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1. Scope

This specification is for the 12V 105Ah Muller Energy slimline LiFePO₄ Battery, in which the description and model, main performance and precautions of the product are included.

This product is well suited for the use in 4WD, caravans, camper vans and boats.

2. Description and Model

2.1 Description : LiFePO₄ slimline battery

2.2 Model : ME12105SL

3. Appearance



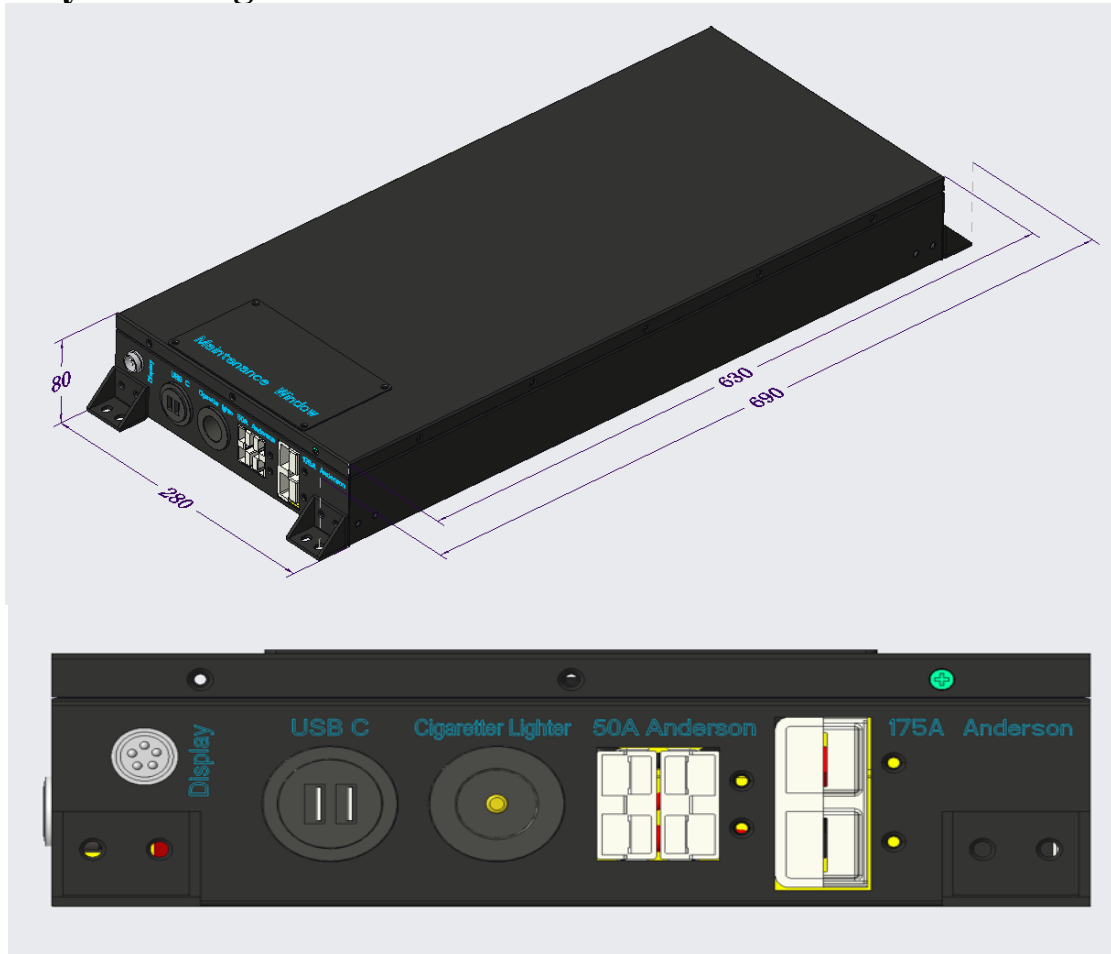
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4. General Technical Parameter

#	Item	Parameter	Remark
1	Nominal Capacity	105.0 Ah @ 0.2C discharge	
2	Minimum Capacity	98.0 Ah @ 0.2C discharge	
3	Nominal Voltage	12.8V	
4	AC Impedance Resistance	≤50mΩ	
5	Charge	Max Charge Current	100A
		Cut-off Voltage	14.6V
		Charging temperature	0°C~60°C
6	Discharge	Max Continuous Current	150A
		Max Instantaneous Current	300A
		Cut-off Voltage	10V
		Discharging temperature	-20°C~60°C
7	Recommend SOC Window	SOC : 10%~95%	
8	Expected Cycle Life	2000 @ 100% DoD 3500 @ 80% DoD 6500 @ 50% DoD	
9	Storage	Temperature	10~45°C (50% SOC recommended)
		Humidity	≤ 75%RH
10	Self discharge	≤3%/Month	
11	Weight	16.7kg	
12	Battery dimensions	Length	630±2mm (690±2mm including brackets)
		Width	280±2mm
		Height	80±2mm
13	50A Anderson maximum current	50A	Per connector. Can be used for charging and discharging
14	175A Anderson maximum current	150A	Limited by BMS. Can be used for charging and discharging
15	Cigarette lighter maximum current	15A	For discharging only, not charging
16	USB A maximum power	18W (12V @ 1.5A)	
17	USB C maximum power	45W (20V@ .25A)	Can charge laptops, tablets, etc
18	USB Switch	Turn on/off USB	
19	Discharge Switch	Turn on/off all the discharge ports. This can be done via the Bluetooth App or via the optional screen.	
20	Bluetooth function	Android and iPhone apps available. Please download the App. QR code below. Please do not change any settings in the BMS unless entirely sure of the consequences.	

