

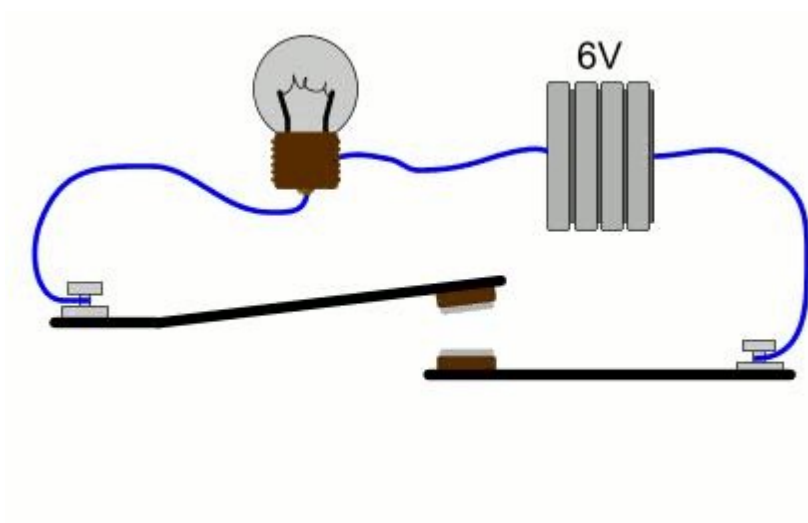
Low Voltage Relay Module



The Growtronix Low Voltage Relay Module is a versatile device that allows the Growtronix system to control many different low voltage devices. It's inputs accept a low voltage power supply and switches it on and off at the output. It can be used to control Solenoid Valves, Sirens, Sprinkler Valves, Contactors, HVAC systems, door lock actuators, strobe light, low voltage pumps, or just about any other low voltage device.

How does it work?

The LV Relay Module contains two relays internally that are each independently software controllable. There are two inputs and two outputs. Generally only one lead from the power supply is switched. A relay behaves much like a light switch in your home. It simply makes and breaks the electrical connection for a single lead of the power source.

