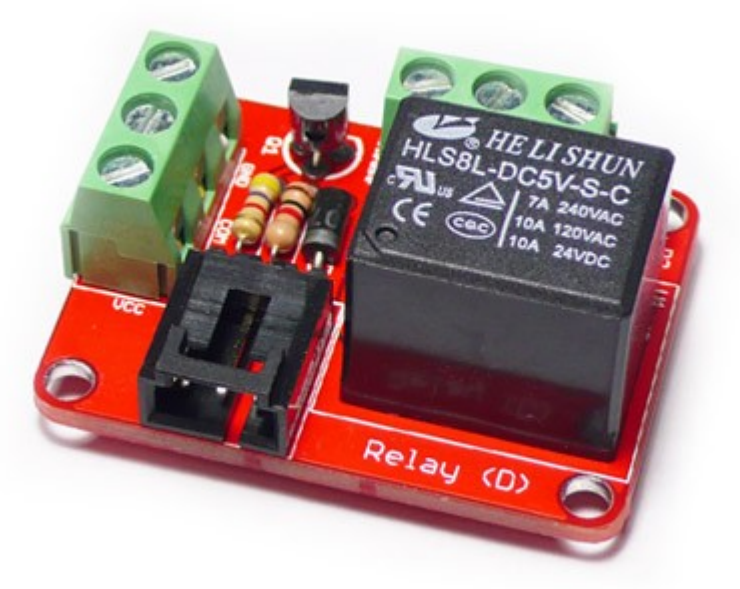
SEED TECHNOLOGY INC (SEEEDUINO)
Electronic brick - 5V Relay module (digital)
Model: ELB115E4M



This Brick uses an HLS8L relay module to control high-voltage electrical devices. (maximum 240VAC, 7A; 120VAC 10A; 24VDC 10A).

Working with the digital relay to control high voltage can be hard to understand. There are no instructions on how to make this perform with an ARDUINO. I created this so people will be able to use the relay with a standard 110 volt house outlet in either NO - NORMALLY OPEN or NC - NORMALLY CLOSED modes. As always working with high voltage is dangerous so be careful. If you do not understand how it works seek help from someone who knows how to make it work or DO NOT ATTEMPT THIS INSTRUCTABLE !!!!!!

UNDERSTANDING RELAY STATES:

You can configure your ARDUINO signal to be either "LOW" or "HIGH". It does make a difference as to how the RELAY controls the outlet in the "NO" or "NC" states. For this project all PINS on the ARDUINO will start out in the "LOW" state as the default. You need to determine how you need your "OUTPUT" PIN to be configured for your own projects. You need to understand this concept so you can configure your projects using this RELAY BRICK to be the most effective with the least amount danger possible.

NO - Normally Open

The RELAY can be **NO** (Normally Open) state . When outlet is pluged into a high voltage power supply the outlet is **HOT** (power to it and LED on outlet is on). The default mode at the ARDUINO is in the "LOW " state (RELAY LED light is off). When ARDUINO send a "HIGH" command to the RELAY (LED on RELAY turns on) all power is cut to the outlet (LED light on outlet will go out).

POWER LOST DURING USE:

When power goes out or power cord is unpluged there will be no power to the outlet or ARDUINO and all devices connect will not work.

RELAY "LOW" (LED on RELAY is off) and power is lost to the ARDUINO and RELAY outlet will remain **HOT.** What ever device is connected to the outlet will continue to run.

RELAY "HIGH" (LED on RELAY is on) and power is lost to the ARDUINO and RELAY the outlet will revert back to a **HOT** condition. What ever device is connected to the outlet will be turned on again.

NC - Normally Closed

The RELAY can be **NC** (Normally Closed) state . When outlet is pluged into a high voltage power supply the outlet has no power and is **OFF** (power to it and LED on outlet is off). The default mode at the ARDUINO is in the "LOW " state (RELAY LED light is off). When ARDUINO send a "HIGH" command to the RELAY (LED on RELAY turns on) power allowed to flow to the outlet (LED light on outlet will turn on).

POWER LOST DURING USE:
When power goes out or power cord is unpluged there will be no power to the outlet or ARDUINO and all devices connect will not work.

RELAY "LOW" (LED on RELAY is off) and power is lost to the ARDUINO and RELAY outlet will remain **OFF** (LED light on outlet is off) . What ever device is connected to the outlet it will continue to be off.

RELAY "HIGH" (LED on RELAY is on) and power is lost to the ARDUINO and RELAY the outlet will revert back to a **OFF** condition. What ever device is connected to the outlet will turn off as power to the outlet has been lost.

Know what you can drive with this RELAY:
current * voltage = power
This RELAY is rated for 10A at 120V
The RELAY can handle up to a 1,000W device.
It is not a good idea to run this RELAY at a full 1,000W demand. It is a better idea to stop at about 800W to be on the safe side.

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