

# Buck-Boost DC-DC Converter

## 25A and 50A

www.victronenergy.com

### DC-DC Converter for charging a 12V or 24V service battery in vehicles with a smart alternator (regenerative braking, Euro 5 and Euro 6 engines)

The Buck-Boost DC-DC Converter is a DC-DC Converter for charging a 12V or 24V service battery in vehicles with a smart alternator. The converter will charge the auxiliary battery with a pre-set charge voltage, eliminating high voltages (e.g. Mercedes: 15,4V) and low voltages.

#### 'Engine running' detection system

Deep discharge of the vehicle's starting battery is avoided by a built-in 'engine running' detection system.

Instead of this detection system, the converter can also be activated by means of a programmable input (D+, CAN bus or (+)15 connection).

#### Fully programmable

The converter can be fully programmed by means of a simple and user-friendly PC application. (USB type A male to USB type B male cable needed)

#### One product for 12V, 24V and 12/24V systems

The converter can be programmed to charge a 12 V or a 24 V auxiliary battery from either a 12V or a 24V alternator and starter battery.

#### Charge current and input current limiter

The output current is determined by the following factors:

- The maximum charge current setting.
- The maximum input current setting.
- The maximum operating temperature limit of the converter.

#### Input status indication (LED)

Green: converter on.

Yellow: input voltage below threshold, converter off.

Red: over temperature, converter off.

Blue, quick flash: engine running, converter will start after preset delay.

Blue, slow flash: the converter is OFF and activation is blocked due to low input voltage.

#### Output status indication (LED)

Green: converter off, battery voltage normal.

Yellow: converter off, battery voltage low.

Red: converter off, battery discharged or not connected.

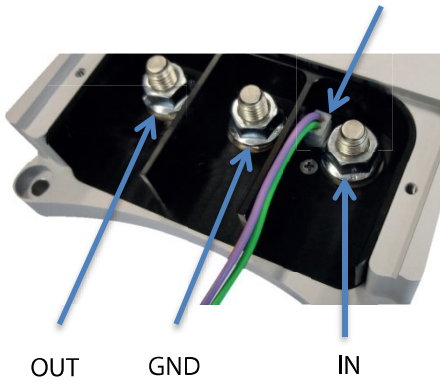
Purple: converter on.



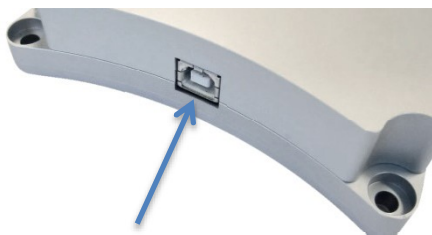
OUT LED indicator  
IN LED indicator



Pin 1



OUT GND IN



USB connection

Buck-Boost DC-DC Converter	25A	50A
Input voltage range	7-35V	
Under voltage threshold	10V	
Output voltage range	2-30V	
Maximum charge current	12V : 25A    24V : 15A	12V : 50A    24V : 25A
<b>Power consumption</b>		
Converter off, LEDs off (power save mode)	7 mA	
<b>On/off input (pin 1, purple wire)</b>		
'On' threshold voltage	> 2V	
Maximum input voltage	60V	
<b>Output pin 1 and pin 2</b>		
Output voltage if activated	Vpinout = Vin	
Maximum current (per pin)	Ipinout = 1A	
<b>GENERAL</b>		
Operating temperature range	-25 +80°C	
Ambient temperature	Max current: up to 40°C	
Weight	1kg	1,1kg
Dimensions	165 x 120 x 30 mm	213 x 120 x 30 mm