

THE POWER OF

REDARC

DC TO DC CHARGING



CHARGING

CHARGED AND READY FOR ADVENTURE.



THE AUSTRALIAN MADE ADVANTAGE

Born and bred in South Australia, REDARC has been powering adventure for over 45 years. Our products are trusted by explorers and weekend warriors alike, because we don't just build electronics, we build confidence.

Your first and only choice. Nobody designs, engineers, builds, or tests market-leading solutions like we do. Designed and built in our world-class Australian manufacturing facility, our rugged and reliable solutions are designed to thrive where others can't. We know this because we test our products in state-of-the-art in-house environmental and vibration testing facilities, to simulate years of use in days.

Every REDARC product is backed by industry-leading technical support and a commitment to world-class customer service, so you're never alone. We don't compromise on quality. So, wherever your journey takes you, REDARC will get you there and back.

At REDARC, Australian Made isn't just a badge, it's an advantage.



**BUILT TOUGH
IN AUSTRALIA**



**TESTED FOR
THE WORLD'S
HARSHEST
CONDITIONS**



**AUSTRALIAN
CUSTOMER
SERVICE**





WHAT IS A DC TO DC CHARGER?

Alternators are designed to top up your start battery and run the vehicle's basic electrical accessories while the engine is running. A DC to DC charger takes power from your vehicle's alternator and uses it to charge a second battery when the vehicle is running. Then, when the vehicle is not running, a DC to DC charger will isolate the batteries from each other so your devices don't drain your start battery.

While you can charge some secondary batteries with your alternator, you will struggle to charge it properly, leaving you with less usable power and reduced battery life.

WHY DO I NEED A DC TO DC CHARGER?

If you are planning to run a fridge, camp lights, or keep your gadgets charged while you're off grid, you'll need a second battery. That battery needs charging or you're risking being stuck at camp with spoiled food and warm drinks.

These chargers manage the charge your secondary battery receives, making sure your battery gets the juice it needs safely and efficiently. This is especially important if you're wanting to charge lithium batteries. A good DC to DC charger, like REDARC's BCDC range, boosts charging voltage over long cable runs and adapts to smart alternators, ensuring your second battery reaches full capacity no matter where you're headed.



Scan QR code
to learn more.

CHARGING



CHARGED AND READY FOR ADVENTURE.

Run your 12V accessories without the stress of a dead start battery with REDARC's range of BCDC chargers.

These compact and advanced DC to DC battery chargers protect your start battery from excessive discharging, while charging your secondary battery to a proven 100%, no matter the battery type. Perfect for a variety of applications, from engine bay to in-cabin, caravan to camper, trailer to marine.



SMART CHARGING AND BATTERY PROTECTION

BCDC chargers manage the charging process to ensure your batteries receive the right amount of power, protecting your battery against overcharging.



START BATTERY STAYS CHARGED & READY TO GO

Using the built-in battery isolator, BCDC chargers automatically disconnect the start battery from the secondary battery, helping you avoid a flat start battery.



GREEN POWER PRIORITY™

Green Power Priority™ technology ensures that the maximum available solar charge is used before DC vehicle power, reducing the load on your alternator.



MULTI-STAGE CHARGING

BCDC chargers automatically switch between stages in its advanced charging process to charge your battery to a proven 100%.



SEAMLESS INTEGRATION

Regardless of the vehicle battery chemistry, alternator type or installation location, the BCDC will keep you charged and your devices powered.



IN-BUILT LED INDICATION

The design of the BCDC incorporates in-built LED's to clearly communicate the charge process and assist with fault detection.

INDUSTRY LEADING TECHNOLOGY

BUILT TOUGH

The BCDC Classic, Trailer (BCDC1212T) and 12V & 24V Single Input chargers feature resin sealed electronics to aid with thermal management and ensure the charger is resistant against environmental factors, including extreme heat, dust and sand ingress, submersion, and vibration. BCDC Alpha, is IP67/69K rated to protect against dust, dirt and water.