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5. Battery Drawings



6. Transportation

This battery is UN38.3 certified.

For shipping, the battery for shipping should be packed in a padded box with an SOC of around 50%

Excessive vibration, impact, sun and rain should be avoided during shipping.

The battery is suitable for cars, trains, ships, aircraft and other transportation vehicles. Transport requirements need to be followed.

7. Storage and other matters

7.1 Long-term storage

Batteries should be stored (more than 1 month) indoor with a dry and clean environment at 10 ~45 . Avoiding contact with corrosive substances and keep away from fire and heat source.

The battery should be charged and discharged every 6 months.

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8. Handling of Batteries

8.1 Charging

8.1.1 Charging current

Charging current shall not exceed the maximum charging current in this specification. Otherwise, it may cause problems in charge and discharge performance, mechanical performance and safety performance, and may cause heat or leakage.

8.1.2 Charging voltage

Charging voltage shall not exceed the maximum charging current in this specification.
Charging temperature

Batteries must be charged within the ambient temperature range of 0 °C~55°C.

8.1.3 Forbidding reverse charge

Battery should be connected correctly. It is strictly prohibited to reverse charge. Otherwise, it will likely cause the battery to fail.

8.2 Discharge

8.2.1 Discharging current

Discharge current shall not exceed the maximum charging current in this specification; Otherwise, it may cause dramatic capacity loss and overheating.

8.2.2 Discharge temperature

Batteries must be discharge within the ambient temperature range of -20 °C~55 °C.

8.3 Battery Handling Precautions

8.3.1 Before using the battery, please read the specification and pay attention to the information on the battery sticker.

8.3.2 Please use the battery in a normal indoor environment, temperature: -20 °C~55 °C, relative humidity: 15 ~ 90%, atmospheric pressure: 86~106 kPa.

8.3.3 Keep away from heat, fire, children. Do not beat, drop or impact the battery.

8.3.4 The battery can only use an appropriate charger to charge.

8.3.5 Do not short circuit the battery at any time, otherwise it can cause serious damage to the battery and cause dangerous situations.

8.3.6 If the battery not used for an extended period of time, please store the battery as outlined in this document.

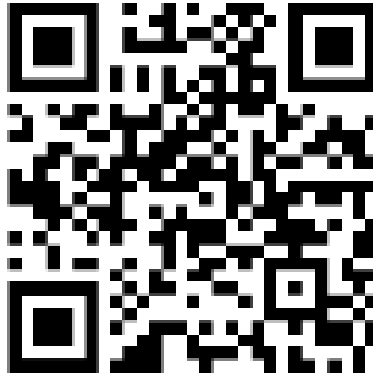
8.3.7 Please recycle battery at end of life.

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9. Bluetooth APP

App supports Apple and Android devices. As the BMS is in a metal box, Bluetooth range may be limited.

Please download Bluetooth APP for iPhone or Android phones by scanning the QR codes below.



Should you not be able to connect, please ensure Bluetooth is enabled and restart your device.

10. Precautions

Failure to observe the following precautions may result in battery leakage, overheating, explosion and/ or fire.

Warning!

1. Do not immerse the battery in water or allow it to get wet.
2. Do not strike, throw or subject the battery near a fire or in hot conditions.
3. Charge with specified charge according to charging requirement
4. Do not reverse the positive (+) and negative (-) terminals.
5. Do not put the battery into a fire or apply direct heat to it.
6. Do not short-circuit the battery by connecting wires or other metal objects to the positive (+) and negative (-) terminals.

Caution!

- a) Do not use or store the battery where is exposed to extremely hot temperatures, such as in a dark car parked in direct sunlight on a hot day. Otherwise, the battery may overheat. This can also reduce battery performance and/or shorten service life.
- b) Do not use battery in the strong electrostatic and magnetic field
- c) If the battery leaks and electrolyte gets into your eyes, rinse the eyes with clean running water and seek medical attention immediately.
- d) Do not use the battery if it gives off an odour, generates heat, changes color or have any problems during usage, storage and discharging.