

# Wiring Directions

**Part Number:** SPD-48500BRUSHLESS

**Model:** 48 Volt 500 Watt Brushless Motor Controller

**Type:** Sensor/Sensorless 120 degree / 60 degree

## Parameters:

Voltage: 48 Volts DC

Power: 500 Watts

Current Limit: 30 Amps

Low Voltage Protection: 42 Volts

## Wiring Specifications:

<b>Power</b>	Thick Red > +48V DC		<b>Brake (low)</b>	White > Signal Low
	Thick Black > Ground			Black > Ground
	Thin Purple > Power On/Off		<b>Brake (high)</b>	Single Yellow > Signal High
<b>Motor</b>	Phase (thick)	Yellow > U		<b>Cruise Control</b>
		Blue > V	Black > Ground	
		Green > W		
	Sensor (thin)	Red > +5V	<b>Three Speed</b>	Orange > Speed 1
		Black > Ground		Black > Ground
		Yellow > U		Blue > Speed 2
		Green > V	<b>Speedometer</b>	Single Yellow & Green > S+
Blue > W		<b>Reverse</b>		Brown > Reverse Signal
<b>Throttle (White Connector)</b>	Red > +5V		Black > Ground	
	Green > Send		<b>Battery Indicator</b>	Single Purple > + 48V
	Black > Ground			Common Black > Ground
<b>PAS (Black Connector)</b>	Red > +5V		<b>Speed Limiter</b>	Thin Orange + Thin Orange
	Green > ZL			
	Black > Ground			

### Notes:

- 1: Connect Power Thin Purple wire to Power Thick Red wire to turn controller on, disconnect to turn power off.
- 2: Common Black > Ground wires should be bridged to the Power Thick Black > Ground wire.
- 3: Only the Power, Motor, and Throttle connections are required for operation. All other connections are optional.