



SCOUT25/40

12 V 25 A / 40 A Integrated Power System

MODELS:

- ICMS-015-001 (25 A)
- ICMS-015-002 (40 A)



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THE SCOUT25/40

12V 25 A / 40 A INTEGRATED POWER SYSTEM

The Scout 25/40 is a compact dual battery system with battery monitoring, ideal for weekend adventurers delivering reliable power without complexity. Equipped with genuine Anderson™ SB50 connectors, the Scout 25/40 is ideal for powering 12V fridges, small compressors, LED lights and charging devices like phones, tablets and portable speakers.

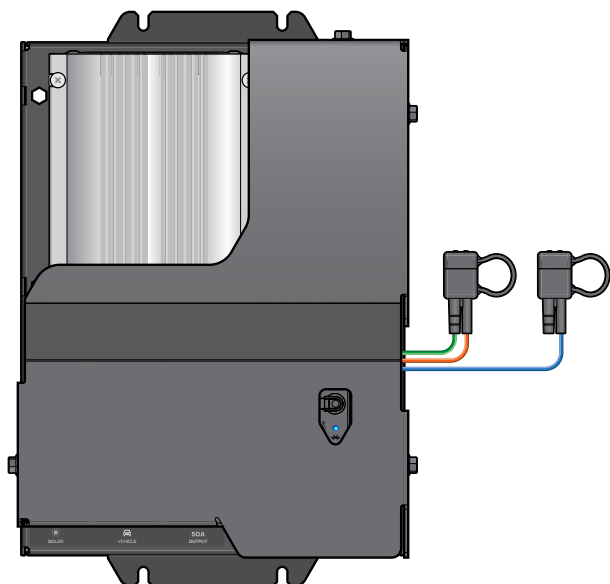
BCDC CORE BATTERY CHARGER

Designed to keep your vehicle's auxiliary battery system fully-charged and can source power from 12V or 24V vehicle alternators and 12V solar panels.

The BCDC Core prioritises charging from solar before supplementing from the vehicle start battery to lighten the load on your alternator and maximise the collection of free solar energy.

SMART BATTERY MONITOR

Provides critical system data including battery voltage, current, temperature and State of Charge (SoC) via the RedVision® User App.



HELPFUL RESOURCES

The individual manuals for REDARC devices in your system are available to download online.




BCDC Core
Instruction Manual




Battery Monitor
Instruction Manual




RedVision
Configuration Guide

WARNINGS & SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS — this manual contains important safety instructions.

Do not operate the system unless you have read and understood this manual.

REDARC recommends that the products 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 include a signal word to indicate 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, if not avoided, may result in moderate or minor injury to the operator or to bystanders.

NOTICE — Indicates a situation that may cause equipment damage.

▲ WARNING

When using this product, basic precautions should always be followed, including the following:

- 1. RISK OF EXPLOSIVE GASES** — Working in the vicinity of a lead-acid battery and Lithium-ion technologies is dangerous. Batteries may generate explosive gases during normal operation. Prevent flames and sparks, and provide adequate ventilation especially during charging.
To reduce risk of battery explosion, follow these instructions and those published by the battery manufacturer and manufacturer of any equipment you intend to use in vicinity of the battery.
- 2. DO NOT** drop metal tools onto a vehicle battery. Doing so might cause the battery to spark or might short-circuit the battery or other electrical parts, which may cause an explosion.
- 3. NEVER** smoke or allow a spark or flame in vicinity of battery or engine.
- 4. RISK OF FIRE — DO NOT** install this product in the same compartment where flammable substances are stored, such as petrol/ gasoline or Liquefied Petroleum Gas (LPG).
- The Heated Lithium (H) charging profile should only be used with lithium batteries that feature a functioning heating element. If unsure, the Standard Lithium (Li) charging profile must be used. Using the wrong charging profile may damage your lithium battery.
- Check the manufacturer's data for your battery and ensure that the maximum voltage of the profile you select does not exceed the manufacturer's recommended maximum charging voltage. If the maximum voltage is too high for your battery type, select another charging profile.
- These products should not be used for any medical purposes, life sustaining equipment, safety applications, or any application where equipment failure can cause injury, death, fires or any other hazard.
- DO NOT** put fingers or hands into the product.
- No user serviceable parts inside (excluding the Fuse Holders). **DO NOT** attempt servicing this product. Have servicing performed by a qualified repair person using only identical replacement parts. This will ensure that the safety of the product is maintained.
- DO NOT** use the ICMS if damaged or modified. Damaged or modified products may exhibit unpredictable behaviour resulting in fire, explosion or risk of injury.
- Incorrect handling or disassembly/reassembly may result in a risk of fire. Any attempt to disassemble/reassemble the ICMS, or make unapproved repairs or modifications will void the warranty and the user's authority to operate the ICMS.
- DO NOT** expose the ICMS to temperatures beyond the published limits.
- DO NOT** operate the ICMS beyond the published ratings. Doing so may result in damage to the ICMS, fire, explosion and burns/personal injury.

14. PERSONAL PRECAUTIONS:

To assist with the safe operation and use of the ICMS when connected to the battery:

- Consider having someone close-by to come to your aid if you are working near a lead-acid battery.
- Remove personal metal items such as rings, bracelets, necklaces, and watches before working with a vehicle battery. A vehicle battery can produce a short-circuit current high enough to weld a ring or the like to metal, causing a severe burn.
- Have plenty of fresh water and soap nearby in case battery acid contacts skin, clothing, or eyes.
- Wear complete eye protection and clothing protection. Avoid touching eyes while working near 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 acid enters eye, immediately flood eye with running cold water for at least 10 minutes and seek medical attention immediately.
- Use suitable Personal Protective Equipment (PPE) when operating power tools.



- f. HOT SURFACE:** High amperage loads connected to the Battery Monitor can cause the terminals and metal components to become extremely hot. To avoid burns, do not touch the hot parts without suitable personal protective equipment.

▲ CAUTION

- Selecting the wrong cable or fuse size could result in harm to the installer or user and/or damage to the battery or other equipment installed in the system. The installer is responsible for ensuring that all installer-supplied cables and fuses are the correct size and type (i.e. has physical performance properties and ratings suitable for the install conditions).
- The system should not be used by persons under the age of 18, or those with reduced physical, sensory or mental capabilities or lack of experience and knowledge unless they are supervised and under instruction.
- Cabling must be installed in protected areas away from heat sources, sharp objects or over/through parts of the vehicle that move during operation or maintenance. Supplementary protection such as conduit may be required, especially when installing or routing in the engine bay.
- DO NOT** use this product to control safety critical devices or those that could cause harm if operated remotely (for example fume exhaust fans or lifters). Only operate devices with moving parts when you have a clear line of sight to the moving parts.

NOTICE

- REDARC recommends only using genuine Anderson™ connectors for ICMS installations. Counterfeit or generic connectors may result in a poor quality connection. For Anderson SB50 connector wiring instructions, refer to the 'SB® Connector Assembly Sheet' available on the Anderson Power Products website.
- The installer is responsible for applying the correct torque to the Terminal Bolts on the Battery Monitor. Over-torquing bolts may damage the Terminals.
- DO NOT** bottom-out the bolt threads when fastening Terminal Bolts to the Battery Monitor Terminals, this may cause a poor electrical connection.

