

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.

PERSONAL SAFETY PRECAUTIONS

To assist with the safe operation and use of the system:

- a. Wear complete eye protection and clothing protection. Avoid touching eyes while working near a battery.
- b. 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.



WARNING

- 1. **RISK OF EXPLOSIVE GASES: Working in vicinity of a lead-acid battery is dangerous. Lead-acid batteries generate explosive gases during normal operation. For this reason, it is of utmost importance that you follow the instructions when installing and using the BCDC Alpha.**
- 2. **NEVER smoke or allow a spark or flame in vicinity of battery or engine, this may cause the battery to explode.**
- 3. **Any changes or modifications not expressly approved by the grantee could void the user's authority to operate this equipment.**

CAUTION

- 1. Do not modify or disassemble the BCDC Alpha under any circumstances. All faulty Units must be returned to REDARC for repair. Incorrect handling or reassembly will result in voiding the product's waterproof rating, may result in a risk of electric shock or fire and may void the product's warranty.
- 2. The BCDC Alpha should not be used 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 appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the BCDC Alpha.
- 3. The BCDC Alpha is not intended to supply power to a low voltage electrical system other than to charge a battery.
- 4. 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.
- 5. Check the manufacturer's data for your battery and ensure that the BCDC Alpha's 'Maximum Output Current' does not exceed the manufacturer's recommended maximum. If the 'Maximum Output Current' is too high for your battery, reduce it by configuring the "Max Charge Current" setting in the Configurator App or via the Control Button.

- 6. Only use the BCDC Alpha with standard automotive lead acid, calcium content, gel, AGM, SLI, deep cycle, heated or standard lithium iron phosphate (LiFePO<sub>4</sub>) type 12 V batteries.
- 7. When using the BCDC Alpha to charge a Lithium Iron Phosphate (LiFePO<sub>4</sub>) battery, only use batteries that feature an inbuilt battery management system which includes cell balancing, under and over voltage protection.
- 8. 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.
- 9. The Battery Type setting must match your auxiliary battery's chemistry. Noticeable oscillations between Boost and Absorption stages may indicate an incorrect Battery Type setting. If unsure which settings to use, then use the AGM/Gel setting.
- 10. If the BCDC Alpha's default input current rating (28 A or 55 A) exceeds the spare capacity of the vehicle electrical system or alternator, reconfigure the Vehicle Input Current Limit setting to be within available capacity.
- 11. Cable and fuse sizes are specified by various codes and standards which depend on the type of vehicle the battery is installed in. Selecting the wrong cable or fuse size could result in harm to the installer or user and/or damage to the BCDC Alpha or other equipment installed in the system. The installer is responsible for ensuring that the correct cable and fuse sizes are used when installing this BCDC Alpha.
- 12. A maximum of two lugs can be connected to each of the Terminals on the BCDC Alpha. Installing more than two may damage the BCDC Alpha and/or other equipment installed in the system and could lead to short circuits between terminals. If you need to connect more than two lugs, use a busbar.
- 13. Before performing work or maintenance on the auxiliary electrical system (which includes the Vehicle Start Battery, Auxiliary Battery, and Solar Panels), isolate all input and output sources of power to the electrical system and charger. Isolate the system by removing fuses or by activating isolation switches (if fitted). There is a risk electric shock and fire if all sources of power are not completely isolated before carrying out work.
- 14. The BCDC Alpha is intended for use in vehicles with Negative Ground. The advice and diagrams in this manual are not applicable to use in positively grounded vehicles, and so may lead to damage to the BCDC Alpha and associated components.

NOTICE

- 1. Keep the BCDC Alpha away from major heat sources (e.g. hot exhaust), high voltage, and avoid exposure to sunlight for long periods of time.
- 2. It is the installer's responsibility to ensure their installation complies with any applicable legal and regulatory requirements.
- 3. For fastening lugs to the BCDC Alpha Terminals, only use the supplied M3 x 8 mm / M5 x 10 mm Hex Head Phillips Screws or equivalent. Using longer screws may lead to poor electrical connection or may damage the BCDC Alpha.

