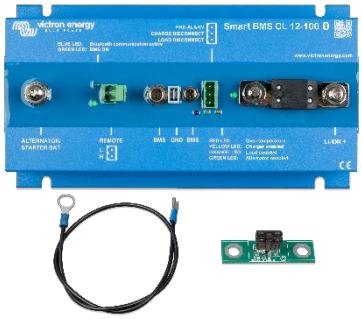
Smart BMS CL 12-100

Protects the alternator against overload

www.victronenergy.com



The Smart BMS CL 12-100 is an all-in-one battery management (BMS) system for Victron Lithium Battery Smart 12,8 V batteries available with a nominal voltage of 12.8 V in various capacities. This is the safest of the mainstream lithium battery types. The maximum number of batteries in one system is 20, which results in a maximum energy storage of 84 kWh in a 12 V system. It has been specifically designed for 12 V systems with a 12 V alternator such as in vehicles and boats.

A dedicated alternator input provides current limiting and one-way traffic from the alternator into the battery, this so any size 12 V alternator (and starter battery) can be safely connected to the lithium battery. The Charge Current Limiter protects the alternator against overload. It monitors and protects each individual battery cell within the battery (or battery bank) and will disconnect the alternator, charge sources or DC loads in case of low/high battery cell voltage or high temperature.

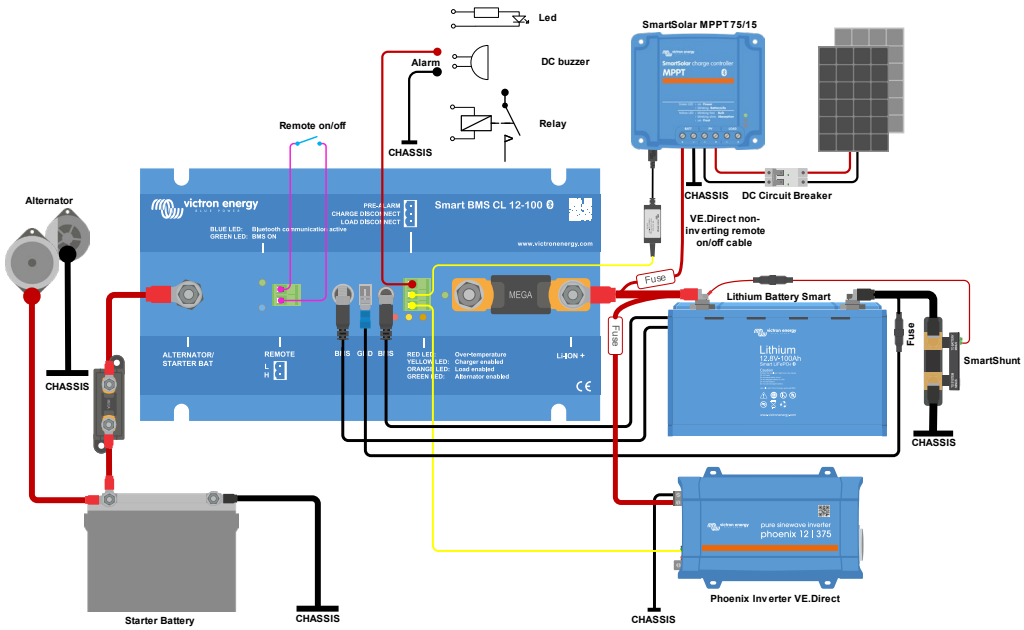
Features

- Alternator/Starter Batt+ port alternator and battery protection: The input current on the Alternator/Starter Batt+ port is electronically limited to approximately 90 % of the fuse rating. A 100 A fuse, for example, will therefore limit the input current to approximately 90 A and protects the lithium battery against excessive charge current and the alternator against overload (most 12 V alternators will overheat and fail if running at maximum output during more than 5 minutes).
- Remote on/off terminal: Use it to interrupt charging via the Alternator port while keeping the BMS functionality active, or as an on/off switch to turn off the system completely.
- Load and Charge disconnect output[1]: The Smart BMS CL 12-100 monitors and protects each individual battery cell within the battery and will disconnect the alternator, charge sources or DC loads in case of low/high battery cell voltage or high temperature.
- Pre-Alarm output: Can be used to drive a relay, LED or Buzzer to issue a warning signal before the BMS disconnects the batteries from the system.
- Bluetooth for monitoring and configuration via our VictronConnect app and with Instant Readout the possibility to read out the most important values in real time without the need to connect to the BMS, which enables diagnostics at a glance.

[1] In some cases an interface cable will be needed, please see the manual.







Victron Energy B.V. | De Paal 35 | 1351 JG Almere | The Netherlands
E-mail: sales@victronenergy.com
www.victronenergy.com

Smart BMS CL 12V 100A	BMS110022000
Alternator port - max charge current	100 A (with 125 A fuse)
Input voltage to start charging	> 13 V
Current consumption, remote on	16 mA (excluding Load output and Charge output current)
Current consumption, remote off	5mA (BMS functionality still active)
Load disconnect output	Normally high (Vbat – 0.1 V) Source current limit: 10 mA (short circuit protected) Sink current: 0 A (output free floating)
Charge disconnect output	Normally high (Vbat – 0.1 V) Source current limit: 10 mA (short circuit protected) Sink current: 0 A (output free floating)
Pre-alarm output	Normally free floating High (Vbat) in case of alarm, max. 1 A (not short circuit proof)
Remote (or System) on/off: Remote L and Remote H	Use modes of the system on/off: 1. ON when the L and H terminal are interconnected 2. ON when the L terminal is pulled to battery minus (V< 5 V) 3. ON when the H terminal is high (V>3 V) 4. OFF in all other conditions
GENERAL	
Operating temperature range	-40 °C to +60 °C
Humidity, maximum / average	100 % / 95 %
Protection, electronics	IP65
DC power connection	M8 (mounting torque: 10 Nm)
DC connector battery minus	Faston female, 6.3 mm
ENCLOSURE	
Weight	1,6 kg
Dimensions (hxwxd)	65 x 120 x 224 mm
STANDARDS	
Emission	EN 61000-6-3, EN 55014-1
Immunity	EN 61000-6-2, EN 61000-6-1, EN 55014-2
Automotive EMC Directive	ECE R10-5