WHAT'S IN THE BOX?

1. SCOUT 25/40 INTEGRATED MODULE

2. Mounting Points (x4)
Refer to the supplied Mounting Template for mounting instructions.

3. FRONT COVER

4. M5 x 12 mm Cover Screws (x4)

5. BCDC CORE 25 A/40 A

6. Status LEDs

7. PROFILE SELECTION WIRES

Attached to BCDC Wiring Loom.
Default profile set as Standard Lithium (LiFePO₄) for Scout 25/40 models.

8. VEHICLE IGNITION INPUT WIRE

Attached to BCDC Wiring Loom.

9. SPARE GROUND CABLE

Connected to the GND Terminal.

10. SMART BATTERY MONITOR

11. GND Terminal
12. Control Button
13. Status LED
14. BNEG Terminal
15. BPOS and RBUS Sockets

16. M10 x 20 mm TERMINAL BOLT

Long Bolt for the Battery Monitor.

17. ANDERSON™ SB50 CONNECTORS

18. Solar Input
19. Vehicle Input
20. 50 A Output

21. BATTERY SENSE LEAD

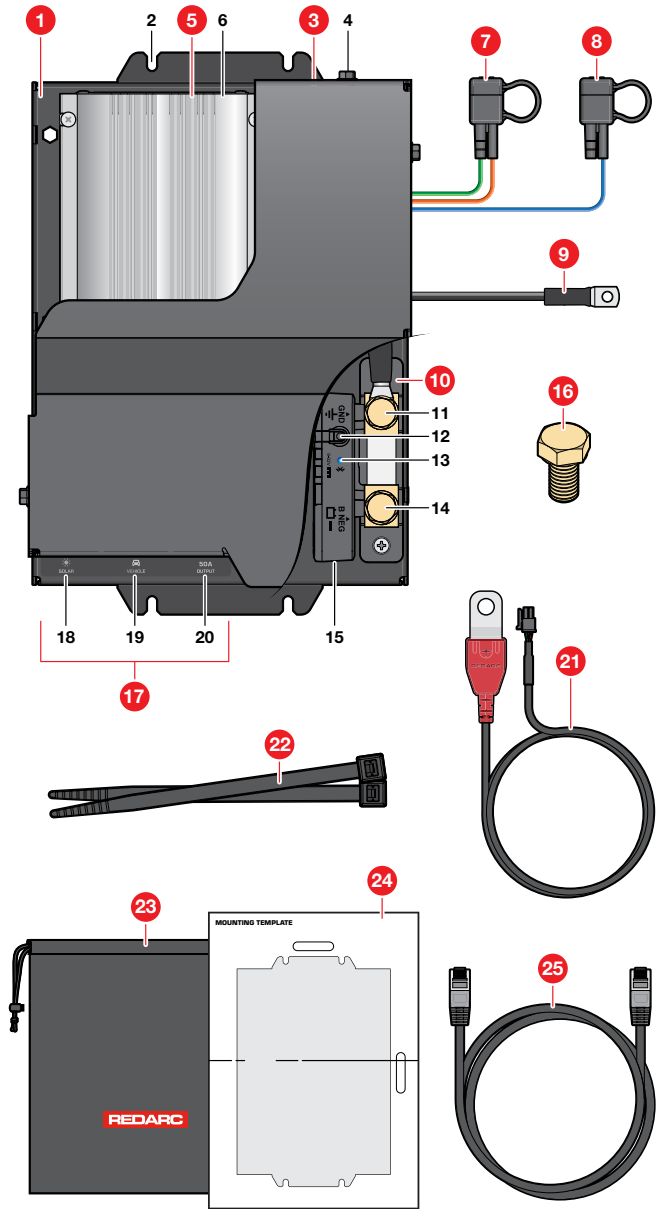
22. CABLE TIES x 2

23. DRAWSTRING BAG

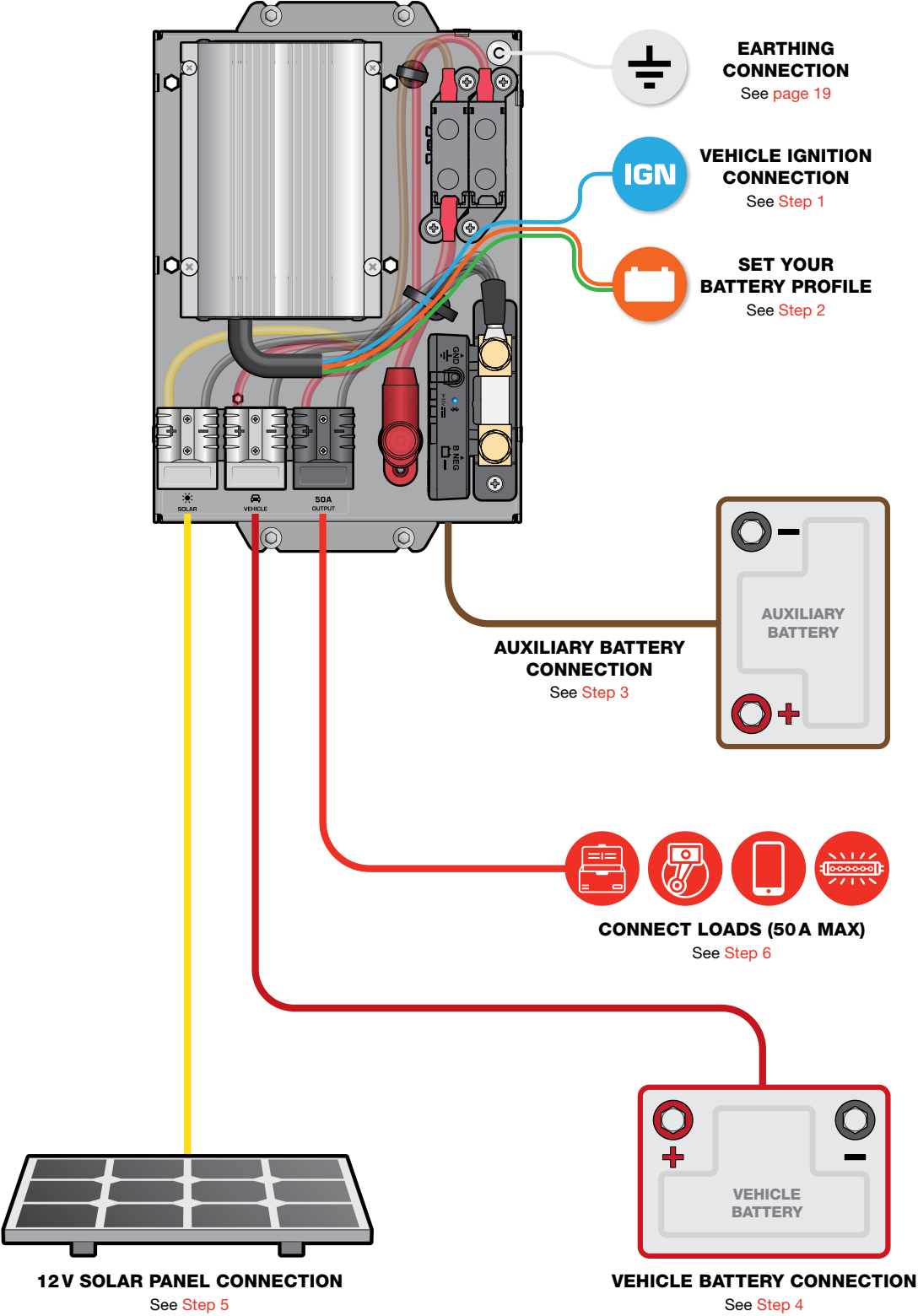
24. MOUNTING TEMPLATE

25. RBUS (RJ45) CABLE

For expanding your system.



