



12V DCDC MPPT BLUETOOTH CHARGER

OWNER'S MANUAL

KADCDCBT25A-AND | KADCDCBT25A-BBK | KADCDCBT40A-AND | KADCDCBT40A-BBK



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SPECIFICATIONS

CHARGER SPECIFICATIONS

SKU	KADCDCBT25A-AND	KADCDCBT25A-BBK	KADCDCBT40A-AND	KADCDCBT40A-BBK
Output Voltage	3V-15.3V			
Max Charge Current	25A		40A	
Max Current Input	28A		56A	
Standby Current	<5mA		<10mA	
Operating Temperature	-20°C to 80°C			
12V Alternator Input	9-16V			
24V Alternator Input	20-32V			
Max Alt Efficiency	MAX 92%		MAX 92%	
Solar Input Range	9-32V		9-32V	
MPPT Efficiency	MAX 99%		MAX 99%	
Dimensions	57 x 121 x 180mm		57 x 121 x 215mm	
Weight	1.6kg		1.8kg	
IP Rating	IP66			
Certifications	AS/NZS 62368 AS/NZS CISPR32 AS/NZS 2772.2:2016 AS/NZS 4268:2017		 	
Recommended Output Fuse	50A			

CHARGING SPECIFICATIONS

NOMINAL BATTERY VOLTAGE	12V				
BATTERY TYPE	WET	GEL	AGM	CAL	LITHIUM
BULK VOLTAGE (CC)	14.4V	14.1V	14.7V	15.3V	14.5V
ABS VOLTAGE (CV)	14.4V	14.1V	14.7V	15.3V	14.5V
FLOAT VOLTAGE (CV)	13.4V	13.5V	13.4V	13.6V	-

ALTERNATOR CUT-IN / CUT-OUT VOLTAGES

12V ALT CUT-IN/OUT VOLTAGE	IGN ON CUT-IN=12.2V	IGN ON CUT-OUT=10.5V	IGN OFF CUT-IN=13.2V	IGN OFF CUT-OUT=12.6V	-
24V ALT CUT-IN/OUT VOLTAGE	IGN ON CUT-IN=24.4V	IGN ON CUT-OUT=21V	IGN OFF CUT-IN=26.4V	IGN OFF CUT-OUT=25.2V	-

** CC = Constant Current | CV = Constant Voltage

**Return to Bulk Voltage - The KickAss DCDC charger range implements an intelligent voltage monitoring system to determine the point at which the charger transitions from Float back to bulk. This ensures the battery SOC is always maintained in an optimal state, regardless of whether the battery is being actively discharged or in a standby / low discharge state.

PRODUCT OVERVIEW



DIMENSIONS



PRODUCT FEATURES

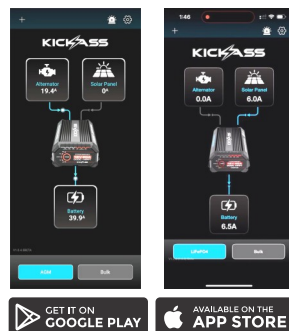
25 / 40A Charger Output

The 25A and 40A models deliver a true continuous output of 25A and 40A respectively, ensuring consistent and reliable battery charging.

Bluetooth Monitoring and Control

All models support connection to a mobile Bluetooth app, available on the App Store and Google Play.

The app provides real-time input and output data, configuration options, OTA firmware updates, and access to warnings and fault diagnostics.



Plug-and-Play Installation

Anderson-style connectors on the alternator and solar inputs, as well as the battery output, allow for a simple, reliable plug-and-play installation.

Dual Charging Input – Alternator and Solar

The charger accepts input from either an alternator or solar source. If both sources are connected, the charger will prioritise the alternator input.

IP66 Rating

Heavy duty casing with IP66 ingress protection ensures reliable performance in harsh environments.

12 / 24V Alternator Compatibility

The DCDC charger is compatible with both 12V and 24V nominal alternators, with the operating mode easily configurable via the mobile Bluetooth app.

The maximum input current can be configured via the mobile Bluetooth app, allowing the charger to limit alternator draw. This feature is useful for vehicles with low-power alternators or hybrid systems with limited output capacity.