ADVANCED TESTING

We're dedicated to delivering the best, which is why we invest in cutting-edge manufacturing and testing. From reducing RF emissions with advanced electromagnetic tests, to simulating years of wear and tear in just weeks, we push our products to their limits. We even test them in extreme environments to ensure they're ready for anything life throws your way.

RANGE

	CORE	CLASSIC	ALPHA	ALPHA R
Lithium Ready	✓	✓	✓	✓
Built-In Isolator	✓	✓	✓	✓
Silent Operation	✓	✓	✓	✓
In-Cabin Install	✓	✓	✓	✓
Under Bonnet Install	●	✓	✓	●
MPPT Solar Regulator	✓	✓	✓	✓
Solar Chargeback	●	●	✓	✓
Start Battery Recovery	●	●	✓	✓
Alternator Protection / Hybrid Compatible	●	●	✓	✓
Battery Monitoring	●	●	●	✓
Output Monitoring	●	●	✓	✓
Intelligent Charging	●	●	●	✓
RedVision Connectivity	●	●	●	✓

WHAT CHARGER DO I NEED?

BATTERY SIZE		CHARGER SIZE
AGM / LEAD ACID	LITHIUM	
80-200AH	UP TO 150AH	
200-400AH	100-300AH	
200-500AH	100+AH	
400+AH	200+AH	100A

RECOMMENDED CAPACITY. CHECK WITH YOUR BATTERY MANUFACTURER.

PRODUCT ICONS KEY



Suitable for in-cabin installation only



Suitable for under bonnet and in-cabin installation



Solar ready



RedVision App compatible

BCDC ALPHA



ALWAYS POWERED, NEVER STRANDED.

As the only DC to DC charger that offers both start battery charging and recovery, the BCDC Alpha ensures you'll never be stuck with a flat battery, giving you the confidence to tackle any adventure. Feature-packed with over-the-air updates for future-proof charging, this charger offers all the power without the hassle.



HYBRID READY

Limit input current to protect vehicle alternators—making it suitable for vehicles with low surplus current or small DC converters like hybrid and electric vehicles.



NEVER GET STRANDED

Recover your flat start battery with the push of a button, and get back on the road quickly and safely with Start Battery Recovery.



INSTANT INSIGHT

Stay informed and monitor charger status in real-time through the RedVision smart phone app connected using Bluetooth.



SIMPLIFIED INSTALL

Mounting points and screw connections allow for a simple installation. No solder, no tricky wiring configuration, no worries!



START BATTERY CHARGE MODE

Use excess solar power to automatically top up the start battery when the secondary battery is full.



AUSTRALIAN MADE

Made in Australia, tested in the world's harshest conditions. Backed by REDARC's leading technical support.

BCDC ALPHA R

BCDC12050R, BCDC12100R



OUTSMARTS ORDINARY CHARGERS

The BCDC Alpha R is more than a DC to DC charger, it's a battery management solution for those who demand more from their power system.

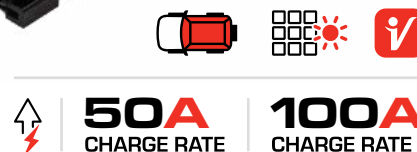
This Australian-made system is designed to charge an in-cabin or canopy secondary battery via your vehicle's alternator and solar power. Perfect for off-grid adventures and touring setups, BCDC Alpha R also has start battery maintenance, capable of both maintaining and recovering your start battery.

INTELLIGENT CHARGING

Unlike standard DC to DC chargers, the BCDC Alpha R adjusts its charge mode in real-time to meet your battery's needs, protecting the battery, maximising efficiency and extending lifespan. Enhanced with configurable input current limits, perfect for hybrid and EVs, it functions as a true battery manager, not just a charger.

ADVANCED MONITORING

Stay on top of your system with state of charge percentage, time remaining, and charger performance, delivered straight to your mobile device. Included with the BCDC Alpha R, the Smart Battery Monitor also allows the BCDC Alpha R to distinguish between the current sent to your battery and the current directed to the loads in your system.



