

## SPD-482000BLDC-B 48-72 Volt DC 1500-2000 Watt Brushless DC Motor Controller

**Battery Pack Compatibility:** Compatible with 48 Volt, 60 Volt, and 72 Volt Battery Packs

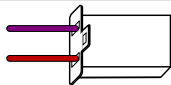
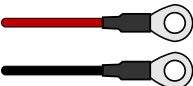
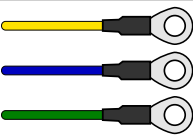
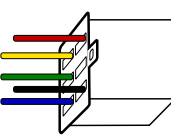
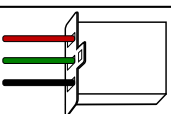
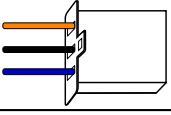
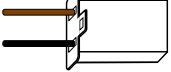
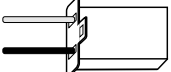
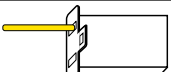
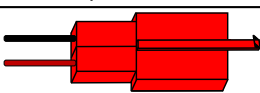
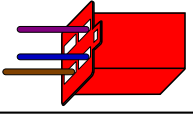


**Motor Compatibility:** Recommended for Brushless DC Motors Between 1500 and 2000 Watts

**Current Limit:** 45 Amps (45 Amps Maximum Current Output)

**Low Voltage Protection:** 40 ± 0.5 Volts

**Sensor Information:** Works only with Sensored Brushless DC Motors

**Phase Information:** Compatible with 120 Degree and 60 Degree Motor Phases

Power Switch Wires		Purple to Power Switch Contact Red to Power Switch Contact
Input Power Wires		Red Wire to Battery Positive + Black Wire to Battery Negative -
Motor Phase Wires		Yellow to Yellow Motor Phase Wire Blue to Blue Motor Phase Wire Green to Green Motor Phase Wire
Motor Hall Sensor Wires		Red to Red Motor Hall Wire +5V Black to Black Motor Hall Wire Ground Yellow to Yellow Motor Hall Wire Green to Green Motor Hall Wire Blue to Blue Motor Hall Wire
Throttle Wires		Red +5 Volt Output Green 1-4 Volt Signal Input Black Ground
† 3 Speed Control Wires		Orange to Black for Low Speed Black to No Wire for Medium Speed Blue to Black for High Speed
† Reverse Wires		Brown to Reverse Switch Contact Black to Reverse Switch Contact
† ~ Switch E-Brake Wires		White to Brake Switch Contact Black to Brake Switch Contact
† ~ Voltage E-Brake Wire		Yellow to +12 Volt Brake Signal
† Alarm Power Wires		Black to Alarm Positive - Input Red to Alarm Positive + Input
† Alarm Signal Wires		Purple to Vehicle Power On Signal Blue to Motor Disable Signal Brown to Alarm Power On Signal
† Speedometer Wire		Yellow/Green to Speedometer
† Regen Braking Wires		Connect Together for Regen Braking or Leave Disconnected for No Regen Braking

† Optional Connections: These wires do not need to be connected for the controller to operate.

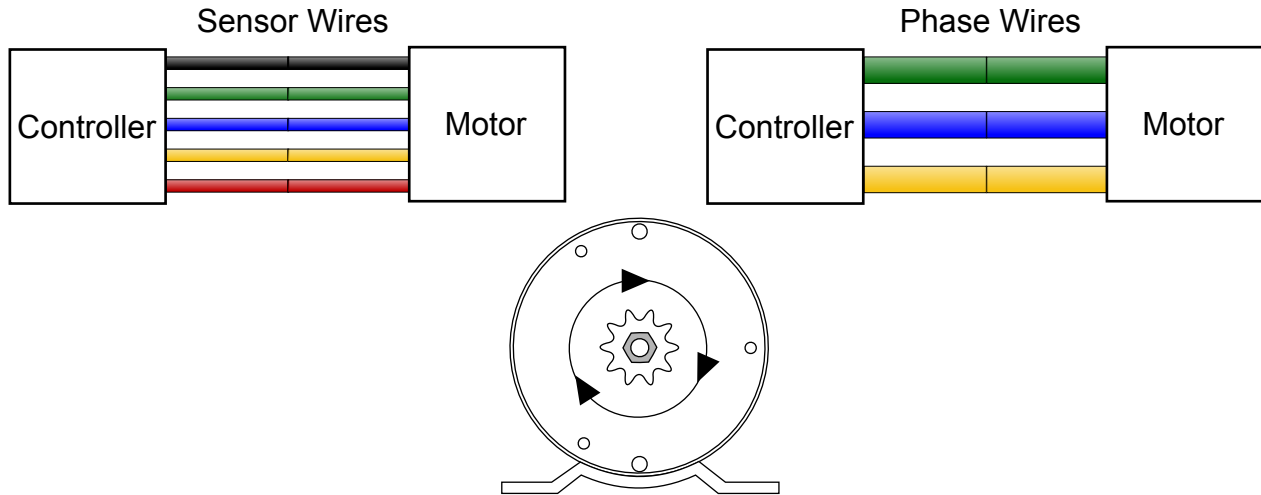
~ Use either the Switch E-Brake Wires connector or the Voltage E-Brake Wire connector. Do not use both.