SYSTEM LAYOUT



MOUNTING THE SCOUT

The Scout must be mounted before making any cable connections. Refer to the supplied [Mounting Template](#) for mounting requirements and instructions.

SYSTEM PLANNING

WHAT YOU WILL NEED

Before you begin, purchase the correct cable sizes, lugs, fuses, and consumables needed for your installation.

NOTE: Poor quality cables can degrade over time when exposed to high temperatures (such as in an engine bay). Make sure you purchase good quality cables with a suitable temperature rating for your installation.

You will need to source suitably rated cables for the following connections:

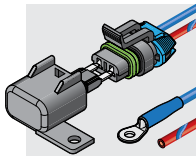
- **Vehicle Ignition** connection (applies to vehicles with smart alternators) — see '[Ignition Cable Requirements](#)' and [Step 1](#)
- **BNEG** and **Auxiliary Battery Positive (+)** connections (**RS3WK-004** recommended) — see [Step 3](#)
- **Vehicle Battery** connection (**BATWK** recommended) — see '[Vehicle Battery Wiring Kit Selection](#)' and [Step 4](#)
- **Solar** panel connection — see [Step 5](#)
- **Auxiliary Load** connection — see [Step 6](#)

VEHICLE BATTERY WIRING KIT SELECTION

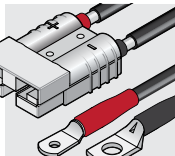
The **REDARC BATWK Wiring Kit** range is recommended for **Vehicle Battery** and **Ignition** (if required) cable connections.

Calculate the cable distance from the Scout to your vehicle battery and refer to [Table A](#) to determine which **BATWK Wiring Kit** is suitable for your installation.

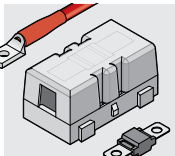
TABLE A: BATWK WIRING KIT SELECTION		
Cable Distance to Vehicle Battery	0 m – 5 m	5 m – 8 m
Recommended Wiring Kit	BATWK-002	BATWK-001



Vehicle Ignition Cable



Anderson™ to M8 Terminal Cable



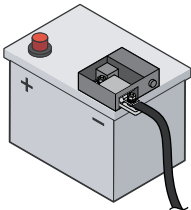
70 A Fuse Kit

IGNITION CABLE REQUIREMENTS

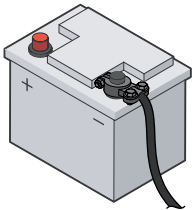
The use of the **Ignition** cable (provided with **BATWK Wiring Kit**) is only required for vehicles with **smart alternators**.

The **Ignition** cable connection allows for the Scout to start or stop charging the auxiliary battery from the vehicle battery based on the BCDC Core's voltage thresholds. Refer to the [BCDC Core Instruction Manual](#) for vehicle ignition charging thresholds.

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



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.

See [Step 1](#) for **Ignition** wiring instructions based on the type of **smart alternator** your vehicle has.

THE ESSENTIAL WIRING STEPS

1. CONNECT TO VEHICLE IGNITION – USING BATWK

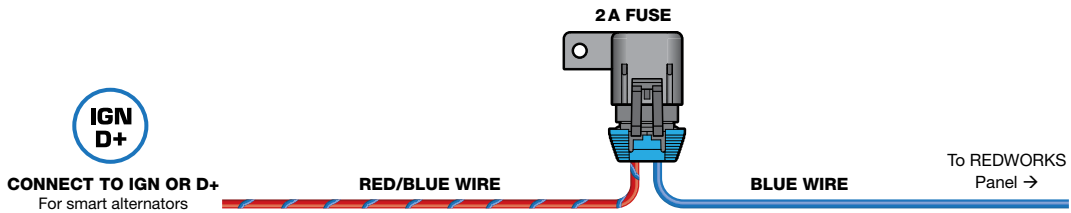
- 1.1 Depending on the type of smart alternator your vehicle has, use the **Ignition** cable to connect the **Red/Blue** wire to the following:

CONTINUOUS IDLE VEHICLES

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

IDLE STOP VEHICLES

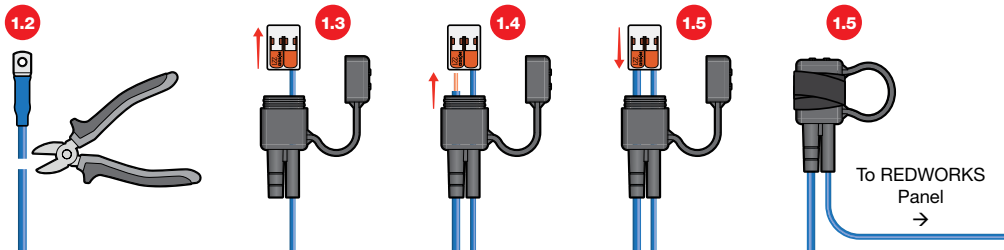
Connect the **Red/Blue** wire to the designated **D+** terminal or a similar pick up point.



NOTE: For installations not using a **BATWK Wiring Kit**, the **Ignition** cable connection must be fitted with a 2A fuse for cable protection.

IGNITION CONNECTION TO THE SCOUT

- 1.2 Using the **Ignition** cable and cable cutters, cut the **Blue** wire to remove the lug assembly.
- 1.3 Open the Ignition Wago® Boot to unlock the terminal lever on the Wago® Splice and route the **Blue** wire through the spare Leg of the Wago® Boot.
- 1.4 Strip the end of the **Blue** wire back 11 mm (0.43") then insert the wire into the terminal on the Wago® Splice.
- 1.5 Lock the terminal lever on the Wago® Splice and wrap electrical tape around the Wago® Boot to secure the lid.



2. ORANGE AND GREEN WIRES – SET THE PROFILE

The **Orange** and **Green** wires come pre-connected to the Wago® Boot — this configuration is only suitable for Standard Lithium (LiFePO₄) batteries. The connected wires to the Wago® Boot can be altered to suit AGM/Gel battery types.