BCDC ALPHA

BCDC12025B, BCDC12050B



ALWAYS CHARGED, NEVER STRANDED

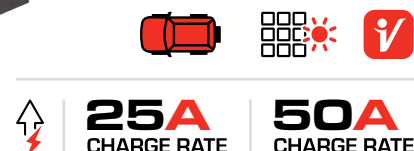
Stay powered on every adventure with the BCDC Alpha. This rugged, Australian-made charger uses advanced technology to charge your secondary and start batteries via your vehicle's alternator and solar power.

INSTANT INSIGHT

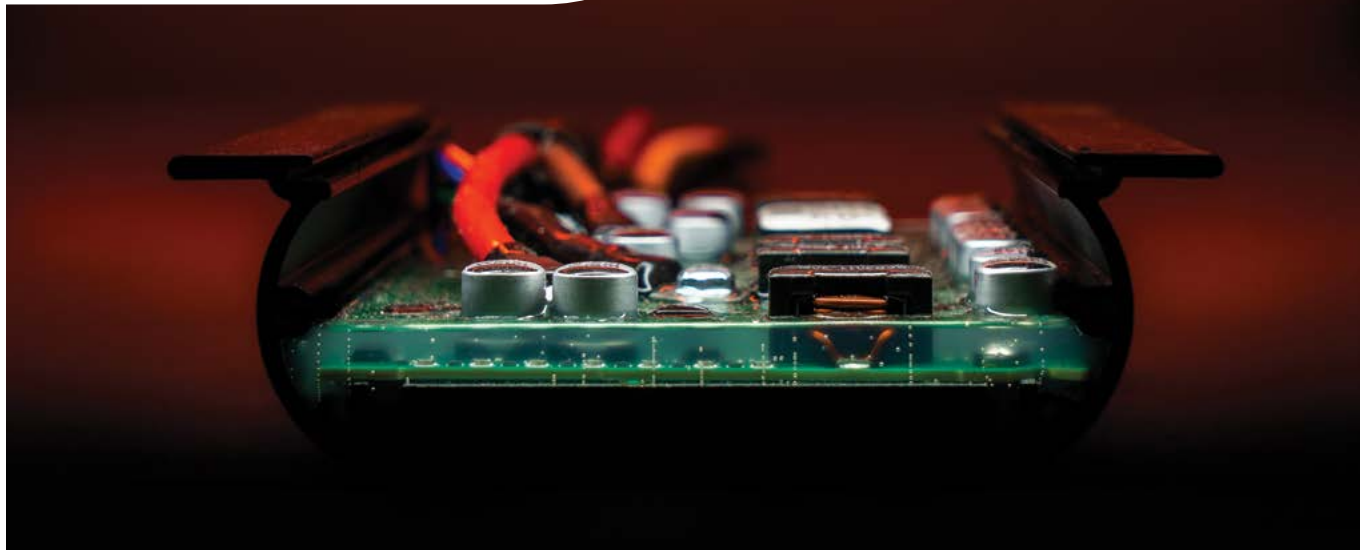
Receive over-the-air updates, stay informed on your system, and monitor charger status in real-time all through the RedVision app. Also through the app, or via a button on the charger, initiate Start Battery Recover to revive a flat start battery. No cables, no strangers, no dramas.

BUILT TOUGH

BCDC Alpha outlasts and outperforms other chargers. Australian built and tested with IP67/69K, dust and moisture protection, and exceptional thermal performance makes the BCDC Alpha the most reliable, highest performance option. Installation is a breeze with a user-friendly pushbutton interface, screw terminals, and input current limiting capabilities.



THE RANGE



BCDC Classic

BCDC CLASSIC

BCDC1225D, BCDC1240D, BCDC1250D

THE 'EVERYTHING PROOF' DC TO DC CHARGER

Water, mud, dust, heat and corrugated roads are no match for the BCDC Classic. It's the DC to DC charger to have when failure is not an option.

