![seeed WIKI]

# Grove - 2-Coil Latching Relay

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Introduction

This module is based on 2-Coil Latching Relay. Contrast to the ordinary relay, this latching relay does not need continuous power to keep the state, only a rising/falling pulse is needed to change the work state. Even the power can be removed when the work state do not need to change, making this module especially suitable for low-power projects.
Model: COM05061P ⧉
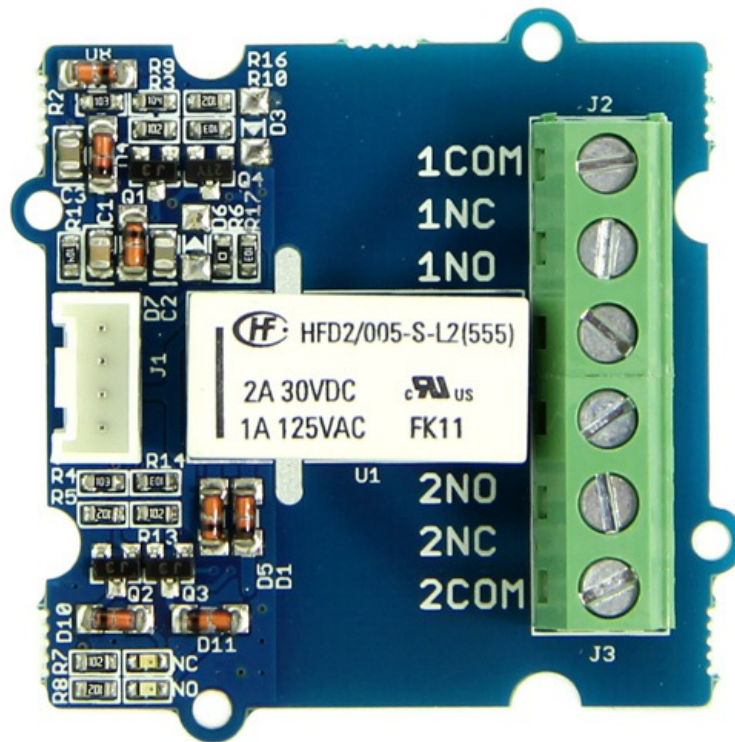
Feature

- Grove Connector
- Low power consumption
- Dual Switch

Specification

Item	Min	Typical	Max	Unit
Working Voltage	4.7	5.0	5.3	VDC
Set/Reset Voltage(Max)		4.0		VDC
Coil Resistance	151	167	183	Ω
Switching Voltage(Max)		35VAC/35VDC		/
Switching Current(Max)		3		A
Set Time(Latching)		4.5(max)		ms
Reset Time(Latching)		3.5(max)		ms

Usage

The latching relay only draws power during the changing of state. A rising/falling voltage pulse on the signal pin changes it's working state. This is very useful in situations where energy efficiency is important, and also in sitations where you need the relay to remember its state.

Let's begin to use it.

- Connect the module to D3 port of Grove - Base Shield.
- The relay hold in "set" status(Comm and NO connected) in default, when there is a rising edge on the SIG pin. It turns the "reset" state(Comm and NC connected). The reference code as show below:

```
#define LatchingRelay 3
void setup()
{
pinMode(LatchingRelay,OUTPUT);

digitalWrite(LatchingRelay,LOW);
delay(1000);
digitalWrite(LatchingRelay,HIGH);
delay(1000);

}
void loop()
{

}
```

- The relay hold in "reset" status(Comm and NC Connected), when there is a falling edge on the SIG pin. It turns the "set" state(Comm and NO connected). The reference code as show below:

```
#define LatchingRelay 3
void setup()
{
pinMode(LatchingRelay,OUTPUT);

digitalWrite(3,HIGH);
delay(1000);
digitalWrite(3,LOW);
delay(1000);
}
void loop()
{

}
```

- This module consumes little power when working state doesn't change. After setting the relay state, you do not need to supply power for the Latching Relay any more, which makes it especially low power consumption.

Note：

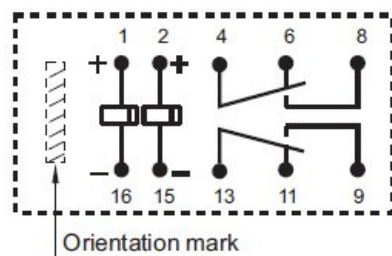1) Relay is on the "reset" status when being released from stock.

Diagram shows the "reset" position
Energize terminals 1 and 16 to "set"
Energize terminals 2 and 15 to "reset"

2) The two-way relay are controlled at the same time.
3) The NO(NC) indicator will flash once when switch to "set"("reset") status.

Resource

Grove - 2-Coil Latching Relay Eagle File 🗗
Latching_Relay_Datesheet 📄

Support

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