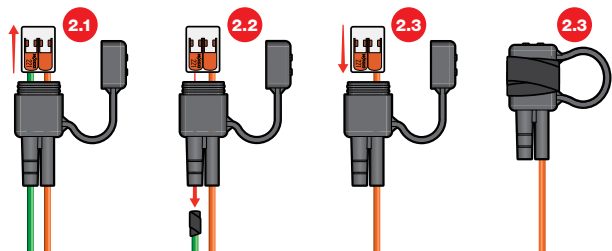
- If your auxiliary battery type is not Standard Lithium or AGM/Gel, refer to the **BCDC Core Instruction Manual** for battery type wiring instructions.

STANDARD LITHIUM BATTERY PROFILE

Leave both wires connected to the Wago® Boot and wrap with electrical tape around the Wago® Boot to secure the lid.

AGM / GEL BATTERY PROFILE

- 2.1 Open the Wago® Boot to unlock the terminal lever on the Wago® Splice.
- 2.2 Remove the **Green** wire from the terminal and the Leg of the Wago® Boot then wrap with electrical tape.
- 2.3 Lock the terminal lever on the Wago® Splice and wrap electrical tape around the Wago® Boot to secure the lid.



3. CONNECT THE AUXILIARY BATTERY – USING RS3WK-004

Using the **Battery Sense Lead** and the **RS3WK-004 Wiring Kit**, adhere to the following to connect the Scout to your auxiliary battery.

B NEG CABLE CONNECTION

- 3.1 Connect the **Black** cable to the Battery Monitor **B NEG** Terminal and tighten the Terminal Bolt to 20 N·m (14.7 lbf·ft). Hold the **B NEG** cable when torquing to avoid the cables touching the Battery Monitor Housing.

IMPORTANT: Ensure there is sufficient clearance around the Front Cover when connecting the **Black** cable to the **B NEG** Terminal.

- 3.2 Connect the other end of the **Black** cable to the auxiliary battery negative (–) terminal and tighten to the manufacturer's torque specification.

No other connections should be made to the **B NEG** Terminal or auxiliary battery negative (–) terminal for correct operation of the Battery Monitor.

AUXILIARY BATTERY POSITIVE (+) CONNECTION

- 3.3 Mount the Fuse Holder as close as possible to the auxiliary battery positive (+) terminal.

Ensure the **Red** cable can reach to the **Auxiliary Connection Point** on the Scout, and the **Short Red** cable can reach to the auxiliary battery positive (+) terminal.

- 3.4 Connect the **Red** cable to the **Auxiliary Connection Point** and tighten to 12 N·m (8.85 lbf·ft).

- 3.5 Proceed to 'Battery Sense Lead Connection' before connecting the **Short Red** cable to the auxiliary battery positive (+) terminal.

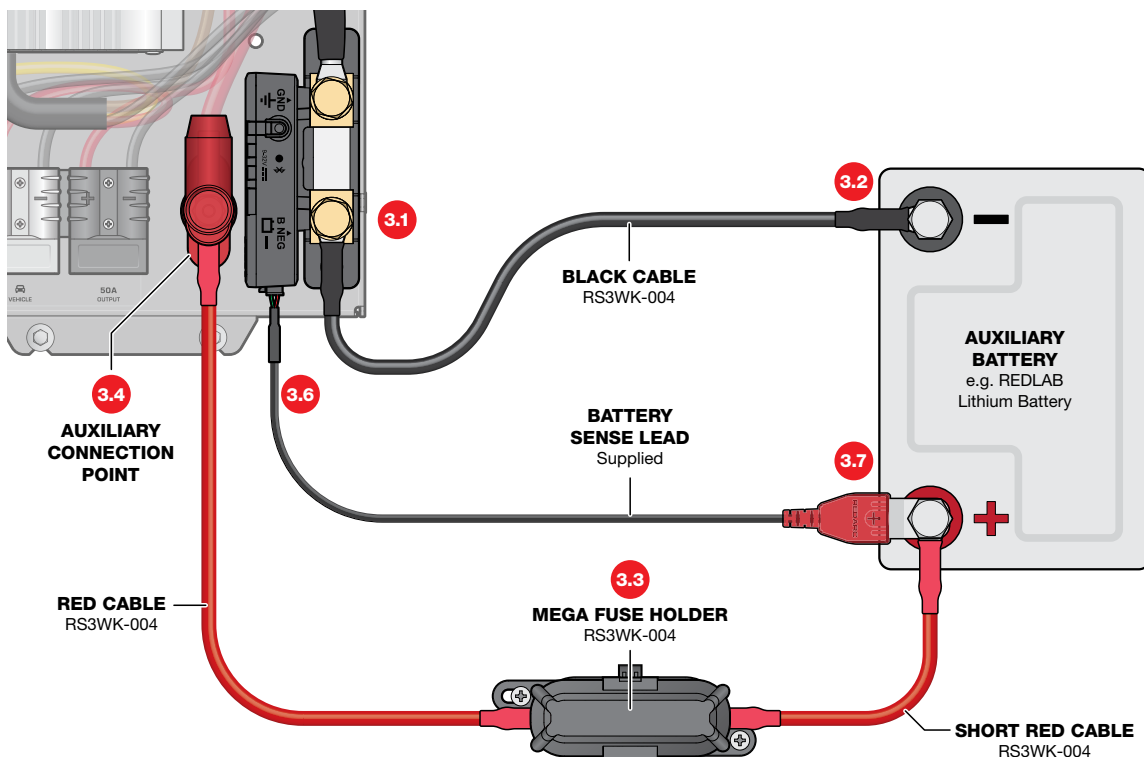
BATTERY SENSE LEAD CONNECTION

- 3.6 Connect the **Battery Sense Connector** to the **B POS** socket on the Battery Monitor.

- 3.7 Connect the **Short Red** cable then the **Battery Sense Lead** to the auxiliary battery positive (+) terminal and tighten to the manufacturer's torque specification.

NOTICE: DO NOT cut or modify the Battery Sense Lead.

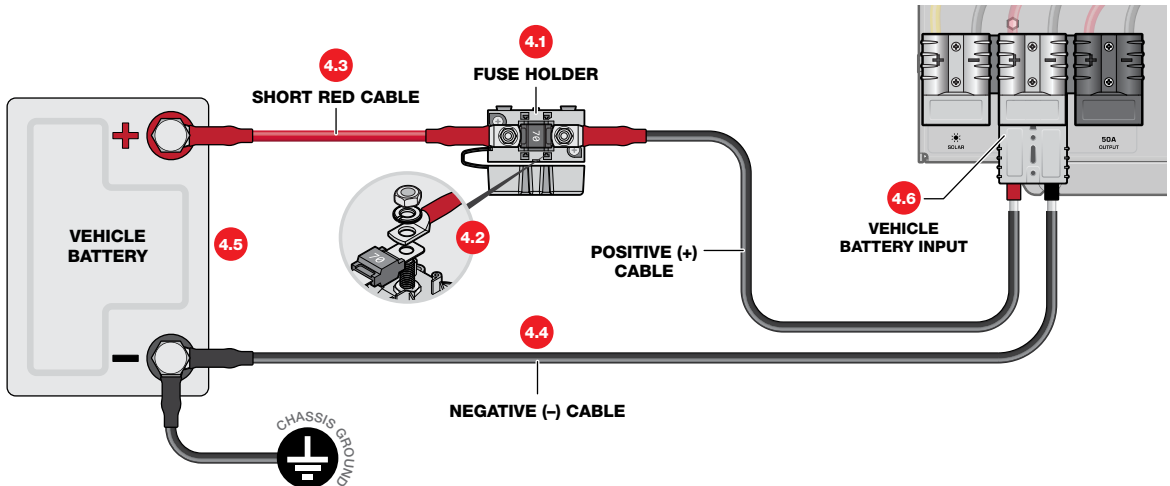
NOTICE: DO NOT fit the Battery Sense Lug in between the auxiliary battery positive (+) terminal and lugs that carry high currents. Connect the lugs carrying high-currents to the auxiliary battery first, then the Battery Sense Lug on top (last).