Note: Always verify the alternator/generator's output voltage and current ratings in hybrid vehicles.

Hybrid Compatible

The maximum input current can be configured via the mobile Bluetooth app, allowing the charger to limit alternator draw. This feature is useful for vehicles with low-power alternators or hybrid systems with limited output capacity.

Note: Always verify the alternator/generator's output voltage and current ratings in hybrid vehicles.

Smart Alternator Compatible

Compatible with both smart (variable voltage) and fixed voltage alternators.

For best performance, the IGN wire should be connected in all installations. It is required for smart alternators but optional for fixed-voltage systems.

Lithium Battery Compatible

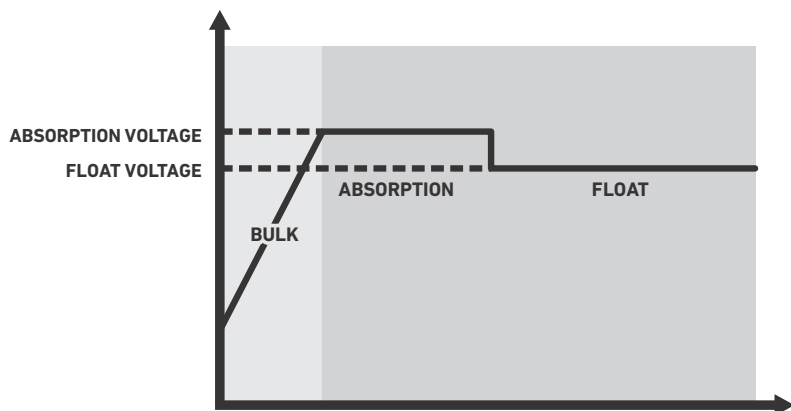
Dedicated lithium charging profiles are included for optimal performance and battery protection.

Automatic Lithium Recovery Mode

When a lithium battery enters sleep or low-voltage disconnect mode, the charger will automatically initiate recovery when an input source is detected. Current is limited during recovery before resuming full-rate bulk charging.

Multi-Stage Charging

The charger supports a 3-stage charging algorithm:



Starter Battery Isolation

If the alternator's voltage drops below the charger's input cut-out threshold, the charger will enter isolation mode to prevent draining the vehicle's starter battery.

Support for Multiple Battery Chemistries

Includes selectable charging profiles for LiFePO₄, AGM, WET, CAL, and GEL battery types.

Integrated Protection Features

- Battery reverse polarity protection
- Solar input reverse polarity protection
- Alternator input reverse polarity protection
- Battery output over-current protection
- Output over-voltage protection
- Output under-voltage protection
- Over-temperature protection
- Alternator under-voltage and over-voltage protection
- Solar over-voltage protection

External Battery Temperature Sensor

The temperature sensor adjusts bulk and absorption voltages for AGM, WET, CAL, and GEL batteries. It should be attached to the negative terminal of the charging battery.