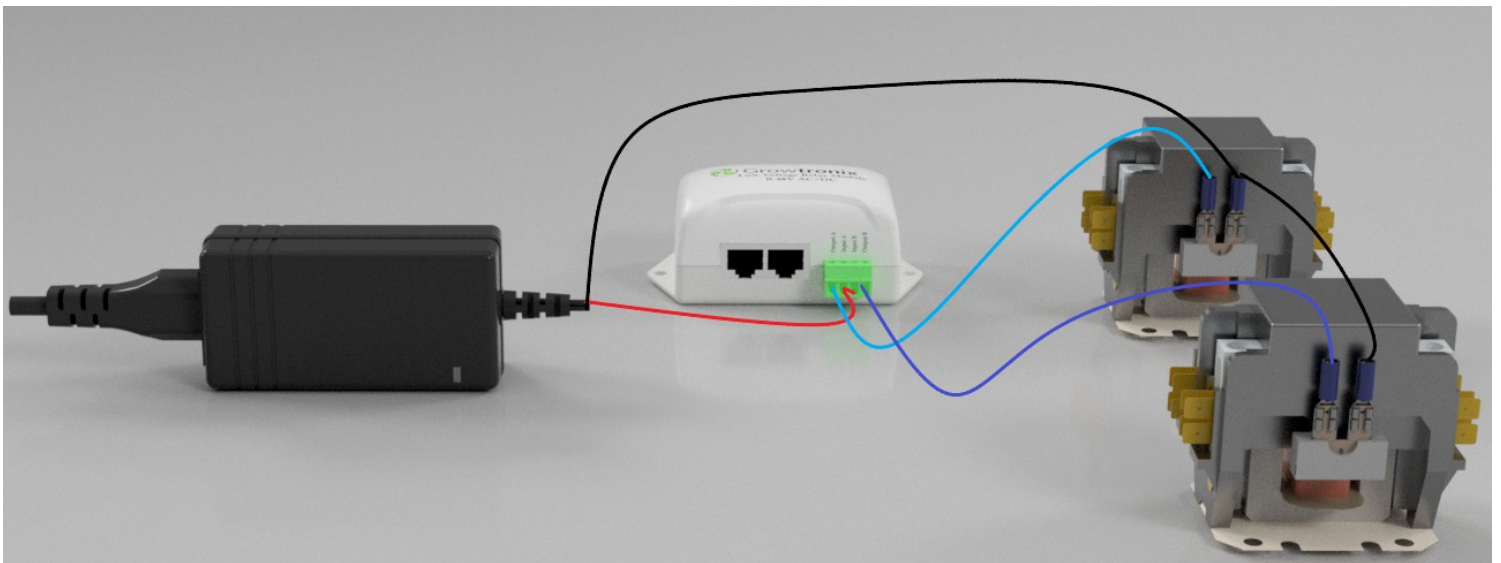


Hook Up Diagrams

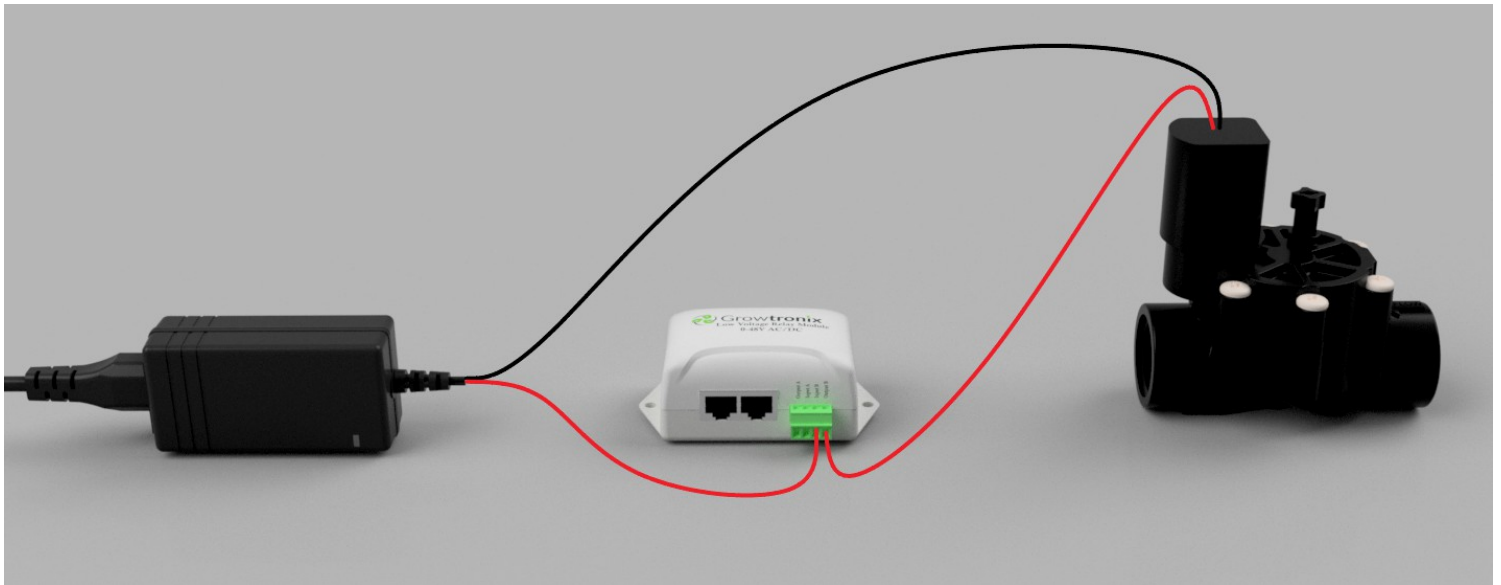
24V Contactor Control

The below set up consists of a 24V power supply that has one lead attached to both Input A and Input B. The other lead of the power source goes directly to both of the contactors. Output A then goes to one of the contactors remaining coil connector and Output B goes to the other contactors remaining coil connector. Contactors can be used to switch high voltage and high current devices.