4. CONNECT THE VEHICLE BATTERY – USING BATWK

Using the **BATWK Wiring Kit** adhere to the following to connect the Scout to your vehicle battery.

- 4.1 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 the **Vehicle Battery Input** (🚗), and the **Short Red** cable can reach to the vehicle battery positive (+) terminal.
- 4.2 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.
- 4.3 Connect the **Short Red** cable to the vehicle battery positive (+) terminal.
- 4.4 Connect the **Negative (-)** cable to the vehicle battery negative (-) terminal or to chassis ground. For vehicles with smart alternators which have a battery sensor on the negative (-) terminal, ensure the connection is made on the vehicle side of the sensor.
- 4.5 Tighten the vehicle battery positive (+) and negative (-) terminals to the manufacturer's torque specification.
- 4.6 Plug the **Anderson™** connector into the **Vehicle Battery Input** (🚗).



5. CONNECTING SOLAR

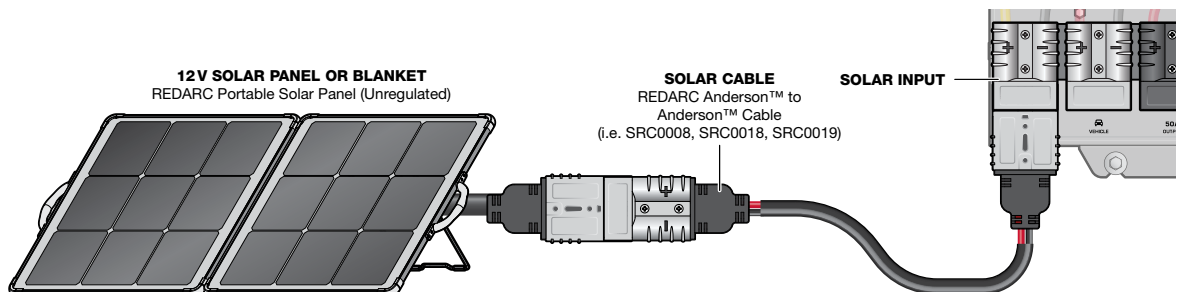
- ✓ Only connect 12V solar panels to the **Solar Input** (☀️).
- ✓ Make sure all wiring, components, and fuses used with your solar panel or solar array are compliant with local codes and standards.
- ✗ DO NOT connect solar panels that have inbuilt regulators. The BCDC has an inbuilt regulator that may not function correctly if regulated solar panels are connected.
- ✗ DO NOT connect solar panels that have an open circuit voltage that exceeds the 32V limit of the BCDC input.

CONNECTING A SINGLE SOLAR PANEL

- 5.1 Plug your solar panel into the **Solar Input** (☀️) on the Scout.

CONNECTING MULTIPLE SOLAR PANELS

To connect more than one solar panel to the Scout, refer to 'Connecting Multiple Solar Panels' (page 19).



6. CONNECTING ANDERSON™ LOAD

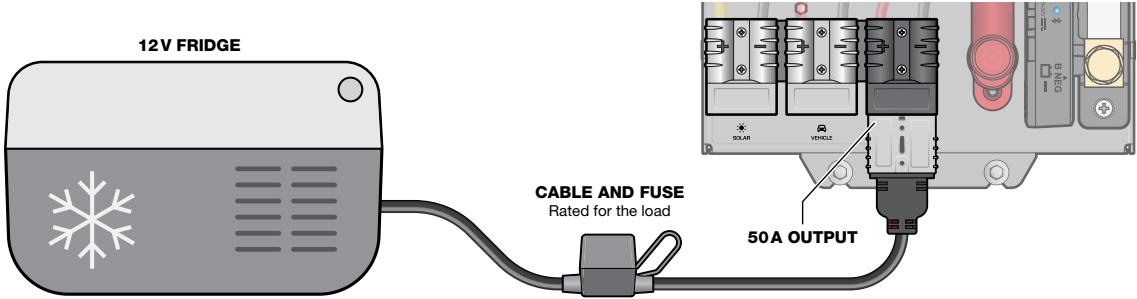
The **50 A Output** is suitable for loads up to 50 A including 12 V fridges, large compressors, and electric jacks. Ensure the load connection meets the following requirements:

- ✓ The load cable is equipped with a genuine Anderson™ SB50 connector.
- ✓ The load cable is protected by a fuse suitably rated for the cable size.

6.1 Connect the cable to the **50 A Output** on the Scout and to your load.

CONNECTING ADDITIONAL LOADS

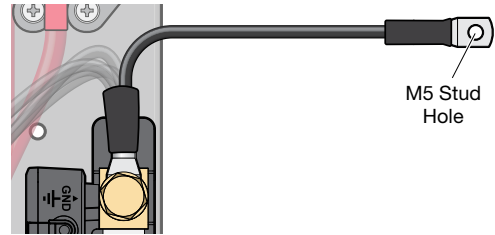
If additional loads are being integrated into your system, the alternative wiring requirements on 'Connecting Additional Auxiliary Loads' (page 17) **MUST** be strictly followed.



SPARE GROUND CABLE

The **Spare Ground** cable is attached to the **GND** Terminal on the Battery Monitor and **MUST** be used under one of the following conditions:

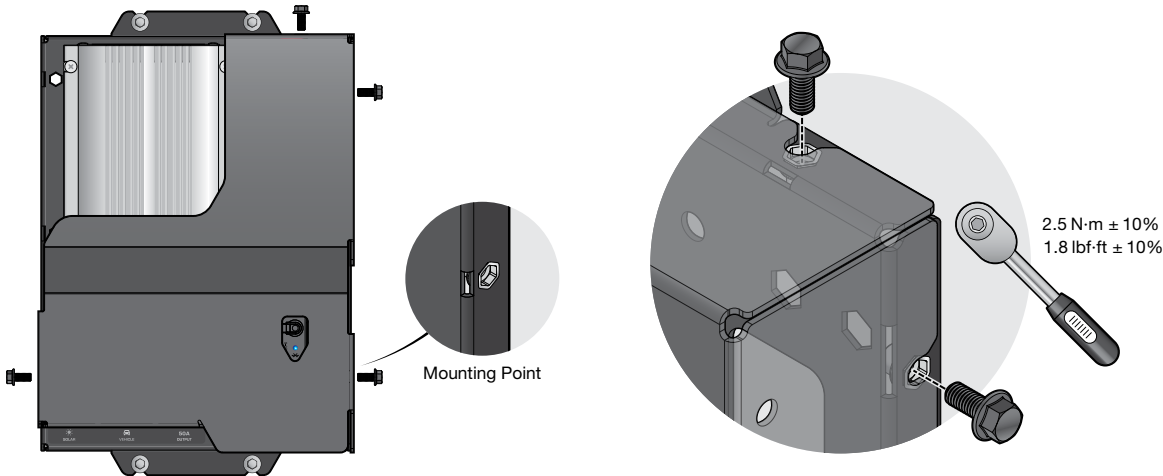
- Wrap the cable with electrical tape and secure using cable ties
- OR
- Use to connect an additional load to your system.



