

THE POWER OF

REDARC®

50A Vehicle Battery Wiring Kit

Designed for connections to vehicle ignition
(if required) and to the vehicle battery

MODELS:

- **BATWK-001**
- **BATWK-002**

WARNINGS AND SAFETY INFORMATION

SAVE THESE INSTRUCTIONS — This manual contains important safety instructions. Do not install the Wiring Kit unless you have read and understood this manual. REDARC recommends that the devices referenced in this manual be installed by a suitably qualified person.

Disclaimer: REDARC accepts no liability for any injury, loss or property damage which may occur from the improper or unsafe installation or use of its products.

SAFETY MESSAGE CONVENTIONS

Safety messages in this manual contain a signal word that indicates the level of the hazard, as follows:

▲ WARNING: Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury to the operator or to bystanders.

▲ CAUTION: Indicates a potentially hazardous situation which may result in moderate or minor injury to the operator or to bystanders.

NOTICE: Indicates a situation that may cause equipment damage.

▲ WARNING

- Do not install Wiring Kit when the vehicle ignition is on. There is a risk of personal injury and damage to the vehicle and auxiliary battery.
- NEVER smoke or allow a spark or flame in vicinity of battery or engine. This can cause the battery to explode.
- Ensure the vehicle is turned off, is prevented from moving and the start battery is disconnected before commencing any installation. If not, there is a risk of personal injury, damage to the vehicle and or parts being fitted.

▲ CAUTION

- The Wiring Kit should not be used or installed by persons (including children) with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless they are supervised or have been instructed on how to use the equipment by a suitably qualified person. Children should be supervised to ensure that they do not play with the equipment.
- Do not alter or disassemble the Wiring Kit under any circumstances. Any faulty units must be returned to REDARC for repair. Incorrect handling or reassembly may result in a risk of electric shock or fire and may void the warranty.

PERSONAL PROTECTIVE EQUIPMENT

To assist with the safe operation and use of the Wiring Kit:

- Wear complete eye protection and clothing protection. Avoid touching eyes while working near a battery.
- If battery acid contacts your skin or clothing, remove the affected clothing and wash the affected area of your skin immediately with soap and water. If battery acid enters your eye, immediately flood the eye with running cold water for at least 10 minutes and seek medical assistance immediately.



WARRANTY

For full warranty terms and conditions, visit the Warranty page of the REDARC website: www.redarcelectronics.com/warranty

Australia, New Zealand, UK & Europe

REDARC Electronics Pty Ltd, 23 Brodie Road (North), Lonsdale SA 5160, Australia

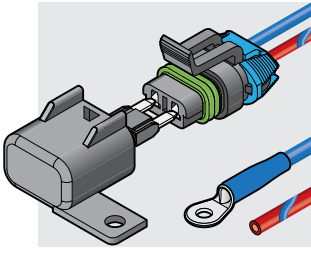
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New Zealand +64 9 222 1024
UK & Europe +44 (0)20 3930 8109

North America

REDARC Corporation, c/o Shalco, Inc., 308 Component Dr., Smithfield, NC 27577, USA

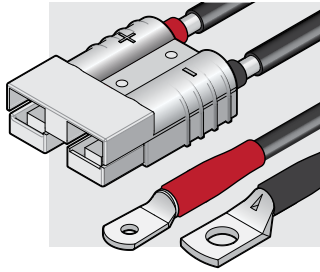
USA +1 (704) 247 5150
Canada +1 (604) 260 5512
Mexico +52 (558) 526 2898

KIT CONTENTS

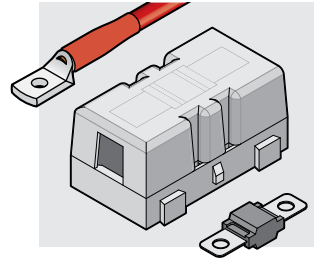


Ignition Cable

Supplied with 1 Blue cable,
1 Red/Blue cable and 2A Blade Fuse



**Anderson™ to M8 Battery
Terminal Cable**



Fuse Kit

Supplied assembled with one 70A
MIDI Fuse with Holder and a Short
Red cable

See "**Specifications**" for exact lengths of the cables, type of fuses and quantity of cable ties supplied with each Wiring Kit.

