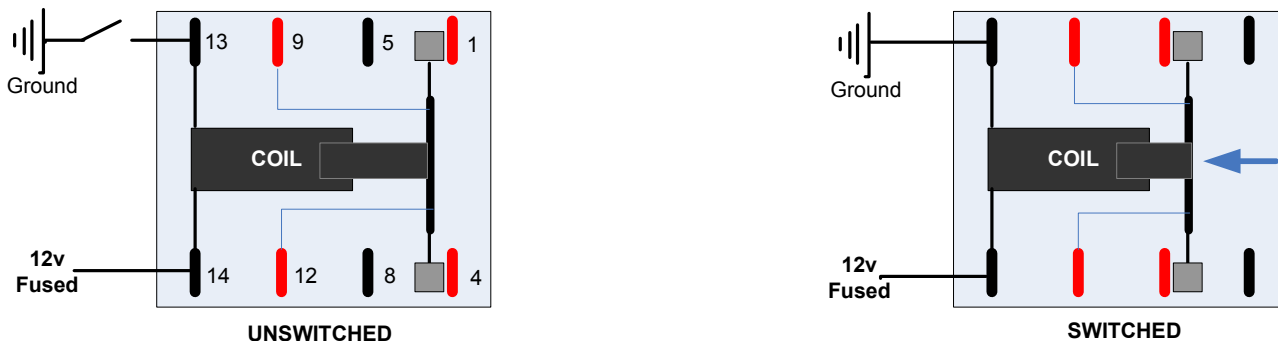


D.Y.I. Immobilizer – Theft Deterrent Wiring – Relays Explained

Before attempting to wire the D.Y.I Immobilizer Theft Deterrent, you need to understand the components that will be used and how they work. We will start with the toughest of the components to understand and finish with the simplest. If you can't fully understand how the DPDT (Double Pole / Double Throw) relay works, then do not move on until you do.

DPDT (DOUBLE POLE / DOUBLE THROW)



There are a total of 8 connections on this relay.

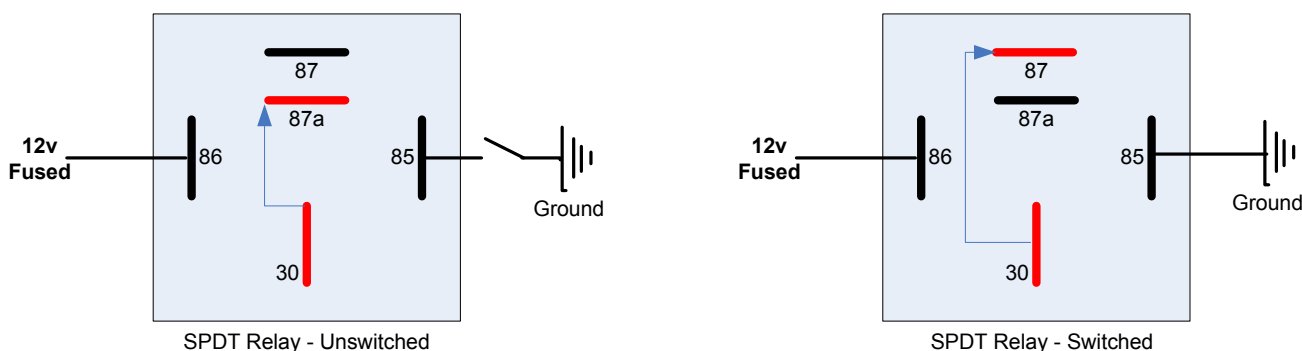
The first two connections (13 & 14) are used for the latching action of the relay and are directly connected to the relay coil.

The second two connectors (9 & 12) are internally wired to the relay contacts – when the relay is latched, both contacts will pull-in changing the output from the forth set of contacts (1 & 4) to the third set (5 & 8). (The inputs are independent of each other. You could have 12 volts on one side and a ground on the other if needed.)

The last four connectors are for your outputs and will change during the switched / un-switched state.

Hint: Imagine the relays above with a dotted horizontal line thru the center of the relay. Each side is independent of each other.

SPDT (SINGLE POLE / DOUBLE THROW)



Now for an easier to understand relay, the SPDT (Single Pole / Double Throw) relay. This is the relay that will carry the load. You want to purchase a 30/40 amp relay to make sure that your relay can carry the load thru posts 30 & 87.

The switching (latching) is performed by sending a + and – on either side of the coil as noted on posts 86 and 85. In an un-latched state, the path is from posts 30 and 87a. When latched (or switched), the path changes to 30 and 87. Simple, right?

Hint: Normally you would use a relay to pass voltage or a ground from post 30 to post 87 when switched (control a fan, fuel pump, etc.) You can change to output to a device by having a ground on post 87a and voltage on 87 (used for power windows, liner actuators, etc.)

Automotive Rewire does not warrant or guarantee this installation. It is the responsibility of the installer / owner to test functionality and assumes all responsibility.

D.Y.I. Immobilizer – Theft Deterrent Wiring – Relays Explained

Now that you fully understand how the DPDT and SPDT relays work, it is time to look at the reed switch and the momentary switch.

REED SWITCH



The reed switch is simply a switch that changes poles when a magnet is held close to it. This is the same switch that you would find on alarm systems at doors and windows.

You will want to make your connections on the **COMM** (Common) and the **NC** (Normally Closed) connections. When a magnet is held close to the switch, the reed will switch from the **NO** (Normally Open) connection to the **NC** (Normally Closed) connection.

Hint: Are you confused why you would want to make your connection on the NC side of the switch? You may not be confused now, but you will when you start to wire your immobilizer. These switches are normally used where a magnetic field is always present. This is considered the normal state of the switch (where a magnet is always present). Always check continuity before wiring the switch. You want the circuit to have continuity when your magnet is placed next to the reed switch.

MOMENTARY SWITCH - NORMALLY CLOSED



The normally closed momentary switch will be used to momentarily break a circuit when the switch is pushed. Very simple to understand in that the switch will always complete a circuit until manually pushed by you. As long as you keep the button pushed, the circuit will be broken. When you release the button, the circuit will close.

Hint: Make sure that you purchase a NORMALLY CLOSED momentary switch!

Now that you fully understand the switches and relays that are used in the immobilizer, you are ready to get wired!