

50A Buck-Boost DC-DC converter

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 50A 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 algorithm, eliminating high voltages (e.g. Mercedes: 15,4V) or 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 12V or a 24V 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 (12V: 0-50A; 24V: 0-25A).
- The maximum input current setting (12V: 0-50A; 24V: 0-25A).
- 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: input under voltage, converter off

Output status indication (LED)

Green: converter off, battery voltage normal

Yellow: converter off, battery voltage low

Red: converter off, battery discharged or not connected

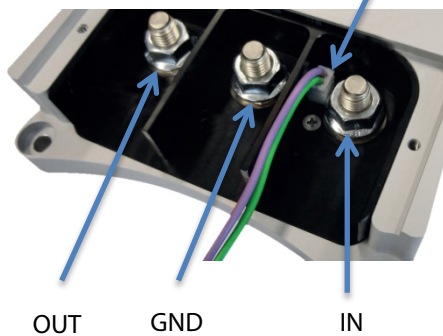
Purple: converter on

OUT Led indicator

IN Led indicator



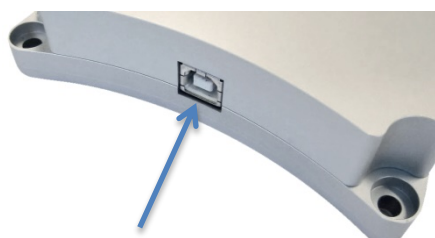
Pin 1



OUT

GND

IN



USB connection

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