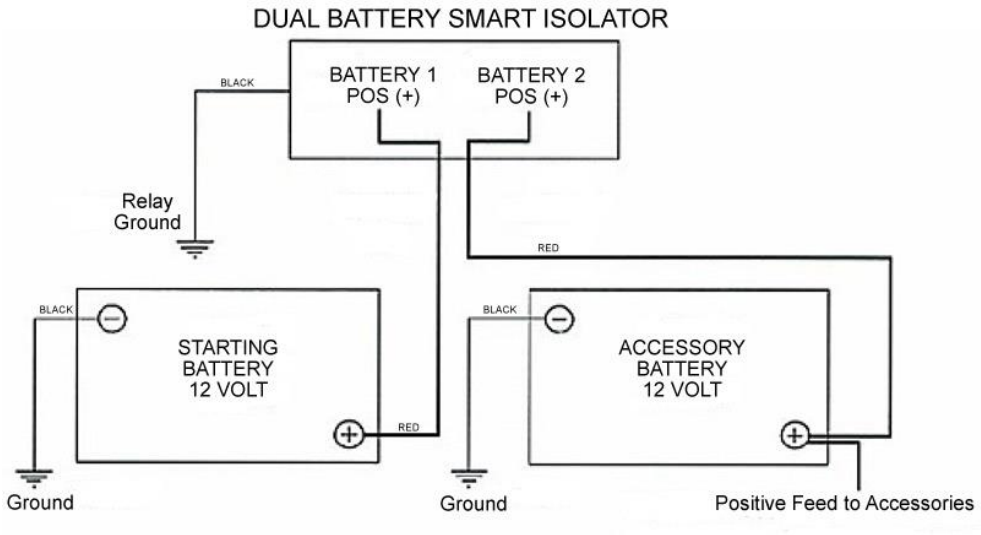
Smart Battery Isolator

The smart battery isolator allows two batteries to be charged at the same time. When the engine is started and either battery reaches 13.4 volts, the relay engages (blue LED on), allowing two battery banks (start and accessory) to be charged simultaneously. When the voltage drops below 12.9 volts (eg the engine is stopped), the relay disengages (blue LED off), separating the batteries. This system eliminates the possibility of draining the start battery and protects sensitive electronic equipment powered with the accessory battery from harmful engine start up spikes.

Wiring Diagram



Wiring the relay:

1. The black wire coiled inside the relay needs terminated to a good ground location using the included blue crimp connector. This wire is simply used as a ground for activating the relay.

2. One terminal on the relay should be connected to the positive terminal of the primary starting battery using 6ga red wire. A ¼" (6mm) crimp connector should be used to attach the wire to the relay side and another crimp connector will attach the cable to a battery terminal.

Handy Tip: The side of the relay casing has break away tabs for the wires to pass thru.

3. The second terminal on the relay should be connected to the positive side of the second battery using 6ga red wire in the same manner as above.

4. Black 6ga wire should be used to ground the second battery. Remember, your ground points are very important! Make sure you are grounding to a good, clean, solid metal surface.

Specifications:

- DC Power: 12V
- Continuous Current Rate: 140A
- Intermittent Current Rate: 170A
- Back-up Current at 12.5V: <=13.0mA
- Ignition Protection: UL1107/UL1500
- Operation Temperature Range: -30°C to 105°C (-22°F to 221°F)

Common Questions and Answers

Q: What is the purpose of the blue LED inside of the isolator?

A: The blue LED being lit indicates the isolator has connected both battery banks together for charging. This will happen when the voltage at the isolator reaches 13.4 volts.
Once the charging source has been removed the isolator will separate the battery banks and turn off the blue LED.
*Note: In some configurations it may take up to 15 minutes for the blue LED to turn off after the charging source has been removed. This is normal and does not indicate an issue.

Q: What size cable should I use to wire the isolator?

A: Most installations should use 6 gauge copper wire from the isolator to each of the battery banks. Keep in mind that only charging current is passing through these cables, not your accessory load. Should you have a specialty installation or long distance between the batteries (20ft+) then please contact us at support@jaycorptech.com for installation advice.

Q: What size / crimp terminals should be used on the relay?

A: We recommend using ¼" (6mm) crimp ring terminals for the isolator side connections.

Q: Can I connect multiple batteries to each side of the isolator?

A: Yes, each battery bank can consist of one or multiple batteries as long as your net voltage is 12 volts.

Q: What is the spade connector for under the back cover of the isolator?

A: The spade connector is an override for the isolator engagement. Applying +12VDC to this connector will cause the isolator to disengage. This is for special use applications and is generally not used.