## Wiring the Motor for Clockwise or Counterclockwise Rotation

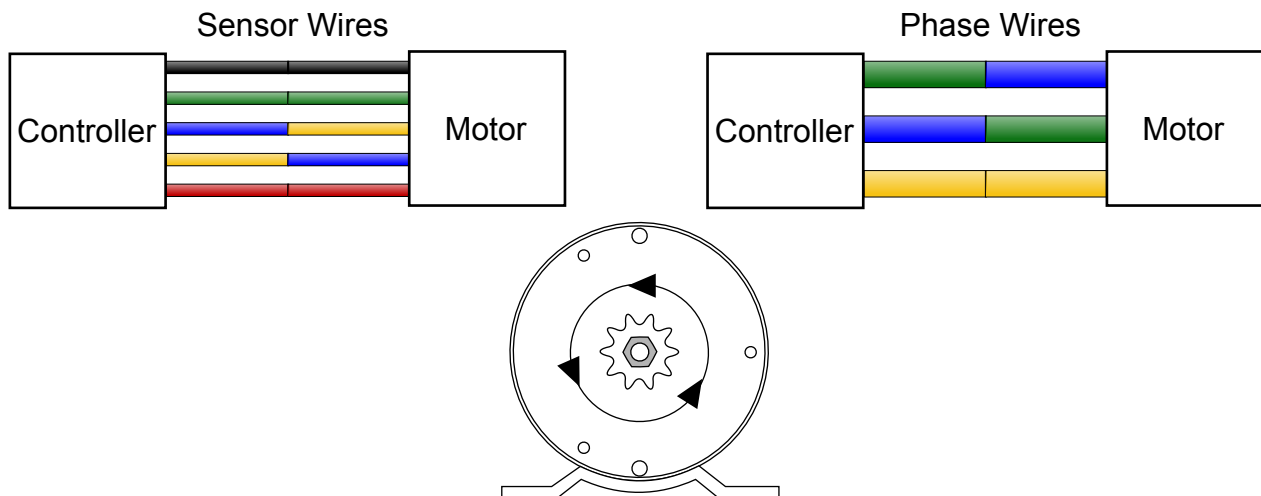
The motor can be wired so it runs in the clockwise or counterclockwise direction.

### Wiring Directions

#### Clockwise Direction



#### Counterclockwise Direction



**Warning:** Never change the positions of the red and black sensor wires. Red must always go to red and black must always go to black otherwise damage to the motor will occur.

## **Installation Notes**

### **Switch and Voltage E-Brake Wires**

- 1.** The Switch and Voltage E-Brake Wires are optional to connect to and the controller will operate normally with nothing connected to them.
- 2.** The E-Brake is designed to help slow the vehicle down, however, not to bring it to a full stop. Mechanical brakes must be used in conjunction with the E-Brake if the E-Brake is used. The E-Brake will be stronger on 48 Volt vehicles than it will on 60 and 72 Volt vehicles which is the nature of multi-Voltage brushless motor controllers.
- 3.** The Switch E-Brake Wires connect to a normally open SPST brake switch.
- 4.** The Voltage E-Brake Wire connect to a +12 Volt DC brake light wire.
- 5.** The E-Brake connectors are optional to use, however, if they are used then use either one or the other, and do not use both of them at the same time.

### **Reverse, Regen Braking, and 3 Speed Control Wires**

- 1.** The Reverse, Regen Braking, and 3 Speed Control Wires are optional to connect to and the controller will operate normally with nothing connected to them.
- 2.** The Reverse Wires connect to a 2 position On-Off maintained contact SPST switch.
- 3.** The regen braking connectors may be plugged together to enable regenerative electronic braking.
- 4.** The 3 Speed Control Wires connect to a 3 position On-Off-On maintained contact SPDT switch.