BOALT-ResWire Installation Guideline

The BOSCH charging system requires a functioning generator indicator lamp for the alternator to work. The charging system will not create current if you remove the original instrument cluster. The solution is to mimic the function of the bulb with a 330Ω to 470Ω resistor installed in-line from a KEY ON power source to the BLUE DF circuit of the alternator. This can be achieved in a number of ways depending on your particular model and configuration.

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Custom Motorcycles

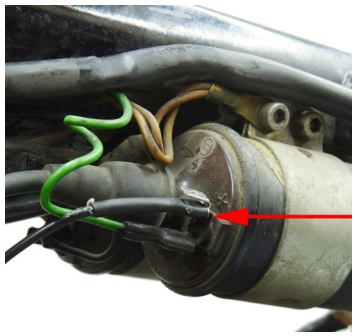
If you are using an electrical hub such as the R21 or M-Unit, or even wiring everything from scratch, the installation will consist of two points of contact.

1. Connect the GREEN end of the resistor wire to any key ON power source such as engine/ignition/coil power out from your electrical hub, or from the coil positive terminal, as this is often a convenient location to source key ON battery voltage.
2. Connect the BLUE end into the DF circuit of the alternator. This can be into the front engine harness if retained, or even directly into the stock diode board, as there is a spare and open DF terminal on all Airheads.

The resistor wire is non directional as a resistor works in either direction and has no polarity. Staying true to BMW wire colors, GREEN is used for KEY ON POWER and BLUE is for DF Field Power for the alternator to create a magnetic field so the alternator will work.

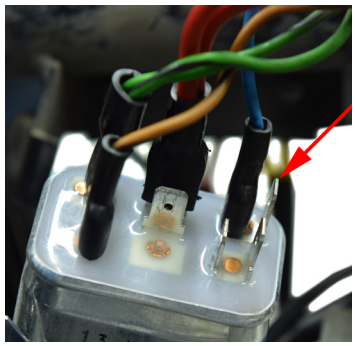
ALL /5 and /6 Models

Connect the GREEN end to the coil POSITIVE. *There will already be a GREEN wire there from the main chassis harness.*



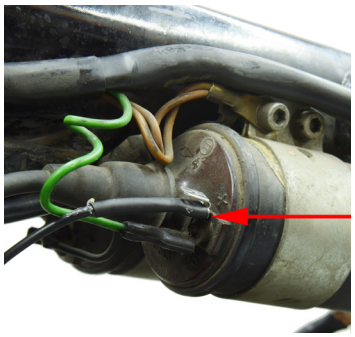
On the starter relay, unplug the BLUE wire coming from the chassis harness and leave disconnected.

In it's place plug in the BLUE end of the resistor wire into the same terminal on the starter relay.

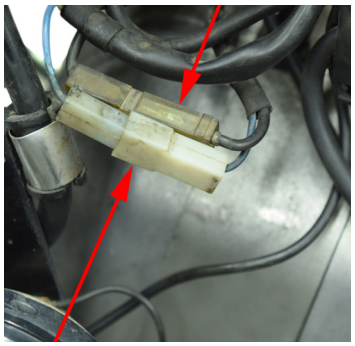


Airhead Models up to 09/1978

Connect the GREEN end to the coil POSITIVE. *There will already be a GREEN wire there from the main chassis harness.*



Identify the white connectors between the chassis harness and the front engine harness.

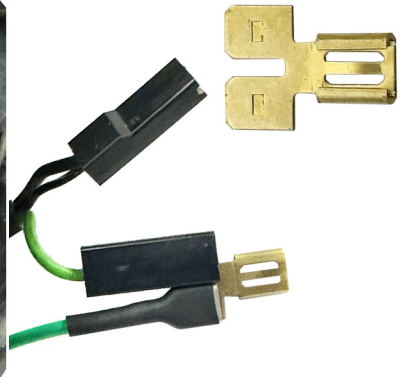


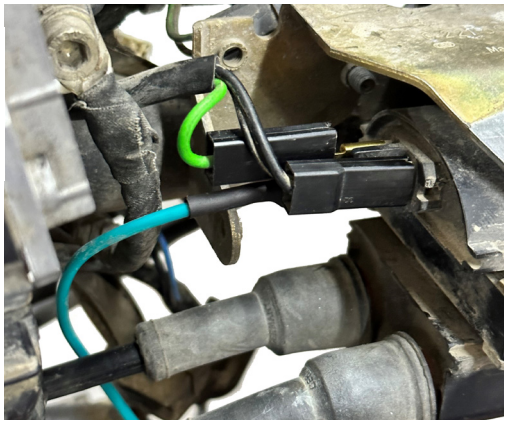
These wires are BLACK (*Starter circuit*) and BLUE (*charging circuit*). Unplug the BLUE wire from the chassis harness and leave disconnected. Plug the BLUE side of the resistor wire in its place into the white plug with BLUE wire from the front engine harness.

Airhead Models AFTER 09/1978

There are a couple of options for the bypass wire on this wiring configuration. Ultimately we still need to connect to a GREEN key ON power source and deliver this voltage through the resistor to the BLUE DF circuit.

Connect the GREEN end of the resistor wire to the coil POSITIVE with the included splitter

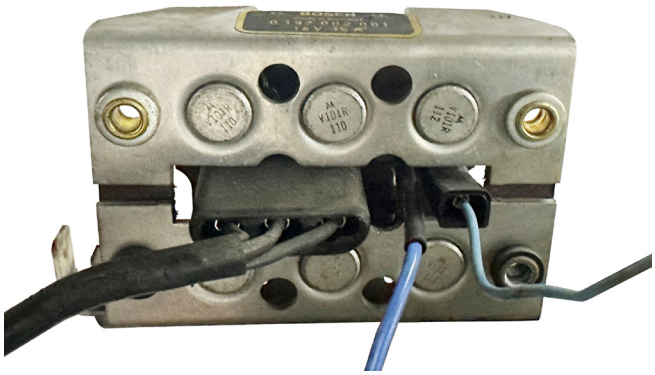




The BLUE end can be connected in one of two possible locations.

An easy solution is to route the wire through the top of the engine and connect the female spade terminal directly to the diode board DF terminal.

You can disconnect the existing BLUE wire leaving it unconnected and replace it with the new BLUE wire from the resistor wire, or use the remaining open DF terminal on the diode board as shown here.



Another option is to identify the 2 wire white connector between the chassis harness and the front engine harness with BLACK and BLUE wires. This is located under the tank on the left side opposite the coils.

The BLACK engages the starter when the start button is pressed on the handlebar. BLUE connects to the generator light, and the DF circuit we are going to connect to.

You can tap into this wire using an appropriate wire tap. Or you can unplug this connector, change the terminal from a Female to a Male spade terminal on the BLUE side of the resistor wire and plug into the front engine harness BLUE wire terminal. The BLACK wire will need to be re-established from the chassis harness to the front engine harness with a jumper wire (not provided) to maintain starter function.