For example a single contactor can control a bank of many HID lights.



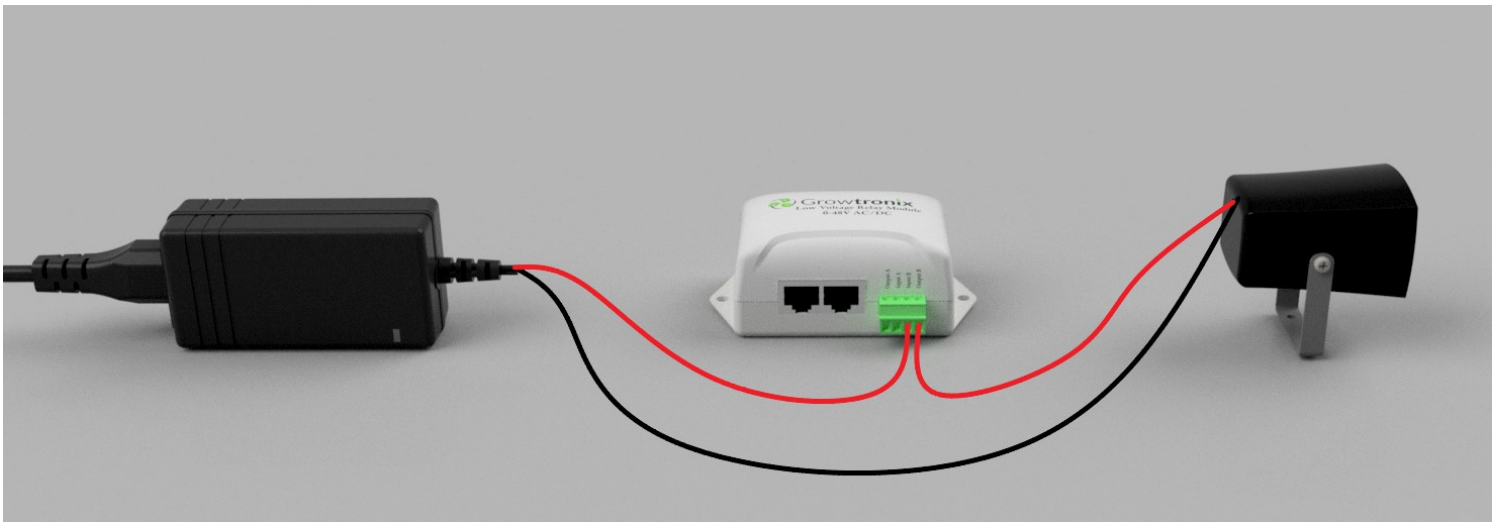
AC/DC Solenoid Valve Control



Growtronix Low Voltage (LV) Relay Modules can be used to control solenoid valves. For example a typical 24 VAC Sprinkler Valve can be controlled. In the above diagram one lead of the 24 VAC supply goes directly to the solenoid valve. The other lead from the power supply goes to Input B on the LV relay module. Output B from the module then connects to the remaining connection on the solenoid valve.

With the above example, we could bridge input B to input A and attach another solenoid in the same way to Output A. Alternatively we could put a different power supply onto Input A and control another device separately.

DC Siren Control



The LV Relay Module can be used to control most low voltage equipment. Here is a diagram showing the control of a 12 VDC siren. It illustrates how just about any low voltage device can be controlled using the LV Relay Module. Ventilation dampers, CO2 burners and solenoid valves, Ventilation shutters and most other low voltage devices that operate when power is applied (doesn't have a digital controller that needs the user to push a button etc. for it to function).

HVAC Control

The Low Voltage Relay Module can be used to control an HVAC system. Essentially they can replace a typical thermostat. There are many different wiring schemes in use for HVAC systems. A common setup is displayed in the below diagram. The red wire is typically the 24 VAC supply. The yellow wire is typically the cooling and the white wire is typically heating. Many times there are additional wires for added functionality for example the green wire usually controls the Fan. An additional LV relay module would be needed if the additional functionality is required. We will do a more in depth article on controlling different types of HVAC systems in the future.