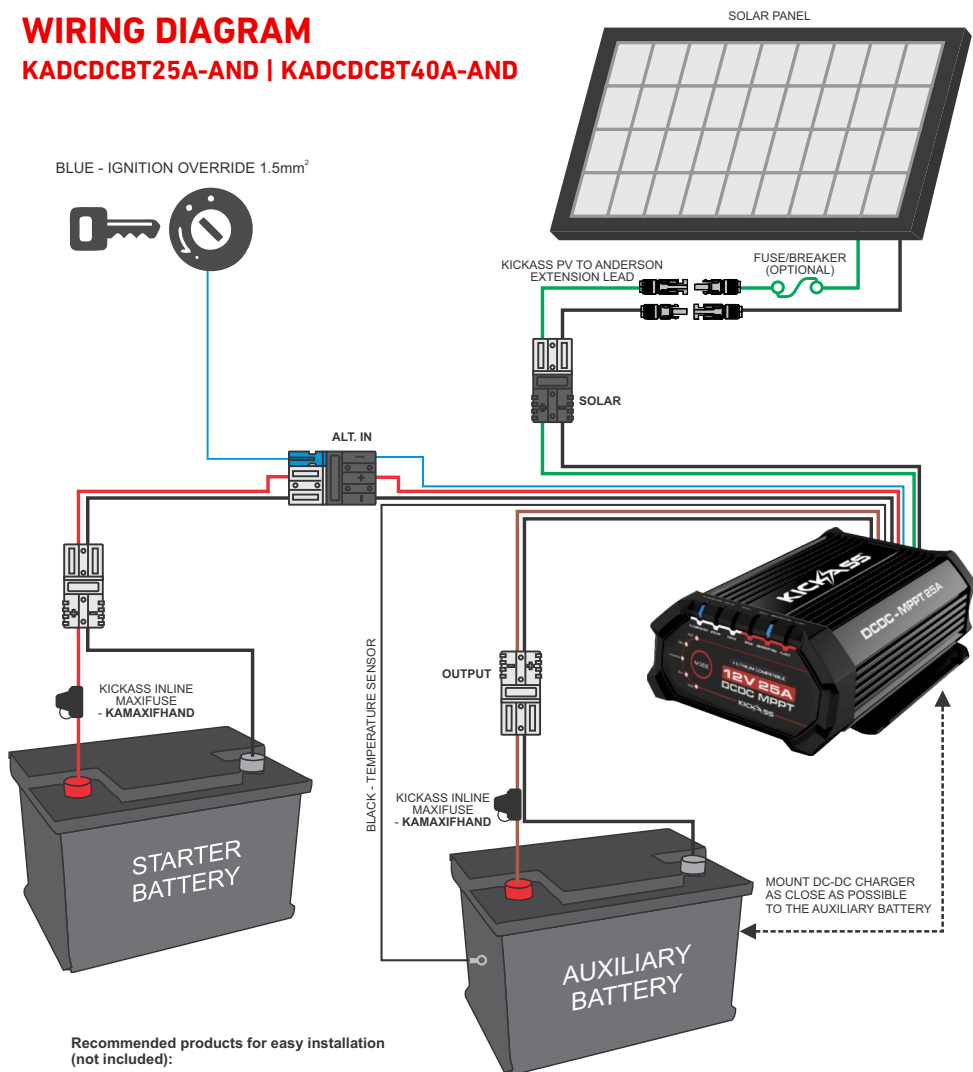
Standby Mode

If no input is detected for five minutes, the charger enters standby mode and the LED status lights on the front panel turn off. It will resume active operation when input voltage exceeds the cut-in threshold or the mode button is pressed.

INSTALLATION INSTRUCTIONS

WIRING DIAGRAM

KADCDCBT25A-AND | KADCDCBT40A-AND



Recommended products for easy installation (not included):

KAMAXIFHAND - KickAss Inline Maxi Fuse Holder with Anderson Style Plug

KADBWK8MMPP - KickAss Plug and Play dual battery wiring kit (For KADCDC25ABT models)

KAHDBWKPP65 - KickAss Heavy Duty Plug and Play DCDC Wiring Kit - 6.5m (All models)

KAHDBWKPP8 - KickAss Heavy Duty Plug and Play DCDC Wiring Kit - 8m (All models)

OPERATION INSTRUCTIONS

CONNECTING TO THE BLUETOOTH APPLICATION

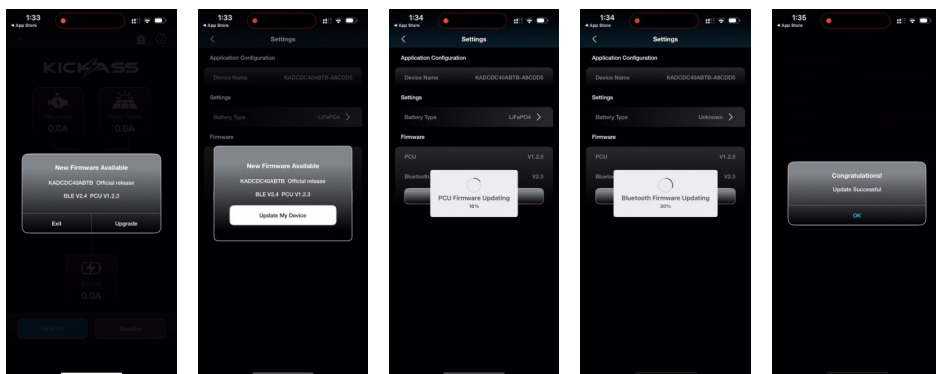
1. Download the mobile application from the App or Google Play Store.