BEFORE USING THE WIRING KIT

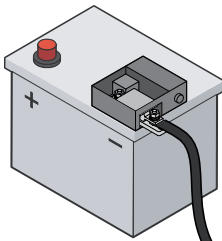
Refer to the Instruction Manual provided with any REDARC devices in your setup for important system requirements and installation instructions needed before and after using the Wiring Kit.

IGNITION CABLE REQUIREMENTS

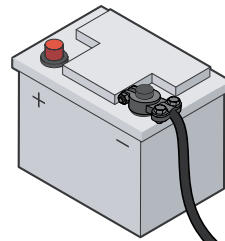
The **Ignition** cable connection allows the connected REDARC Battery Charger to start or stop charging the auxiliary battery from the vehicle battery. This connection is only required for vehicles with **smart alternators**.

To identify if your vehicle has a **smart alternator** check for a battery sensor on the vehicle battery as illustrated below or refer to your vehicle dealer.

Vehicles with **standard alternators** do not require the **Ignition** Cable.



Smart Alternator



Standard Alternator

TYPES OF SMART ALTERNATORS

Identify the type of **smart alternator** your vehicle has based on how the engine behaves when the vehicle is stationary. This determines the ignition connection point for the **Ignition** cable.

- **Continuous Idle Vehicles** — the engine keeps running when the vehicle is stationary.
- **Idle Stop Vehicles** — the engine automatically shuts off when the vehicle is stationary.

SMART ALTERNATOR IGNITION CONNECTION

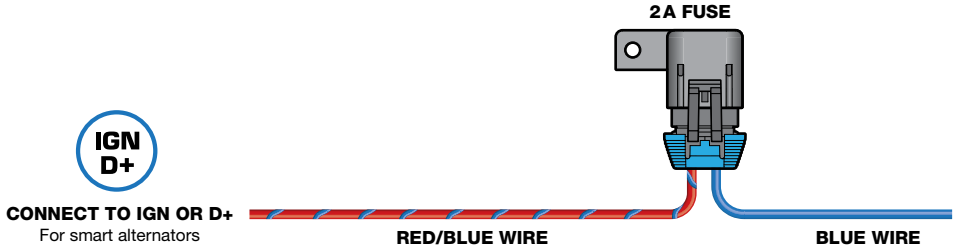
Depending on the type of smart alternator your vehicle has, connect the **Red/Blue** wire to the following:

CONTINUOUS IDLE VEHICLES

Connect to **IGN** (ignition) by connecting the **Red/Blue** wire to an ignition-switched fuse in one of the vehicle's fuse boxes, located in either the engine compartment or vehicle cabin.

IDLE STOP VEHICLES

Connect the **Red/Blue** wire to the designated **D+** terminal or pin located in near the vehicle alternator.



BATTERY CHARGER IGNITION CONNECTION

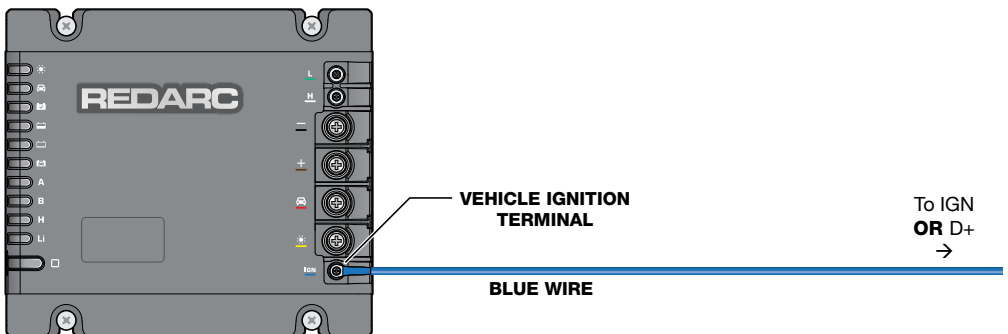
Refer to the following Ignition connection instructions based on the REDARC device in your system:

- "BCDC Alpha Ignition Connection" on page 4
- "BCDC Classic/Core Ignition Connection" on page 5
- "REDWORKS Ignition Connection" on page 5 for REDWORKS models with a BCDC Core/Classic.