SMART AND RUGGED

Simultaneous solar and DC charging, lithium compatibility, MPPT solar regulator – all in a compact form factor. Suitable for under-bonnet installations, the range features dual battery isolation, and fault detection against voltage spikes, overheating, and reverse polarity.



25A
CHARGE RATE

40A
CHARGE RATE

50A
CHARGE RATE

BCDC CORE

BCDCN1225, BCDCN1240

POWER UP FOR LESS

The BCDC Core is the perfect DC to DC charger for in-cabin, canopy, or battery box setups where dust and weatherproofing isn't required. Each BCDC Core features an MPPT solar regulator and Green Power Priority™ all in the familiar BCDC form factor.

COMPACT AND SILENT

Compact, with no loud fans or relays, the BCDC Core can be tucked away, leaving room in the cabin for more important things. Hide it under the rear floor, behind a side panel or under the seats and make your power setup look like it was meant to be there.



25A
CHARGE RATE

40A
CHARGE RATE



BCDC 24V SINGLE INPUT

**BCDC2420, BCDC2420-LV, LFP2420,
LFP2420-LV**

VEHICLE AND SOLAR INPUT

These 20A chargers are designed to meet the demands of 24V charging. The BCDC2420 charges AGM, gel, calcium content, VRLA and lead acid batteries. The LFP2420 and LFP2420-LV are designed to charge lithium batteries. LV models feature a lower voltage setting in order to operate with variable voltage alternators.



BCDC SINGLE INPUT

BCDC1220, BCDC1220-IGN

VEHICLE INPUT ONLY

Our single input DC to DC chargers take charge from the alternator only. BCDC1220 models charge secondary batteries while the engine is running, while the IGN model is suitable for vehicles with an ECU-controlled, variable voltage alternator.



BCDC TRAILER S

BCDC1212S

VEHICLE AND SOLAR INPUT

The ideal battery charger for enclosed trailers - such as camper trailers, horse floats, and mobile service vehicles. Combines a 12A tow vehicle charger and a 40A MPPT solar regulator into one unit for simplified power management.



BCDC TRAILER

BCDC1212T

VEHICLE INPUT ONLY

The ideal battery charger for trailers with electrical equipment and accessories - such as dump trailers, work trailers, car trailers and camper vans. Potted and fully sealed electronics make it suitable for external installation.

ACCESSORIES



BCDC MOUNTING BRACKETS

Our vehicle-specific mounting brackets aid engine-bay installations of our BCDC range, allowing installation in the front of the vehicle.

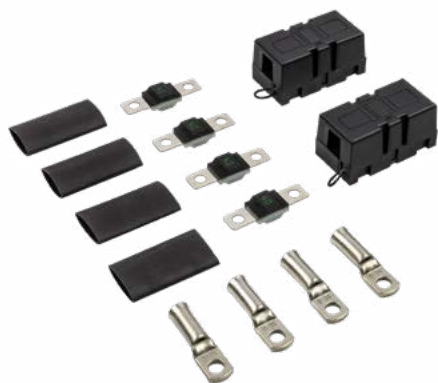
☐	BCDCMB-101	Toyota Landcruiser 200 (11/2008 onwards)
☐	BCDCMB-102	Toyota Landcruiser 70 (03/2007 onwards)
☐	BCDCMB-103	Toyota LandCruiser Prado 150 (10/2009 onwards)
☐	BCDCMB-104	Toyota Hilux (03/2009 - 09/2015)
☐	BCDCMB-105	Toyota Hilux (10/2015 onwards)
☐	BCDCMB-106	Isuzu D-MAX (06/2012 - 2019) & Holden Colorado (10/2015 onwards)
☐	BCDCMB-107	Universal Mounting Kit
☐	BCDCMB-108	Toyota LandCruiser J100 & J105 (1998 - 2007)
☐	BCDCMB-109	Mitsubishi Triton MR Diesel & Pajero Sport QF (2019 onwards)
☐	BCDCMB-110	Nissan Patrol Y61, GU Series 4 - 9 Diesel (01/2005 - 04/2016)
☐	BCDCMB-111	Toyota LandCruiser 300 (2021 onwards)
☐	BCDCMB-112	Ford Ranger, Raptor & Everest (V6 Models Only) (07/2022 onwards)
☐	BCDCMB-114	Toyota LandCruiser 70 (2024 onwards)



BCDC WIRING KITS

Our wiring kits are designed to facilitate easy installation of a BCDC in a variety of battery locations and configurations.