KA CHARGE (4+)
Kickass Products Pvt Ltd
Designed for iPhone
Free

OVER THE AIR (OTA) UPDATE

When the Bluetooth mobile application first connects to the DCDC charger, it will automatically check for any available firmware updates. If an update is available, it must be downloaded and installed before the app can be used.



During the Over-The-Air (OTA) update process, all LED status lights on the DCDC charger will flash.



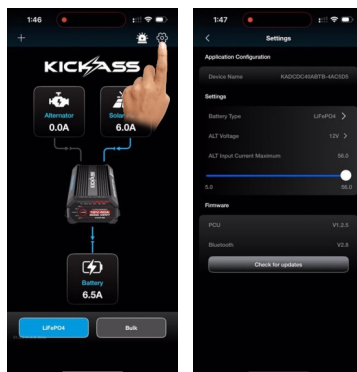
Important: Do not disconnect power to the DCDC charger or close the app while the OTA update is in progress.

CONFIGURE THE BATTERY TYPE AND ALTERNATOR INPUT VOLTAGE USING THE BLUETOOTH APP

To configure the DCDC charger, tap the Settings icon on the main page of the Bluetooth mobile application.

From the Settings menu, you can adjust the following parameters:

- Battery Type
- Alternator Nominal Input Voltage
- Maximum Alternator Input Current

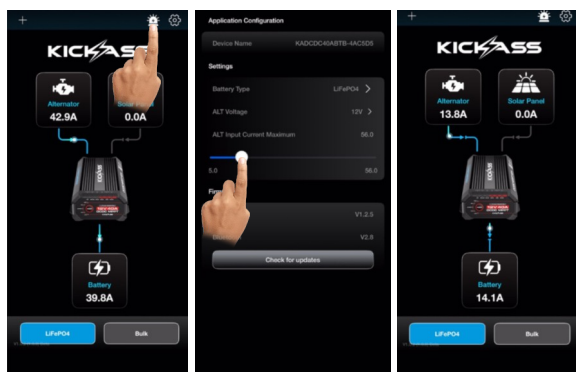


LIMITING THE ALTERNATOR INPUT CURRENT

The Maximum Input Current slider allows you to limit the amount of current the DCDC charger draws from the vehicle's alternator. Reducing this setting will proportionally reduce the total charging current delivered by the DCDC charger.

This setting only affects the current drawn from the alternator input. It does not limit the charge current available from the solar input.

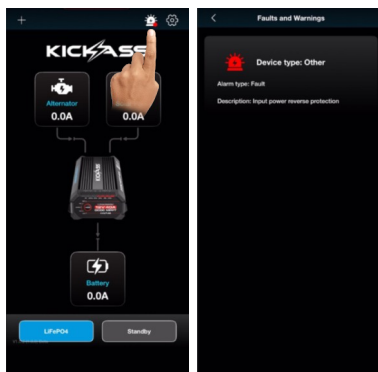
Adjusting the maximum input current is useful in installations where the vehicle alternator's load must be managed—such as in vehicles with low-output alternators or hybrid systems with integrated low-power alternator/generators. This ensures the DCDC charger continues to operate efficiently while drawing the maximum available power from the solar input when connected.



FAULT MONITORING VIA THE BLUETOOTH MOBILE APPLICATION

Fault and warning information is also displayed in the Bluetooth mobile application.

To view an active fault, select the alert icon from the main page.



SETTING THE BATTERY TYPE - MODE SWITCH

To set the battery type using the physical controls:

1. Press and hold the Mode button for four seconds.
2. The charger will enter battery selection mode.
3. Press the Mode button repeatedly to cycle through the available battery types.
4. Stop on the desired battery type; it will be saved automatically after a short delay.