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THE POWER OF  
REDARC

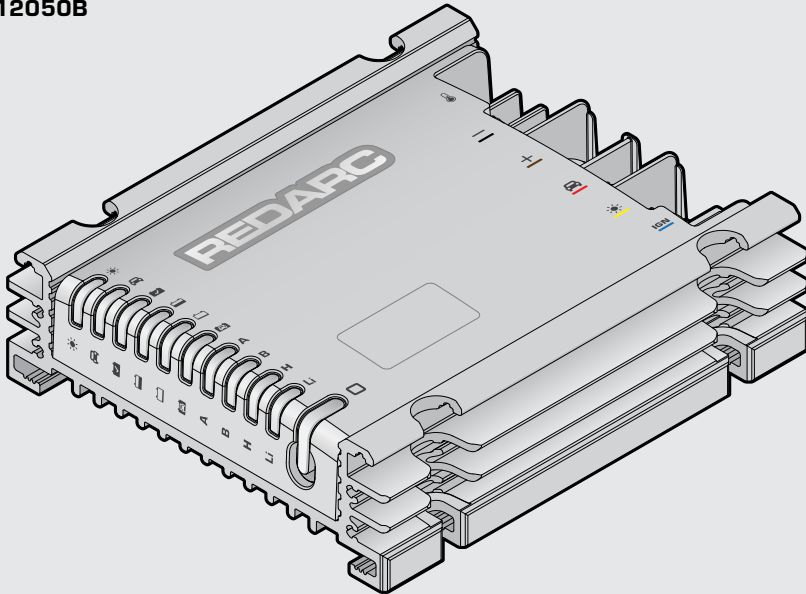
INSTALL GUIDE

BCDC ALPHA®

12 V 25 A / 50 A DC-DC Charger with Bluetooth® and Start Battery Charging

MODELS:

- BCDC12025B
- BCDC12050B



## BCDC ALPHA OVERVIEW

The BCDC Alpha charges all common 12 V automotive battery types including standard and heated lithium from both solar panels and the vehicle start battery. It is equipped with screw terminals for easy installation, and has a push-button interface for simple operation.

The BCDC Alpha 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, with an option for excess solar energy to then top-up the vehicle start battery.

Wirelessly pair to the BCDC Alpha using the REDARC Configurator and RedVision® App on your smartphone to configure, monitor and control your system.

The BCDC Alpha also features the capacity to seamlessly revive and charge a fully flattened lithium battery.

## FULL-LENGTH MANUAL

This document contains everything you need to know to complete a basic install of your BCDC Alpha.

Note that there is a full-length manual available that contains expanded installation information for more complex systems.



For the latest version of this document and any available translations, visit the REDARC website: [www.redarcelectronics.com](http://www.redarcelectronics.com)

## WARRANTY

For full warranty terms and conditions, visit the Warranty page of the REDARC website at [www.redarcelectronics.com/warranty](http://www.redarcelectronics.com/warranty)

### Australia and New Zealand:

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

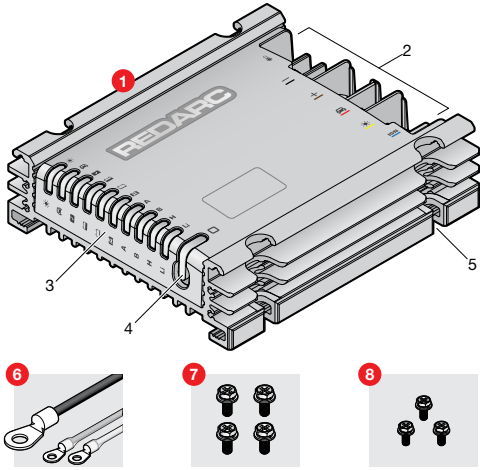
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## KIT CONTENTS



### 1 BCDC ALPHA

- Terminals
- Status LEDs
- Control Button
- Mounting Points (x4)

### 6 TEMPERATURE SENSOR CABLE — 2 m (6'7")

### 7 M5 x 10mm HEX HEAD PHILLIPS SCREW (x4)

### 8 M3 x 8mm HEX HEAD PHILLIPS SCREW (x3)

## STATUS LEDS

### SOLAR AND VEHICLE LEDS ☀️🚗

ON when the input is available and in use.