BCDC ALPHA IGNITION CONNECTION

Adhere to the following for Ignition connection instructions using a BCDC Alpha Battery Charger:

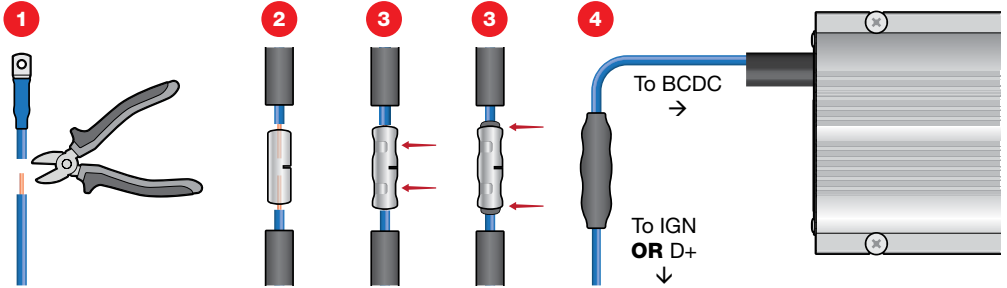
1. Using the **Ignition** cable, connect the lug on the **Blue** wire to the Vehicle Ignition terminal on the BCDC Alpha. Secure using the M3 Screw and tighten to 1 N·m (0.74 lbf·ft).



BCDC CLASSIC/CORE IGNITION CONNECTION

Adhere to the following for Ignition connection instructions using a BCDC Classic/Core Battery Charger:

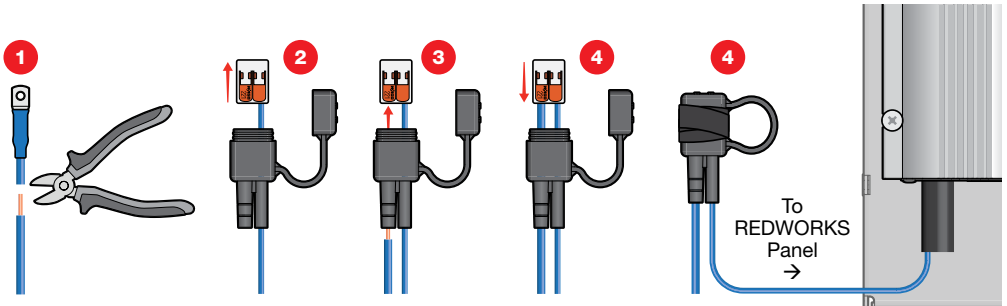
1. Using the **Ignition** cable and cable cutters, cut the **Blue** wire to remove the lug assembly. Then, strip the end of the **Blue** wire back 12 mm (0.5").
2. Slide heatshrink over the **Blue** wire and the **BCDC Blue** wire then insert the wires into a butt-splice. Keep the heatshrink away from the butt-splice until soldering is complete.
3. Crimp both wires to the butt-splice using single-indent type crimper's then solder the wires to the butt-splice.
4. Wait for the butt-splice to cool, then slip heatshrink over the point and heat.



REDWORKS IGNITION CONNECTION

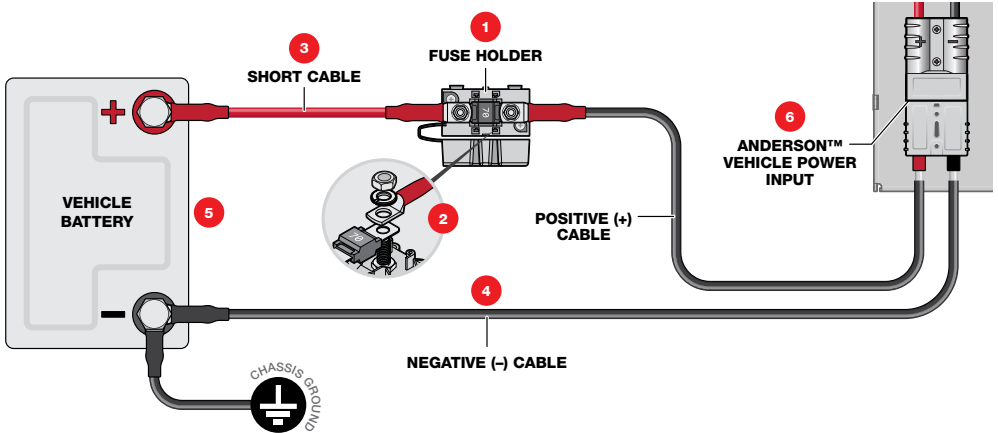
Adhere to the following for Ignition connection instructions using a BCDC Core/Classic REDWORKS model via the Wago Boot (not supplied):