LITHIUM RECOVERY MODE

When the Lithium battery type is selected and the auxiliary battery voltage is detected to be below 8V, the charger will enter Lithium Recovery Mode.

In this mode, the charger will output a constant voltage of 14.5V for up to 5 minutes to attempt to recover the lithium battery.

During this recovery period, the output current is limited to 6A.

LED INDICATIONS

NORMAL OPERATION

STATUS	FLASHING	SOLID
ALTERNATOR	Actively Charging from alternator input	Input detected but under voltage cut-in
SOLAR	Actively Charging from solar input	Input detected but under cut-in voltage or charging from alternator
FAULT	-	-
BULK	Currently in bulk stage	-
ABSORPTION	Currently in absorption stage	-
FLOAT	Currently in float stage	Battery full

FAULT CONDITIONS

LED INDICATOR						
FAULT	ALTERNATOR	SOLAR	FAULT	BULK	ABSORPTION	FLOAT
NTC OPEN CIRCUIT			SLOW FLASH (1S)	SLOW FLASH (1S)	SLOW FLASH (1S)	
BATTERY REVERSE POLARITY			FAST FLASH (0.25S)		FAST FLASH (0.25S)	
INPUT REVERSE POLARITY			FAST FLASH (0.25S)	FAST FLASH (0.25S)		
OUTPUT SHORT CIRCUIT			FAST FLASH (0.25S)			FAST FLASH (0.25S)
OUTPUT OVER-VOLTAGE PROTECTION			SLOW FLASH (1S)	SLOW FLASH (1S)		
OUTPUT UNDER-VOLTAGE PROTECTION			SLOW FLASH (1S)		SLOW FLASH (1S)	
OVER TEMPERATURE PROTECTION			SOLID ON			

TROUBLESHOOTING

CONDITION	POSSIBLE CAUSE	RECOMMENDED ACTION
DCDC charger not achieving full output current during bulk charging.	Undersized wiring – If the cable between the alternator and the DCDC charger is too small, voltage drop may occur. This can result in low input voltage, reducing the charger's output.	Increase the cable size. The minimum recommended cable size is 6 AWG .
	Low alternator output – The alternator may not be able to supply enough current to support both the vehicle systems and the DCDC charger.	A. Identify and disable any non-essential 12V loads (eg spotlights) while charging. B. Reduce the maximum alternator input current via the app. C. Consider upgrading the vehicle's alternator if necessary.
DCDC charger is hot to touch.	This is normal. The charger is passively cooled via the heatsink casing and is designed to operate at high temperatures.	No action required. Avoid touching the device during operation, especially at high load.
Solar reverse polarity fault will not clear.	The reverse polarity protection remains active until the incorrect wiring is corrected.	Disconnect the solar input and reconnect with the correct polarity.
DCDC charger continues charging after vehicle is turned off.	The IGN wire is connected to a circuit that remains live even when the ignition is off.	Reconnect the IGN wire to a circuit that is only powered when the vehicle ignition is on.

KICKASS PRODUCTS PTY LTD. WARRANTY DISCLAIMER

At Kickass Products Pty Ltd., we stand behind the quality and durability of our outdoor and camping products. Our product team rigorously tests every item in demanding conditions to ensure performance in normal use environments.

Limited Warranty Coverage

Kickass Products Pty Ltd. warrants that our products are free from manufacturing defects in materials and workmanship for the applicable warranty period. If a defect arises within this period, we will, at our discretion, repair, replace, or provide an appropriate remedy in accordance with Australian Consumer Law (ACL).

Exclusions

Warranty does not cover:

- Normal wear and tear
- Misuse, abuse or improper installation
- Damage caused by accidents, modifications, or lack of proper maintenance
- Consumable parts, unless a defect in materials or workmanship is present

Making a Warranty Claim

To initiate a claim, please retain your proof of purchase and contact our customer service team with details of the defect. We will guide you through the process, including potential return or assessment requirements.

Your Rights Under Australian Consumer Law

This warranty is in addition to any rights or remedies you may have under the ACL and does not exclude, restrict, or modify them.

Thank you for choosing Kickass Products Pty Ltd. We are committed to ensuring your outdoor adventures are backed with confidence.



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