### CHARGING STAGE LEDS 📊🔋🔌

Shows the current charging stage the BCDC Alpha is in when charging the auxiliary battery. See **"Charging Stages"** for information about each charging stage: **Float, Absorption and Boost.**

### CHARGEBACK LED 🚗🔌

ON when the Start Battery Charge Mode is enabled and active, or when Start Battery Recovery is in progress.

### CHARGE PROFILE LEDS

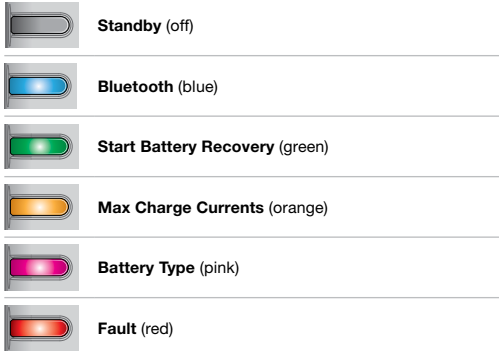
Shows the charging profile of the auxiliary battery, as configured via the Control Button or the Configurator App **Battery Type** setting.

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

## CONTROL BUTTON

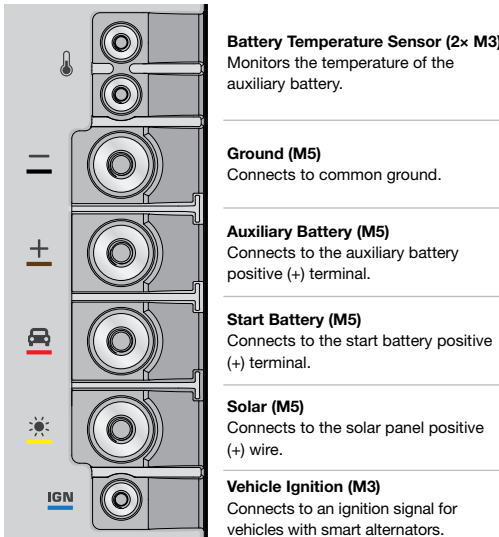
Controls the BCDC Alpha and can be used to configure essential settings — additional settings are configured using the Configurator App.

To wake up the BCDC Alpha press and hold the Control Button until it turns blue. Press the Control Button again to cycle through the settings as indicated by the LED colour. To enter the selected setting, press and hold the Control Button until the LED remains solid on.



## TERMINALS

The BCDC Alpha has female screw terminals.



## INSTALLATION — MOUNTING

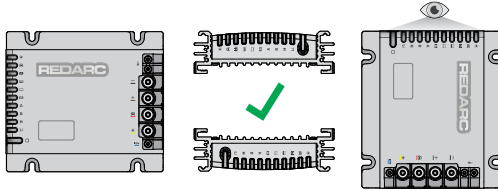
The BCDC Alpha can be installed in the engine bay of a vehicle, along a chassis rail or in the cabin of a vehicle.

### DON'T:

- ✗ Do NOT mount the BCDC Alpha in an orientation that allows liquid to pool at the terminals.
- ✗ DO NOT mount using adhesives or adhesive tape.