1. Using the **Ignition** cable and cable cutters, cut the **Blue** wire to remove the lug assembly. Then, strip the end of the **Blue** wire back 12 mm (0.5").
2. Open the Wago Boot to unlock the terminal lever on the Wago® Splice.
3. Route the **Blue** wire through the spare leg of the Wago® Boot and into the terminal on the Wago® Splice.
4. Lock the terminal lever on the Wago® Splice and wrap electrical tape around the Wago® Boot to secure the lid.



VEHICLE BATTERY CABLE CONNECTION

1. Mount the Fuse Holder as close as possible to the vehicle battery positive (+) terminal.
Ensure the **Positive (+)** cable can reach from the Fuse Holder to your system's Anderson™ vehicle power input, and the **Short Red** cable can reach from the Fuse Holder to the vehicle battery positive (+) terminal.
2. Install the **Positive (+)** cable to the fuse holder then tighten the fuse terminal nut to 4 N·m (2.95 lbf·ft) and close the fuse holder lid. To protect the fuse from damage, hold the **Positive (+)** cable when tightening the fuse terminal nut.
3. Connect the **Short Red** cable to the vehicle battery positive (+) terminal.
4. Connect the **Negative (-)** cable to the vehicle battery negative (-) terminal.
5. Tighten the vehicle battery positive (+) and negative (-) terminals to the manufactures torque specification.
6. Plug the **Anderson™** connector into your system's Anderson™ vehicle power input.



CABLE MANAGEMENT AND ROUTING

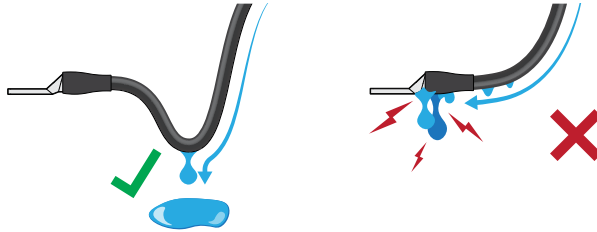
⚠ CAUTION: Do not route cables over hot surfaces and sharp objects, or over/through parts of the vehicle that move during operation or maintenance.

Once all wiring is completed, do the following to protect and secure the cables:

- To avoid connections becoming loose, secure all cables to a fixed point using the supplied cables ties.
- Allow for strain-relief for cables, ensuring cables are not pulled or stretched tightly. This can cause damage or allow connections to become loose and affect the performance of your system.
- Flexible conduit (not supplied) can be used to manage and protect bundled cables.

PREVENTING WATER ENTRY

Add a drip-loop to any cable connections made to the devices in your system. Ensure the drip-loops are made outside of the device to prevent moisture from running down the cables into the devices and any sockets/terminals.



GENERAL MAINTENANCE

Periodically check that all connections are firm, and that all cables are adequately managed. Parts of the system may have moved as a result of repeated vibration, particularly if the vehicle has been travelling on uneven/corrugated road surfaces.

SPECIFICATIONS

BATWK-001

Ignition Cable			Anderson™ to Battery Terminal Cable	Fuse Kit		Cable ties
Blue Cable	Red/Blue Cable	Fuse Size		Short Cable	Fuse Size	
9 m (29'6")	300 mm (11.8")	2 A	8 m (26'3")	150 mm (6")	70 A	15

BATWK-002

Ignition Cable			Anderson™ to Battery Terminal Cable	Fuse Kit		Cable ties
Blue Cable	Red/Blue Cable	Fuse Size		Short Cable	Fuse Size	
6.5 m (21'4")	300 mm (11.8")	2 A	5 m (16'5")	150 mm (6")	70 A	15

Tech Support

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