☐	BCDCWK-001	BCDC Classic25 (BCDC1225D)	Engine bay - side by side
☐	BCDCWK-002	BCDC Classic25 (BCDC1225D)	Engine bay - across vehicle
☐	BCDCWK-003	BCDC Core25 (BCDCN1225) BCDC Classic25 (BCDC1225D)	Vehicle rear
☐	BCDCWK-004	BCDC Classic40 (BCDC1240D) BCDC Classic50 (BCDC1250D)	Engine bay - side by side
☐	BCDCWK-005	BCDC Classic40 (BCDC1240D) BCDC Classic50 (BCDC1250D)	Engine bay - across vehicle
☐	BCDCWK-006	BCDC Core40 (BCDCN1240) BCDC Classic40 (BCDC1240D) BCDC Classic50 (BCDC1250D)	Vehicle rear
☐	BCDCWK-101	BCDC Alpha25 (BCDC12025B)	Engine bay - side by side
☐	BCDCWK-102	BCDC Alpha25 (BCDC12025B)	Engine bay - across vehicle
☐	BCDCWK-103	BCDC Alpha25 (BCDC12025B)	Vehicle middle
☐	BCDCWK-104	BCDC Alpha25 (BCDC12025B)	Vehicle rear
☐	BCDCWK-105	BCDC Alpha50 (BCDC12050B)	Engine bay - side by side
☐	BCDCWK-106	BCDC Alpha50 (BCDC12050B)	Engine bay - across vehicle
☐	BCDCWK-107	BCDC Alpha50 (BCDC12050B)	Vehicle middle
☐	BCDCWK-108	BCDC Alpha50 (BCDC12050B)	Vehicle rear



FUSE KITS

Designed to provide a simple, neat fuse installation, these kits are equipped with high quality fuses and fuse holders to fit the cable required for the specific current and make a solid connection.

☐	FK23	23A Fuse Kit	BCDC1212T (input) & BCDC1212S (input)
☐	FK30	30A Fuse Kit	BCDC1212T (output)
☐	FK40	40A Fuse Kit	BCDC12025B, BCDC1225D & BCDCN1225
☐	FK50	50A Fuse Kit	TVMS1240, BMS1230S3 & BMS1230S3R
☐	FK60	60A Fuse Kit	BCDC12050B, BCDC1240D, BCDCN1240, BCDC1212S (output) & 100A SBI (standard)
☐	FK70	70A Fuse Kit	BMS12050
☐	FK100	100A Fuse Kit	100A SBI (with override)
☐	FK125	125A Fuse Kit	200A SBI (standard)
☐	FK175	175A Fuse Kit	BMS12100

POWER KITS

These kits offer simple and reliable DC and solar charging solution to power your journey. Thanks to the included Smart Battery Monitor, each kit offers advanced Bluetooth battery monitoring, delivered straight to your fingertips.

Tailored for cabin, canopy, and trailer set ups, each kit includes a BCDC charger, Smart Battery Monitor, and the necessary fuse kit packaged in a single carton.



4X4 POWER KIT 25A 4X4POWERKIT1

Perfect for those wanting to add a moderate sized second battery in their cabin, canopy or a battery box. This kit includes a BCDC Core25 for simultaneous DC and solar, perfect for running a fridge or camp lights for weekend adventures.



4X4 POWER KIT 40A 4X4POWERKIT2

Power extended adventures with the included BCDC Core40 perfect for larger battery banks in cabin, canopy or a battery box. Run a fridge, camp lights and more, and enjoy peace of mind with real-time battery monitoring.