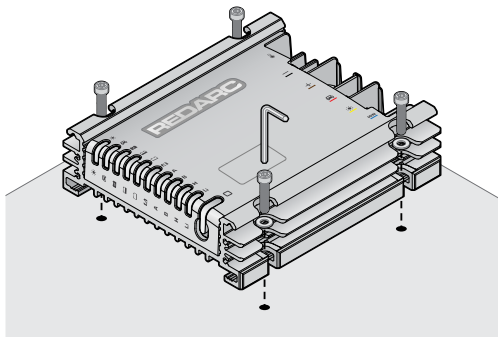
### DO:

- ✓ Use all mounting points on the BCDC Alpha.
- ✓ Mount in an orientation where the Control Button and Status LEDs are accessible and visible.
- ✓ If installing the BCDC Alpha in an enclosed space, make sure there is adequate venting at the top and bottom of the enclosure for cross-flow of air.
- ✓ Mount the BCDC Alpha to a fixed surface.
- ✓ Mount on flat a surface. Check the reverse side before drilling.
- ✓ Leave 40 mm (1.6") clearance around the BCDC Alpha.



### MOUNT THE BCDC ALPHA

Mount using four **M6 (1/4")** fasteners with washers.



### MOUNTING ACCESSORIES

REDARC has mounting brackets designed for specific vehicle models. They allow you to quickly mount the BCDC Alpha to existing mounting points in your vehicle. Visit the REDARC website to see the full range.




## SPECIFICATIONS

BCDC ALPHA SPECIFICATIONS		
Model	BCDC12025B	BCDC12050B
Nominal Current Rating	25 A	50 A
Operating temperature*1	−40°C to 85°C (−40°F to 185°F)	
Start Battery Input		
Voltage Range	9–32 VDC ---	
Maximum Input Current	28 A	55 A
Solar Input		
Voltage Range*2	9–48 VDC ---	
Maximum Input Current	28 A	55 A
Maximum Array Size	500 W	1000 W
Output		
Nominal Output Voltage	12 V	
Voltage Range	9–16 VDC ---	
Maximum Output Current	25 A	50 A
Battery Capacity Range	40 to 300 Ah	50 to 600 Ah
Maximum Output Power	400 W	800 W

\*1 As the temperature of the Unit rises above a certain level the current capacity of the output is decreased gradually to protect the battery and the Unit.

\*2 The maximum voltage of the solar array should be calculated for the minimum temperature that it would be exposed to. The value should be less than 48V or else damage to the Unit may occur. The Unit will not charge if the voltage is too high.

## COMPLIANCE

IP Rating	IP67/IP69K
FCC ID	2BAH6-BCDCX01
IC ID	30290-BCDCX01
  	CAN ICES-003 (B)/ NMB-003(B)

### INTERNAL TRANSMISSION NOTICE

**Note:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules and with Innovation, Science and Economic Development Canada's licence-exempt RSS (s). Operation is subject to the following two conditions:

(1) This device may not cause interference.

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

(1) L'appareil ne doit pas produire de brouillage.

(2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillard est susceptible d'en compromettre le fonctionnement

This equipment complies with the FCC and ISED Canada radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and all persons during normal operation.

Cet équipement est conforme aux limites d'exposition aux rayonnements de la FCC et ISED Canada établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec une distance minimale de 20 cm entre le radiateur et toutes les personnes pendant le fonctionnement normal.