7. FIT THE FRONT COVER

Once all wiring is complete the Front Cover needs to be mounted to the Scout Panel using the supplied M5 × 12 mm Screws.

- 7.1 Align the Front Cover with the four M5 Mounting Points on the Scout.
- 7.2 Secure the Front Cover with the four Screws using a spanner or socket and tighten to $2.5 \text{ N}\cdot\text{m} \pm 10\%$ ($1.8 \text{ lbf}\cdot\text{ft} \pm 10\%$). For installations in difficult areas to access, a ratcheting ring spanner is recommended.

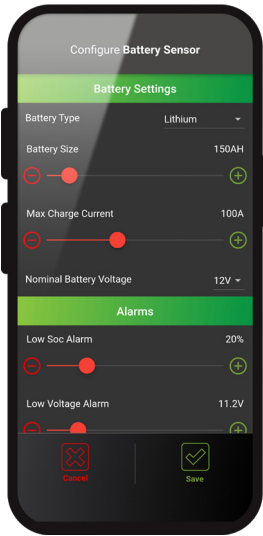


CONFIGURE THE SYSTEM

THE CONFIGURATOR APP

Once the installation is complete, configure the system to define the Scout's behaviours and operation, and your auxiliary battery's specifications.

Download the free Configurator App to configure the system by pairing your smartphone to the Battery Monitor.



Download the free Configurator App

PAIRING INSTRUCTIONS

1. Download the RedVision Configurator App.
2. Make sure your smartphone's Bluetooth® technology function is enabled.
3. Press the Control Button on the Battery Monitor for 3 seconds. The Status LED will flash blue (pairing mode).
4. Open the Configurator App and allow the required permissions.
5. In the **"Choose Configuration"** screen, tap **"Read Device"** then select the system that matches the Product Serial Number on the Battery Monitor.
6. When the **"Pair"** banner appears, tap **Pair**.

CONFIGURE THE SYSTEM

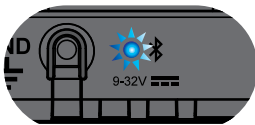
7. Under the **"Charger Settings"** heading tap **"Battery Sensor"** to navigate to the **"Configure Battery Sensor"** screen.
8. Under the **"Battery Settings"** heading, enter your auxiliary battery's **Type**, **Size**, and the **Max Charge Current**. Refer to your battery manufacturer's specifications for these values.
9. The **Nominal Battery Voltage** MUST be **'12V'**.
10. Under the **"Alarms"** heading, configure the **Low SoC Alarm** and **Low Voltage Alarm**.

When your battery goes below these configured values, the Status LED on the Battery Monitor will turn red, and an alert will display in the RedVision App.

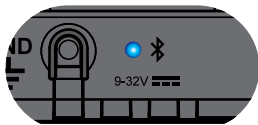
11. Once completed, tap **Save**

COMPLETE CONFIGURATION

12. Make sure the Battery Monitor is in Bluetooth pairing mode, then tap **Program**
13. In the **"Choose Configuration"** screen, re-select the system. Do not exit the App until the success banner appears and the Status LED on the Battery Monitor is solid Blue.
The Battery Monitor is now configured, and Bluetooth pairing is complete.



Bluetooth Pairing Mode

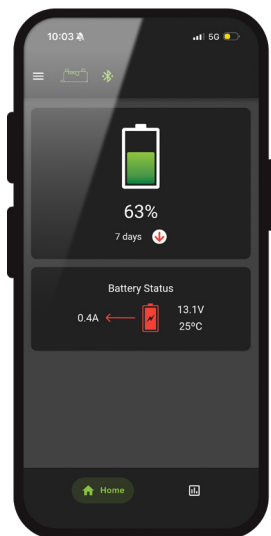


Bluetooth Connected

OPERATION

THE REDVISION® APP

The RedVision App gives you remote access to the Scout's functions and features including battery voltage, current, temperature and State of Charge (SoC) of the connected battery.



Download the free
RedVision User App

PAIRING INSTRUCTIONS

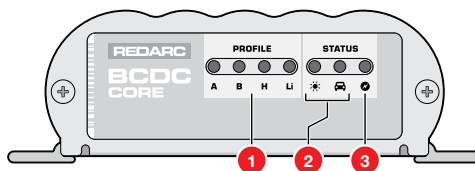
1. Download the RedVision App and make sure your smartphone's Bluetooth® technology function is enabled.
2. Press and hold the Control Button on the Battery Monitor for 0.5 to 3 seconds. The Status LED will flash blue (pairing mode).
3. Open the RedVision App and allow the required permissions if it's the first time using the App.
4. Tap the **Menu** ≡ Icon, then under the devices heading, tap **+ Add Device**.
5. Find and select the device that matches the Product Serial Number on your Battery Monitor. Read and agree to the disclaimer.
6. When the Bluetooth pairing request appears, tap **Pair**.
7. Once the Status LED turns solid blue, and the system information appears on your smartphone the Bluetooth pairing is complete (first time pairing may take a few minutes).

CALIBRATION

When the battery is first connected, the system will start a calibration process to determine the State of Charge (SoC) of the battery — this value does not appear in the RedVision App instantly after completing your installation.

Calibration will continue until your auxiliary battery is fully charged.

BCDC CORE USER INTERFACE



1. PROFILE LEDS

The Profile LED indicates the charging profile the BCDC will use based on the chemistry of your auxiliary battery — this must be set correctly during installation (see [Step 2](#)).

- | | |
|-----------|---------------------|
| A | AGM / Gel |
| B | Lead Acid / Calcium |
| H | Heated Lithium |
| Li | Standard Lithium |

2. SOLAR AND VEHICLE INPUT LEDS

The Solar and Vehicle LEDs will be ON when the input is available and in use, and OFF when the input is not available or not in use.

- | | |
|---|---------------|
| ☀ | Solar Input |
| 🚗 | Vehicle Input |

3. CHARGING STAGE LED

The Charge Stage LED indicates the current charging stage:

Off — Off or no output

On — Boost stage

Flashing twice every 2 seconds — Absorption stage

Flashing once every 2 seconds — Float stage

CHARGING STAGES

BOOST

Boost stage charges the auxiliary battery at the fastest possible rate, maintaining a constant current until the battery reaches its maximum voltage.

ABSORPTION

The charger will then move to Absorption stage which maintains a constant voltage level for a preset period of time or until the current being drawn by the output battery drops to a predetermined level for 30 seconds.