TRAILER POWER KIT TRAILERPOWERKIT1

Charge and monitor your trailer's battery while on the move, eliminating the need for unnecessary idling and reducing the dependence on mains power charging. The Trailer Power Kit has everything you need for trailer battery management.

SYSTEM ADD-ONS



SMART BATTERY MONITOR

BSEN500

KNOWLEDGE IS POWER

The REDARC Smart Battery Monitor is your solution for accurate and real-time battery level tracking. Featuring RedVision connectivity and enhanced Bluetooth, get state of charge, time remaining, and current flow information at your fingertips. With only three connection points and a user-friendly configuration app, you can start monitoring within minutes. A simple addition to any 12-volt power system, the Smart Battery Monitor is the easy choice for keeping track of your batteries so you can focus on your adventure.

EFFORTLESS SETUP

Three connection points and our intuitive app get you monitoring in no time. Open the app with a single touch, and your battery details are right there.

UNRIVALLED ACCURACY

Up to 5 times more accurate than the leading competitor. You can trust that "2 Hours Left" means "2 Hours Left".

BUILT TO LAST

Our rigorous testing ensures that the Smart Battery Monitor won't let you down when the road gets rough. It's made in Australia so you know it'll go the distance.



500A
CURRENT RATING

SMART BATTERY ISOLATOR

100A | SBI12, SBI12D, SBI24, SBI24D
200A | SBI212, SBI212D, SBI224, SBI224D
LITHIUM | SBI12-BLD, SBI12-LLD

SIMPLE OFF-GRID POWER

REDARC's compact and microprocessor-controlled Smart Start® Battery Isolators (SBI) protect the start battery from excessive discharge by isolating it from a secondary battery that's powering non-essential accessories and appliances.

SOLAR AND LITHIUM COMPATIBLE

Dual sensing models (-D) are designed for secondary batteries charged by another source, such as solar panels. For lithium setups, use an SBI Load Disconnect Controller: -BLD for BMS, or -LLD for lithium load disconnect.

SMART AND RUGGED

SBI's features built-in surge protection, advanced fault detection, silver contacts perfect for marine use, and an LED indicator to display faults, including over-voltage, and excessive current draw. Its low 120 mA draw reduces heat, while heavy-duty 200A models are built for winching applications.



	CONNECTION VOLTAGE	ISOLATE VOLTAGE
12 V SYSTEM	13.2 V	12.7 V
24 V SYSTEM	26.4 V	25.4 V

SMARTCHARGE AC CHARGERS

SBC1204, SBC1206, SBC1208, SBC1210

LEADING THE CHARGE

Compact and easy to use, the REDARC SmartCharge AC Battery Chargers provide critical maintenance to batteries left unused for extended periods. Compatible with common automotive battery types including lithium, they provide a simple readout that indicates charging progress.

SMART AND SIMPLE

These chargers maintain your battery through an 8-stage charging process, automatically adjusting its charge to suit the battery's voltage and type. Whether in a caravan, car, boat, or bike, simply plug in it, clip it on and turn it on. Then, rest easy knowing your battery is getting exactly the charge it needs, without the risk of overcharging.

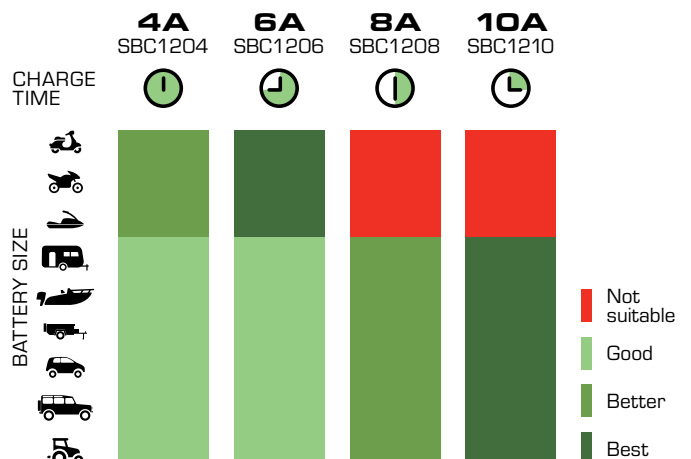
ACCESSORIES

These cables display battery status via a red, yellow or green light.