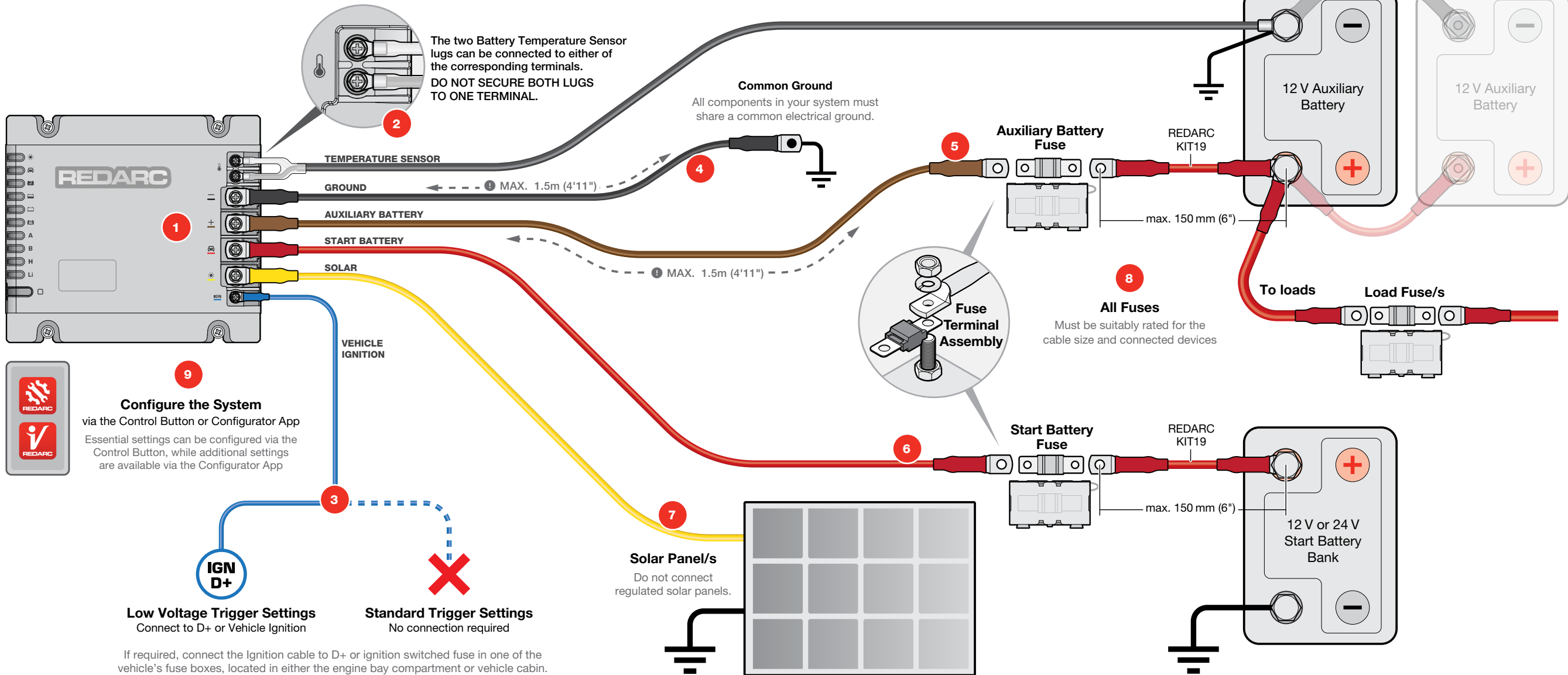
## EXAMPLE INSTALLATION

■ Refer to the full-length instruction manual for the BCDC Alpha and any other devices used in your system for additional wiring information.

❶ Some devices, wiring and parts shown in this example are not supplied.

## ORDER OF INSTALLATION

❶ Install in the correct order, referring to the numbered steps below this wiring diagram, for more information about each connection.



## DOWNLOAD THE APPS

### CONFIGURATOR APP

The Configurator App lets you configure and customise the features and functions of your BCDC Alpha.



### PAIRING INSTRUCTIONS

See "Configuration via the App" for pairing instructions.

### REDVISION® APP

The RedVision® App gives you remote access to BCDC Alpha functions and features including system monitoring, and start battery recovery.



### PAIRING INSTRUCTIONS

- Download the RedVision App and make sure Bluetooth is enabled on your smartphone.
- Press and hold the Control Button until it turns **blue**.
- Open the RedVision App and allow the required permissions if it's the first time using the App.
- Tap the **Menu** icon, then under the devices heading, tap **Add (+)**.
- Tap the device that matches the Product Serial Number on your BCDC Alpha. Read and agree to the disclaimer.
- When the Bluetooth pairing request appears, tap **Pair**.
- Once the Control Button 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).

The RedVision® App and the Configurator App and their interactions with the BCDC Alpha have not been tested on all smartphone models. Visit the application pages within your App store to view compatibility details.

## DEFAULT SETTINGS

Below highlights the default settings in the Configurator App.

