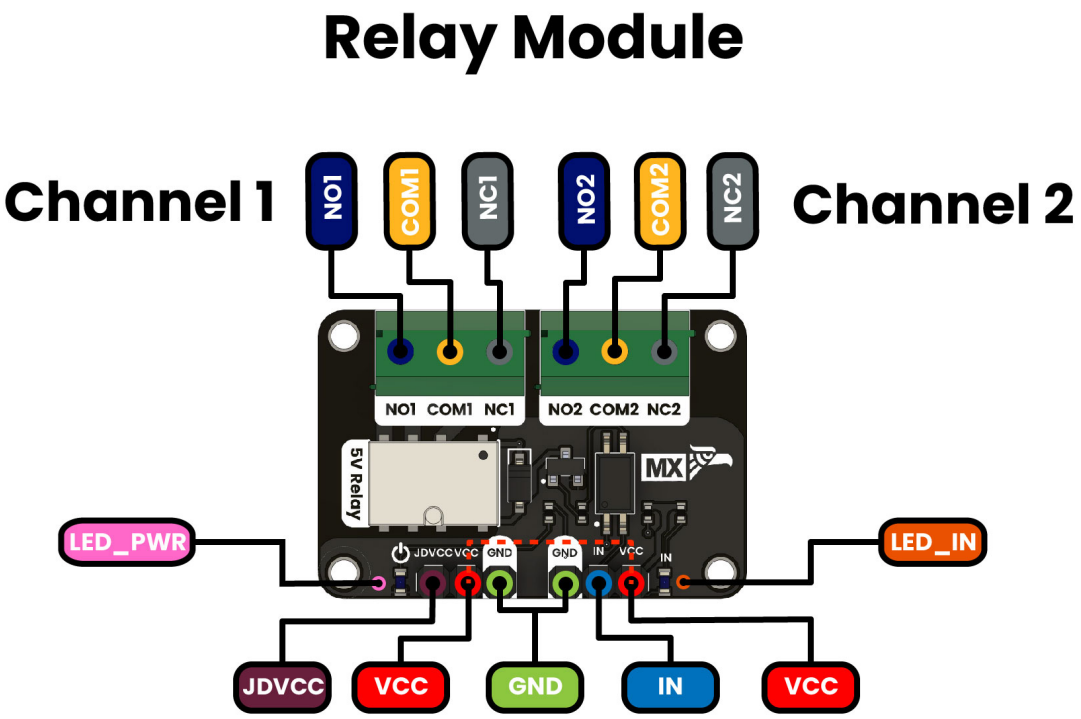
Supported Pins

Symbol	I/O	Description
-	-	Power supply (3.3V or 5V)

Pin & Connector Layout

Signal	Description
JDVCC	+5V supply to energize relay coils
VCC	MCU logic voltage (3.3V or 5V) for the optocoupler/driver circuit
IN	MCU input to activate relay channel 1
NO1	Relay 1 normally open contact
COM1	Relay 1 common terminal
NC1	Relay 1 normally closed contact
NO2	Relay 2 normally open contact
COM2	Relay 2 common terminal
NC2	Relay 2 normally closed contact
LED$_{PWR}$	Indicator LED for power (active when JDVCC is present)
LED$_{IN}$	Indicator LED showing active input from the MCU

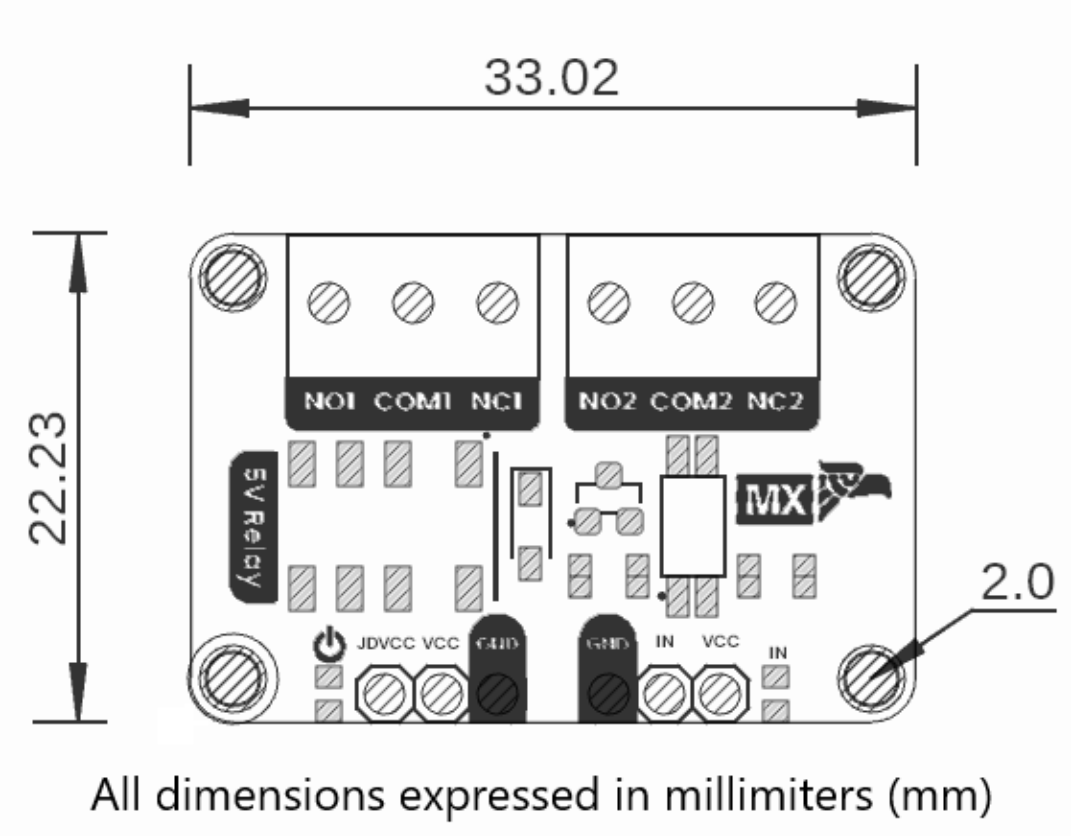
Block Diagram



JDVCC	Relay supply voltage +5V	NO	Normally open
IN	Input signal	NC	Normally closed
VCC	+3V3/5V	COM	Common

VCC depends on the microcontroller's supply voltage

Dimensions



Usage

- Arduino AVR
- Raspberry Pi RP2040
- STM32
- NRF
- PY32
- MAX II

Downloads

- Schematic PDF

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