SBC12ACC1-4 for in-cabin or canopy monitoring
 SBC12AAC1-5 for engine bay monitoring
 SBC12AAC1-6 for non-permanent monitoring



WHAT SMARTCHARGER DO I NEED?



SPECIFICATIONS

	24 V	TRAILER			CORE	
	BCDC2420 BCDC2420-LV LFP2420 LFP2420-LV	BCDC1212S	BCDC1212T	BCDC1220 BCDC1220-IGN	CORE25 BCDCN1225	CORE40 BCDCN1240
Input voltage range	9 - 32 V	9 - 32 V		9 - 32 V	9 - 32 V	
Solar range	9 - 32 V	9 - 32 V	N / A	N / A	9 - 32 V	
Output power	600 W	600 W	147 W	300 W	375 W	600 W
Output current	20 A	55 A	11 A	20A	25 A	40 A
Standby current	< 8 mA	< 8 mA		< 8 mA	< 8 mA	
Recommended input fuse	60 A	23 - 30 A	15 - 23 A	40 A	40 A	60 A
Recommended output fuse	30 A	60 A	30 A	40 A	40 A	60 A
MPPT solar regulator	Yes	Yes	No	No	Yes	
Install location	In-cabin / under bonnet	In-cabin	In-cabin / under bonnet	In-cabin / under bonnet	In-cabin	
Operating temperature	-20°C - 80°C	-20°C - 80°C	-15°C - 80°C	-20°C - 80°C	-10°C - 80°C	
Dimensions (D × W × H)	150 × 120 × 37 mm	165 × 120 × 37 mm		100 × 120 × 37 mm	165 × 120 × 37 mm	
Weight	680 g	900 g	800 g	450 g	900 g	



Scan QR code for
wiring diagrams /
product manuals.



CLASSIC			ALPHA				
CLASSIC25 BCDC1225D	CLASSIC40 BCDC1240D	CLASSIC50 BCDC1250D	ALPHA25 B BCDC12025B	ALPHA50 B BCDC12050B	ALPHA50 R BCDC12050R	ALPHA100 R BCDC12100R	
9 - 32 V			9 - 32 V				Input voltage range
9 - 32 V			9 - 48 V				Solar range
375 W	600 W	750 W	400 W	800 W	800 W	1600 W	Output power
25 A	40 A	50 A	25 A	50 A	50 A	100 A	Output current
< 8 mA			< 6 mA ^{*1}	< 6 mA ^{*1}	< 30 mA ^{*1}	< 45 mA ^{*1}	Standby current
40 A	60 A	60 A	70 A ^{*2}	70 A ^{*2}	70 A ^{*2}	175 A ^{*2}	Recommended input fuse
40 A	60 A	60 A	60 A ^{*2}	60 A ^{*2}	60 A ^{*2}	125 A ^{*2}	Recommended output fuse
Yes			Yes				MPPT solar regulator
In-cabin / under bonnet			In-cabin / under bonnet		In-cabin		Install location
-10°C - 80°C			-40°C - 85°C		-20°C - 60°C		Operating temperature
165 × 120 × 37mm			164 × 146 × 44mm			385 × 146 × 50mm	Dimensions (D × W × H)
950 g			925 g	960 g	960 g	2.2 kg	Weight

^{*1} Typical standby current including Smart Battery Monitor

^{*2} Maximum recommended input/output fuse



NOTES



These products may have patent(s) granted and/or pending, design and eligible layout rights may also subsist. Scan the QR or visit: www.redarcelectronics.com/patent

THE POWER OF

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