Setting	BCDC12025B	BCDC12050B
Vehicle Input Trigger	Auto	Auto
Vehicle Input Current Limit	28 A	55 A
Start Battery Charge Mode	Disabled	Disabled
Battery Type*	Gel	Gel
Battery Size*	100 Ah	100 Ah
Max Charge Current	25 A	50 A
Low Voltage Alarm	9 V	9 V

\*Refer to the manufacturer's specifications for your auxiliary battery to find this value.

## INSTALLATION – WIRING

### BCDC ALPHA CABLE AND FUSE SIZING

Refer to this table to identify the cable sizes needed for the **Ground**, **Auxiliary**, **Start Battery** and **Solar** connections on the BCDC Alpha. Source lugs with a hole suitable for an M5 screw and barrel size to suit the required cable gauge.

**IMPORTANT:** The **Auxiliary** and **Start Battery** cables must be sized to conduct the configured Maximum Charge Current/Vehicle Input Current Limit of the auxiliary and start battery terminals (configured via the Control Button or via the Configurator App) and must be fused to protect wiring.

The **Solar** cable must be sized to conduct the short circuit current of your solar panel/s, regardless if it is below or greater than the maximum solar input current (28 A/55 A).

Expected Current	MIDI Fuse Rating (REDARC Fuse Kit) Auxiliary and Start Battery only		One way length		Cable Gauge	
	In-cabin Install	Engine Bay Install			mm <sup>2</sup>	AWG/B&S
10 A	15 A	15 A	0 – 2 m	0 – 6'7"	4	-
			2 – 5 m	6'7" – 16'5"	6	-
			5 – 9 m	16'5" – 29'6"	7.7	8
			9 – 12 m	29'6" – 39'4"	13.5	6
			0 – 2 m	0 – 6'7"	6	-
25 A – 28 A	40 A (FK40)	50 A (FK50)	2 – 5 m	6'7" – 16'5"	7.7	8
			5 – 12 m	16'5" – 39'4"	13.5	6
			0 – 5 m	0 – 16'5"	13.5	6
			5 – 12 m	16'5" – 39'4"	20.2	4
			0 – 9 m	0 – 29'6"	20.2	4
40 A	50 A (FK50)	60 A (FK60)	9 – 12 m	29'6" – 39'4"	26.6	3
50 A – 55 A	60 A (FK60)	70 A (FK70)				

### ❶ CONNECT LUGS TO THE BCDC ALPHA

- Connect all M5 lugs to the BCDC Alpha using the M5 screws and torque to 4 N-m (2.95 lbf-ft).

### ❷ BATTERY TEMPERATURE SENSOR CABLE

This cable connection allows the BCDC Alpha to monitor the temperature of the auxiliary battery and adjust the charging rate automatically to protect against overheating.

- Connect the **Temperature Sensor** cable to the Temperature Sensor terminal. Secure using two M3 Screws, torque to 1 N-m (0.74 lbf-ft).

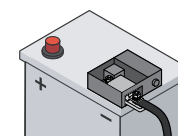
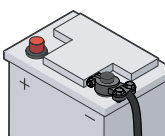
- Connect the **Temperature Sensor** cable to the negative (–) terminal on the auxiliary battery.

### ❸ VEHICLE IGNITION CABLE

- Determine if your vehicle has a variable voltage alternator by checking for a battery sensor on your vehicles start battery.

Standard Alternator

Variable Voltage Alternator (Smart Alternator)



### STANDARD ALTERNATOR

No connection required.

### VARIABLE VOLTAGE ALTERNATOR (SMART ALTERNATOR)

- Connect the **Ignition** cable with an M3 lug to the **Ignition** terminal. Secure using an M3 Screw, torque to 1 N-m (0.74 lbf-ft).
- For **CONTINUOUS IDLE** vehicles, connect the **Ignition** cable to a point that is live only when the ignition is turned on. For **IDLE STOP** vehicles, connect the **Ignition** cable to D+.

### ❹ COMMON GROUND CABLE

- Connect the **Ground** cable to a ground point that forms a common ground with all devices in your system. This can be achieved by connecting the **Ground** cable to a common ground busbar or the vehicle chassis.