FLOAT

Float stage maintains 13.3V (13.6V for LiFePO₄) on the output battery, keeping the battery topped up. When the battery loses charge, the Battery Charger returns to the Boost stage.

SYSTEM STRAIN-RELIEF AND CABLE MANAGEMENT

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

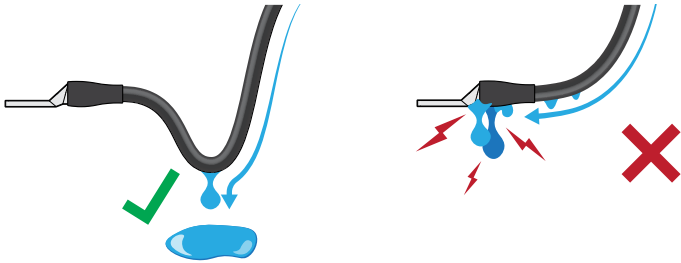
PROTECT AND SECURE THE CABLES

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

- 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 the Scout.
- Flexible conduit (not supplied) can be used to manage and protect cables.
- Make sure all removable covers on the fuses and the Front Cover are put back on once wiring is complete.

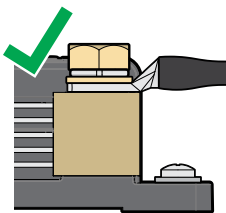
PREVENTING WATER ENTRY

Add a drip-loop to any cables connecting to the Scout. Ensure the drip-loops are made outside the Scout to prevent moisture from running down the cables into sockets/terminals and devices.



BATTERY MONITOR CABLE MANAGEMENT

IMPORTANT: Ensure lugs are fastened firmly against the top face of the terminal. Loose lugs will have a bad electrical connection, causing inaccurate readings from the Battery Monitor, and can result in damage to the wiring and Battery Monitor.

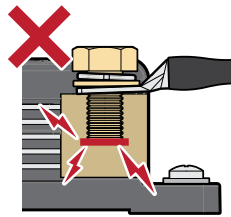


Good connection



Loose Connection

Lug tongue facing downwards and is not long enough to fasten flush to the shunt.



Loose Connection

Do not use the Long Bolt if it is too long and causes a loose connection.

See 'Additional Load Cable Requirements' (page 17) for instructions on using the Long Bolt.

CARE & MAINTENANCE

- Periodically check that all wiring and connections are secure. Parts of the system may have moved during normal use.
- Look for signs of damage or wear along the cables especially parts of the cable around connections, through glands, or against surfaces — replace if damaged.
- Do not use solvents, alcohol or domestic cleaning products to clean the devices on the Scout. If sand or dirt accumulate on the devices, wipe it clean with a slightly damp cloth.
- Do not allow the devices on the Scout to come into contact with corrosive substances.

TROUBLESHOOTING

■ ■ Refer to the [Battery Monitor](#) and [BCDC Core](#) Instruction Manuals for complete troubleshooting and fault information.

TABLE B: BATTERY MONITOR ERRORS

The Status LED on the Battery Monitor will illuminate to indicate the fault type.

LED State	Cause
Flashing red/blue	Fault detected whilst a smartphone is connected to the Battery Monitor via the RedVision App.
Solid red	Bluetooth pairing and/or RBUS device communication Fault detected.

TABLE C: BCDC ERROR CODES

All LEDs on the BCDC will flash to indicate the fault type.

LED State	Cause
1 flash	Internal hardware fault
2 flashes	Unit under temp fault
3 flashes	Unit over temp fault
4 flashes	Output battery fault (volts too high)
5 flashes	Input under-voltage (Battery)*1
6 flashes	Input over-voltage (Battery or Solar panel) or the Solar Panel is connected in reverse polarity.

*1 If the BCDC is being supplied power from the vehicle and solar simultaneously and ONE of those sources is under-voltage, that specific source LED will flash 5 times. If the unit is being supplied power from the vehicle and solar with BOTH sources under-voltage, OR if the unit is being supplied power from one input only and that input is under-voltage, ALL LED's will flash 5 times.

TECHNICAL SPECIFICATIONS

Specifications are subject to change without notice.

TABLE D: PHYSICAL SPECIFICATIONS

Weight	3.6 kg (7.9 lbs)
Dimensions	330 × 235 × 76 mm (13" × 9.25" × 3")

TABLE E: THERMAL SPECIFICATIONS

Operating Temperature Range	−15°C to 60°C (5°F to 140°F)
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TABLE F: BCDC CORE SPECIFICATIONS

Scout Part Number	ICMS-015-001		ICMS-015-002	
BCDC Core Part Number	BCDCN1225		BCDCN1240	
Continuous Power Rating	25 A		40 A	
Maximum Current Rating	35 A		55 A	
Maximum Power Output	375 W		600 W	
Vehicle Input Voltage Range	9 to 32 VDC---			
Solar Input Voltage Range	9 to 32 VDC--- (unregulated only)			
Output Battery Type	Standard Lead Acid, Calcium Content, Gel, AGM or LiFePO ₄ type only			
Charging Profile	A	B	H	Li
Maximum Voltage	14.6 V	15.0 V	14.2 V	
Float Voltage	13.3 V		13.6 V	
No Load Current	< 100 mA			
Standby Current	< 8 mA			
Minimum Output Battery Volts	0.1 V			

All voltages specified are ± 100 mV.

TABLE G: BATTERY MONITOR SPECIFICATIONS

Product Part Number	BSEN500
Operating Voltage Range	9 to 32 VDC ⁻⁻⁻
Current Measurement Range	± 500 A
Current Measurement Accuracy	± 0.3%, 1 to 500 A @ 50°C (122°F)
Voltage Measurement Accuracy	± 0.7%
Battery temperature Measurement Range	−40°C to 100°C (−40°F to +212°F)
Temperature Measurement Accuracy	± 3°C (± 5.4°F)

All voltages specified are ± 100 mV.

EXPAND YOUR SYSTEM

CONNECTING ADDITIONAL AUXILIARY LOADS

To connect additional auxiliary loads to your system adhere to the following requirements:

BNEG CABLE REQUIREMENTS

The **BNEG** cable should be no longer than 1 m (3'3") and must be sized to conduct the combined maximum current rating of ALL loads in your system (Anderson Output load plus additional loads). Source lugs with a hole suitable for an M10 Bolt and refer to [Table H](#) to determine appropriate cable sizing:

TABLE H: BNEG CABLE SIZING

Combined System Current	100 A	200 A	300 A	400 A	500 A
Maximum Cable Length	1 m (3'3")				
Recommended Cable Cross Section	35 mm²	70 mm²	95 mm²	120 mm²	150 mm²
Closest Equivalent AWG/BAE/B&S	2	3/0	4/0	250 kcmil	300 kcmil

AUXILIARY BATTERY POSITIVE (+) CABLE REQUIREMENTS

The **Auxiliary Battery Positive (+)** cable should be as short as possible and must be sized to conduct the maximum current to the Scout 25/40. Source suitably sized lugs for your system and refer to [Table I](#) to determine appropriate cable sizing:

