



180AH SBL Lithium L5 Canbus



SBL-12V180AHBLH

The battery is upgraded bluetooth & self-heating version with integrated passive & active balancer, ON/OFF switch, CANBUS/RS485 communication function. And it comes with screw fixing H8 DIN case design and three RJ45 interfaces for new features.

Features & Benefits

- **Three RJ45 interfaces**

RJ45-1 is for ON/OFF switch

RJ45-2&3 are for CAN/RS485 (Interface to Victron GX, NMEA 2K)

Each of these ports can be used by us for communication with our PC software for updating the BMS or importing new software.

- **Smart BMS upgraded**

Smart BMS design with passive & active balancer integrated.

- **New Grade A+ automotive cells construction**

The new grade A+ automotive cells construction ensures reliable and excellent quality.

- **Pre-charge & Storage function**

Better protections when starting with a higher power inverter and abnormal history storage.

- **Screw fixing DIN Case**

New screw fixing DIN case design and a handle for easier installation.

- **Self-heating**

SBL LiFePO4 battery with Bluetooth and heating version consists of two energy efficient heating elements fully controlled automatically by the BMS, which use the charging current to bring the cells temperature to a safe charging temperature, thus guaranteeing maximum charging and discharging performance even at extreme temperatures to -30°C.

- **Automatic Hibernation mode to double protect battery against deep discharging**

a. If the battery has been put into hibernation mode by app which can be waken up by charging or by app connection.

b. If no current (<0.5A) has been detected by BMS, then BMS will fall into hibernation mode when the cells voltage<3300mV and delay 4320mins (3 days) .

App or charging (current detected by BMS is higher than 0.5A) or on/off lead can switch on the BMS.

If cells voltage is lower than 3V, then app cannot wake up the battery but only charging or by on/off lead.

c. ON/OFF lead connecting the RJ45-1 port.

Press on--> BMS is off

Press off--> BMS is on

Lead off the RJ45 port--> BMS is on

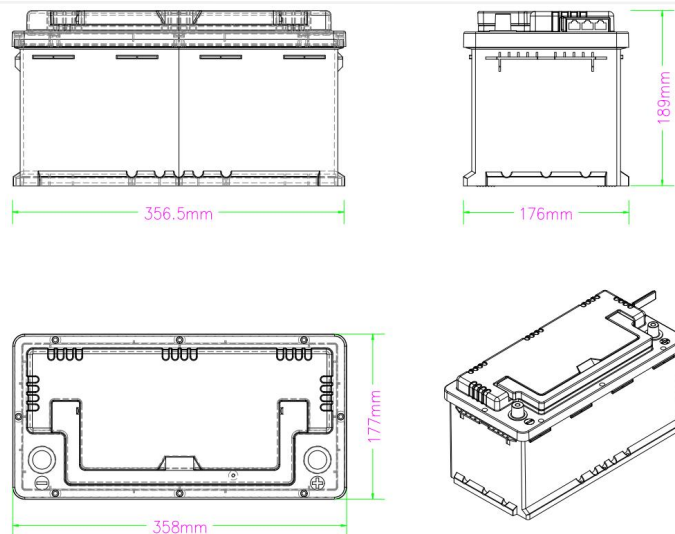
Press on/off needs 3 seconds interval.

If press on to control BMS switching off, charging or app connection cannot wake up hibernation as it is physical control.



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DIMENSIONAL SPECIFICATION



ELECTRICAL SPECIFICATIONS

Nominal Voltage	12.8V
Nominal Capacity	180Ah
Capacity @0.2C	>290 min
Energy	2304Wh
Resistance	<10m Ω
Discharge Efficiency	>99%
Cells Self Discharge	<3% per Month
Modules Connections	4S1P

MECHANICAL SPECIFICATIONS

Dimensions (L x W x H)	357 x 176 x 190mm
Weight	15.8kg
Terminal Type	SAE + M8
Terminal Torque	10-15N-m
Case Material	ABS

CHARGE SPECIFICATIONS

Maximum Charge Current	200A
Recommended Charge Current	$\leq 50A$
Charge Voltage	14.2~14.6V
Charge Cut-off Voltage	14.6V
Reconnect Voltage	14V
Cells Balancing Voltage	3.4V
Cells difference voltage value to open balancing	15mV (passive balancer) 30mV (active balancer)
Passive Balance current	50-100mA
Active Balance current	1-5A
Charge Heating (Temperature <0 $^{\circ}C$, threshold to 10 $^{\circ}C$ and start normal charge. Charge power current need to reach 8A to turn on heaters.	YES



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DISCHARGE SPECIFICATIONS

Maximum Continuous Discharge Current	200A
Max. Pulse Discharge Current	300A (5S)
Discharge Cut-off Voltage	11V
Reconnect Voltage	12V
Short Circuit Protection	Yes

Hibernation Mode SPECIFICATIONS

Eneter hibernation cells voltage (no current flow)	<3.3V
Hibernation delay time	4320mins

BMS CONSUMPTION

Without communication (BT, RS485, CANBUS)	23mA
With communication (BT, RS485, CANBUS)	46mA
Hibernation	0.8mA

TEMPERATURE SPECIFICATIONS

Discharge Temperature	-4~149°F (-20 ~65°C)
Charge Temperature	32~149°F (0°C~+65°C)
Temperature Range Storage <1 month	-4~122°F (-20°C~+50°C)
Temperature Range Storage >1 month	23~104°F (-5°C~+40°C)
Temperature Protection of FET (Built-in)	194°F (90°C)