### ❺ AUXILIARY BATTERY CABLE

- Mount a MIDI fuse holder within 150 mm (6") of the auxiliary battery positive (+) terminal.
- Take out the MIDI fuse from the holder and connect the **Auxiliary Battery** cable to the MIDI fuse holder.
- Connect a short cable between the fuse holder and the positive (+) terminal on the auxiliary battery. The short cable must be no longer than 150 mm (6"), REDARC KIT19 is recommended for this connection.

### ❻ START BATTERY CABLE

- Mount a MIDI fuse holder within 150 mm (6") of the start battery positive (+) terminal.
- Take out the MIDI fuse from the holder and connect the **Start Battery** cable to the MIDI fuse holder.
- Connect a short cable between the fuse holder and the positive (+) terminal on the start battery. The short cable must be no longer than 150 mm (6"), REDARC KIT19 is recommended for this connection.

### ❼ SOLAR CABLE

#### DON'T:

- DO NOT connect solar panels that have inbuilt regulators. The BCDC Alpha 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 48 V limit of the BCDC Alpha input.

#### DO:

- Make sure all wiring, components, and fuses used with your solar panel or solar array are compliant with local codes and standards.

- Cover the solar panel/s before wiring into the system.
- Connect the **Solar** cable to the solar panel/array using suitable connectors (e.g. MC4 connectors) for your system setup.

#### CONNECTING MULTIPLE SOLAR PANELS

- Refer to the full-length manual for instructions on how to connect multiple solar panels.

### ❽ FUSE CONNECTIONS

- To complete the **Auxiliary Battery** cable connection, install and secure the auxiliary battery MIDI fuse to the fuse holder.
- Install and secure the start battery MIDI fuse to the fuse holder to complete the **Start Battery** cable connection.

## CARE & MAINTENANCE

Periodically check that all wiring and connections are secure. Parts of the system may have moved during normal use.

## TROUBLESHOOTING

- Refer to the full-length manual for complete troubleshooting information.

## FAULTS

- In the event of any Status LEDs flashing red, refer to the RedVision App or to the full-length manual to identify the cause of the fault.

## ❹ CONFIGURATION VIA THE APP

### CONFIGURE YOUR SYSTEM

Once installed, configure the system by pairing your smartphone to the BCDC Alpha via Bluetooth.

#### PAIRING INSTRUCTIONS

- Download the Configurator App.
- Make sure Bluetooth is enabled on your smartphone.
- Press and hold the Control Button until it turns **blue**.
- Open the Configurator App and allow the required permissions.
- In the "Choose Configuration" screen, tap "Red Device" then select the system that matches the Product Serial Number on the BCDC Alpha.
- When the "Pair" banner appears, tap **Pair**.
- Under the "Charger Settings" heading tap "Charger Unit" to navigate to the "Configure BCDC Alpha" screen.

#### CONFIGURE THE BCDC SETTINGS

- In the "BCDC Settings", configure in the:
  - Vehicle Input Trigger** – dictates the vehicle start battery turn on/off voltage.
  - Vehicle Input Current Limit** – sets the maximum current drawn from the start battery (28 A or 55 A) also configurable via the Control Button.
- Set the **Start Battery Charge Mode** to On/Off (see "Start Battery Charge Mode").
- Once completed, tap **Save**.

#### CONFIGURE THE BATTERY SETTINGS

- In the "Battery Settings", refer to your battery manufactures specifications for these values.
  - Battery Type** – also configurable via the Control Button.
  - Battery Size**
  - Max Charge Current** – sets the maximum charge current from the BCDC Alpha (25 A or 50 A) also configurable via the Control Button.
- Once completed, tap **Save**.

#### CONFIGURE THE ALARM SETTINGS

- In the "Alarm Settings", configure the **Low Voltage Alarm**. When your battery goes below the configured value, the **Float** Status LED on the BCDC Alpha will flash red and an alert will be displayed in the RedVision® App.
- Once completed, tap **Save**.