TABLE I: AUXILIARY BATTERY POSITIVE (+) CABLE SIZING

Maximum Current to the Scout 25/40	Cable Length		Fuse Rating (REDARC Fuse Kit)	PVC V90 Cable Gauge (AWG / B&S)	XLPE Cable Gauge
50 A	0 – 1 m	0 – 3'3"	60 A (FK60)	6	10 mm²
	1 – 5 m	3'3" – 16'5"		4	16 mm²

ADDITIONAL LOAD CABLE REQUIREMENTS

- All positive loads MUST be connected directly to the auxiliary battery and are protected by a suitable fuse for their individual specified current rating. DO NOT connect any additional positive loads to the Scout.
- All negative loads are connected to the **GND** terminal on the Battery Monitor. DO NOT connect any negative loads directly to the auxiliary battery negative (–) terminal or to the **BNEG** terminal on the Battery Monitor.
- If the combined thickness of the lugs connected to the **GND** terminal is more than 4 mm (0.16"), use the supplied Long Bolt. When using the Long Bolt, the combined thickness of lugs must be no more than 8 mm (0.31").

GND TERMINAL

12V AIR COMPRESSOR
Additional Load

AUXILIARY BATTERY
e.g. REDLAB
Lithium Battery

BNEG CABLE
Table H

AUXILIARY BATTERY POSITIVE (+) CABLE
Table I

POSITIVE (+) TERMINAL

CABLE AND FUSE
Rated for the additional load

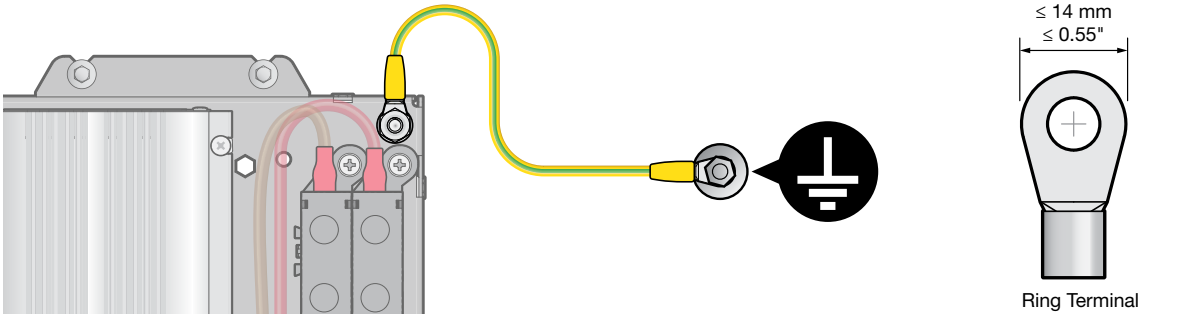
←
TO LOADS

The diagram illustrates the correct wiring for the BATT terminal. It shows a red positive (+) cable connected to the BATT terminal and a black negative (-) cable connected to the GND terminal. A common ground busbar is shown with three output lines labeled "TO LOADS". A separate line from the GND terminal is labeled "TO AUXILIARY BATTERY NEGATIVE (-) TERMINAL".

PROTECTIVE EARTHING CONNECTION

This product includes provision for protective earthing (grounding) for AC to support safe installation. Depending on your application and local requirements, connection to earth may be necessary. It is the installer's responsibility to ensure that earthing is applied where required, in compliance with the relevant electrical safety standards and regulations in your region.

There is a suitable unpainted protective earthing point on the Nomad Panel and on the Front Cover. Fasteners (not supplied) for making electrical connection should suit 6.5 mm (0.26") hole. Refer to lug size below.



CONNECTING MULTIPLE SOLAR PANELS

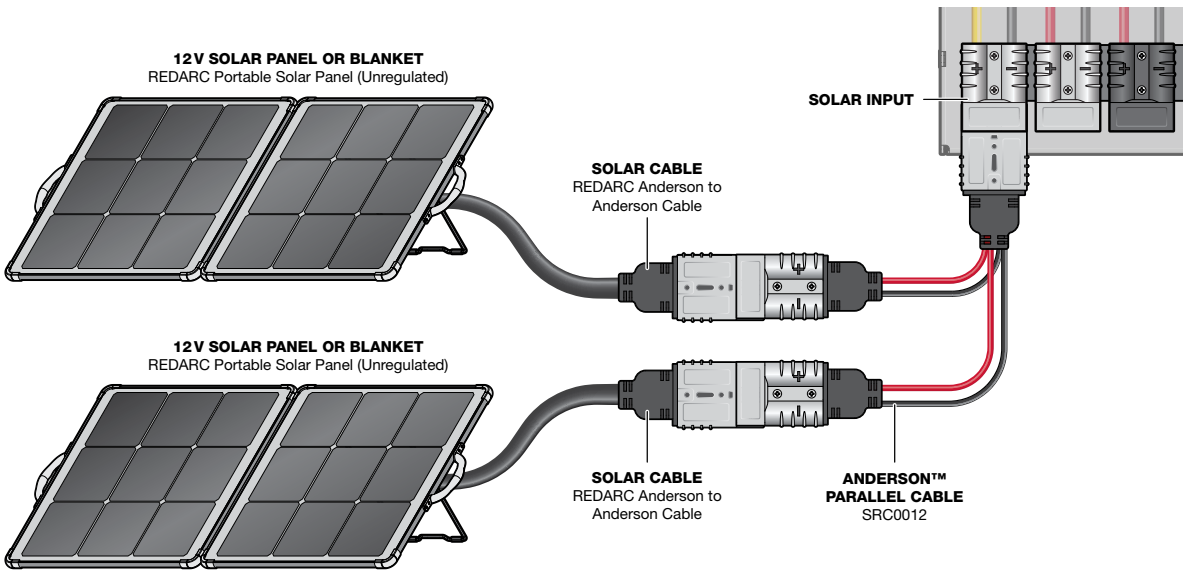
⚠ CAUTION: DO NOT connect solar panels in series.

The Scout can draw power from multiple solar panels in large solar arrays, which can be configured in parallel connections. For correct operation and best performance of the system, choose the solar panel specification and configuration to ensure that:

- The open circuit voltage of the array is below the 32V maximum solar voltage range of the Scout at minimum ambient temperature.
- The solar cable/s are capable of carrying the combined short circuit capacity of the solar panel array, regardless of the maximum solar current rating of the Scout 25/40.
- All solar panels are the same.
- All solar panels are pointing in the same direction.

CONNECTING MORE THAN 2 SOLAR PANELS

For instructions on connecting more than 2 solar panels refer to the [Solar Installation Tech Tip](#) on the REDARC website for important wiring and fusing requirements.



WARRANTY

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

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CHECKING THE PRODUCT SERIAL NUMBER

The Product Serial Number is located on the Main Unit and on the product packaging.

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Europe: OZPARTS PL sp. z o.o. ul. Słowackiego 32/5 87-100, Torun, Poland
For written request please email power@redarcelectronics.eu

PATENTS

This product may have patent(s) granted and/or pending, design and eligible layout rights may also subsist.
Visit: www.redarcelectronics.com/patent

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