#### COMPLETE CONFIGURATION

- Tap **Program** in the App.
- In the "Choose Configuration" screen, re-select your system. Do not exit the App until the success banner appears on your smartphone. The system is now configured, and Bluetooth pairing is complete.

## ❹ CONFIGURATION VIA THE CONTROL BUTTON

### SET CURRENT LIMITS

Using the Control Button sets both Charge Currents (**Vehicle Input Current Limit** and **Max Charge Current**) simultaneously. To set different values, use the Configurator App.

- Press and hold the Control Button until it turns **blue**, then press the Control Button to cycle through each setting until it is **flashing orange**.
- Press and hold the Control Button until the LED is **solid orange** to enter into the setting.
- Press the Control Button to cycle through settings in increments of 10%. The setting is indicated by the Charge Status LEDs.
- To confirm the chosen setting, press and hold the Control Button until it **rapidly flashes orange**. After 10 seconds of no-input, the Control Button LED will automatically turn off.

**NOTE:** The minimum limit on the BCDC12025B is 20%.

### SET BATTERY TYPE

The Battery Type setting must match the chemistry of your auxiliary battery, this makes sure that the correct charging profile is used for your battery's chemistry type.

- Press and hold the Control Button until it turns **blue**, then press the Control Button to cycle through each setting until it is **flashing pink**.
- Press and hold the Control Button until the LED is **solid pink** to enter into the setting.
- Press the Control Button to cycle through the Profile, indicated on the Charge Profile LEDs.
- To confirm, press and hold the Control Button until it **rapidly flashes pink**. After 10 seconds of no-input, the Control Button LED will automatically turn off.

#### CONFIGURATION SETTINGS

LED	Control Button	Configurator App Setting
A	Gel (default)	Gel (default)
B	Standard Lead Acid	Standard Lead Acid
H	Heated Lithium	Heated Lithium
Li	Standard Lithium	Standard Lithium

## OPERATION

### 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

Absorption stage maintains a constant voltage level 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 Lithium) on the output battery, keeping the battery topped up. When the battery loses enough charge or the voltage drops significantly, the BCDC Alpha returns to the Boost stage.

### START BATTERY CHARGE MODE\*

If enabled in the Configurator App, the BCDC Alpha will keep the vehicle's start battery topped up to 12.8V using the solar input once the auxiliary battery is fully charged.

When performing Chargeback, the **Chargeback LED** on the BCDC Alpha will illuminate solid red.

### START BATTERY RECOVERY\*

Start Battery Recovery charges a flat start battery from the auxiliary battery for approximately 15 minutes, providing enough charge to safely start the vehicle in the event of a flat battery.

The BCDC Alpha delivers 25 A/50 A to the start battery (unless the Max Charge Current or Vehicle Input Current Limit is configured lower) and aims to charge the start battery up to 14.6V.

#### START BATTERY RECOVERY VIA THE REDVISION APP

- In the App, tap **Menu**, then tap **Recovery**.
- When the "Initiate Recovery Mode" banner appears, tap **Accept**, the under "Battery Recovery Ready" heading on the home screen, tap **Go** to begin the Recovery process.
- In the App, the screen will display the Recovery progress and the **Chargeback LED** will illuminate **solid red**.
- The App will indicate when the Recovery is complete.

#### START BATTERY RECOVERY VIA THE BCDC ALPHA

- Press and hold the Control Button until it turns **blue**, then press the Control Button to cycle through each setting until it is **flashing green**.
- To start the Recovery, press and hold the Control Button again until it turns **solid green**. The **Chargeback LED** will illuminate **solid red** while the start battery is charging.

**NOTE:** If you need to cancel the Recovery process, press and hold the Control Button until the Control Button LED turns off.
- Once the **Chargeback LED** turns off, Recovery is complete.

**\*NOTE:** This mode is only available for 12V vehicle batteries and require the Vehicle Input Trigger to be set to 'Auto' or '12V' mode.