MEGALiFe Deep cycle Battery Manual

Thank you for choosing MEGALiFe Battery Australia for your energy solution. In purchasing this product, the user agrees that they have read and understood the safety precautions, specifications and instructions listed in this document and other documents available at www.megalifebattery.com.au. MEGALiFe Battery Australia holds no responsibility for personal injury or property damage involving any of its products. Damage of MEGALiFe Battery Australia products due to misuse and/or operations outside of recommended limits will void product warranty and could cause personal injury or property damage.

Safety Warnings

- Do not disassemble, crush or incinerate
- Do not short circuit the terminals
- Do not overcharge or over discharge
- Do not reverse connections (polarity) when charging or installing
- Do not operate beyond the published voltage, current and temperature limits.
- Keep out of reach of children
- Further safety and user information at www.megalifebattery.com.au

Specifications

Part Number	Nominal Voltage	Cut off Voltage	Max Charge Voltage	Max Charge Rate	Max Discharge
MLDC-12100	12.8V	10.0V	14.4V	50A	100A
MLDC-12135	12.8V	10.0V	14.4V	60A	135A
MLDC-12200	12.8V	10.0V	14.4V	100A	150A
MLDC-12300	12.8V	10.0V	14.4V	150A	200A
MLHV-48100	51.2V	40.0V	57.6V	50A	100A
MLDCS-12100	12.8V	10.0V	14.4V	50A	100A
MLDCS-12200	12.8V	10.0V	14.4V	100A	150A
MLDC-3660	38.4V	30.0V	43.2V	30A	60A

Charging

Your MEGALiFe Battery will arrive in a ready to use state of charge of 13V or higher. Regular charging using a lithium specific charger and the IBMS will keep your battery in optimal charge state.

If your battery has been drained below 13V recharge the battery using only a lithium specific, constant current constant voltage (CC/CV) charger with a maximum voltage of 14.4V. Certain lead-acid chargers, especially with pulsing or desulfication algorithms, can potentially damage LiFePO4 batteries. Lead-acid float charging algorithms can also leave LiFePO4 batteries in less than 100% SOC (State of Charge).

In solar or storage applications ensure to also use only a CC/CV charging algorithm that does not exceed 14.4v.

The IBMS protects MEGALiFe from dangerous and damaging under voltage situations but it is recommended to not discharge the battery below 11.2v to ensure optimum lifespan.

Disposal and recycling

MEGALiFe Battery are recyclable and we encourage responsible environmental practices. Please check with your local authority for recycling centers that accept batteries.

Lithium Ion batteries should have their terminals insulated and preferably wrapped in plastic bags prior to disposal to a licensed carrier and/or authorized recycler.

Installation guidelines

- Always wear appropriate personal protective equipment when working with MEGALiFe batteries.
- Before installation, ensure MEGALiFe Battery is at or above 13V SOC and use the correct CC/CV charger if needed to bring voltage above 13V.
- MEGALiFe batteries are designed as direct a replacement for most 12V applications on the market however please ensure any onboard chargers and/or solar regulators are compatible with and set to a LiFePO4 charging profile.
- Please ensure that the M8 terminal bolts are only torqued to a maximum of 8Nm

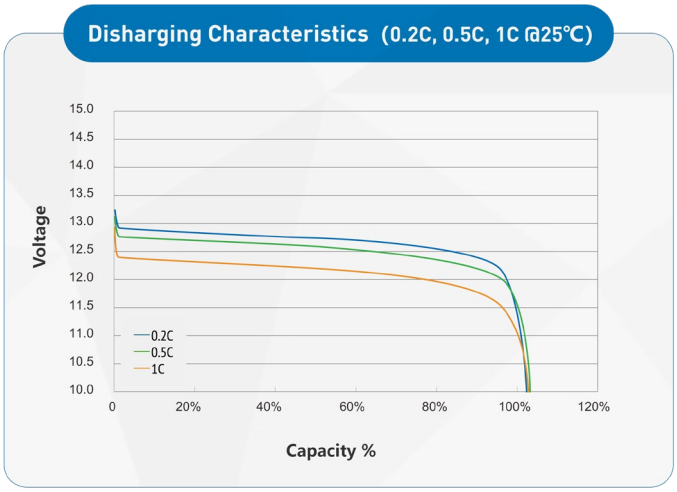
Maintenance

- Keep terminals clean of debris and corrosion
- Do not use solvents, oil or detergents to clean the outside of your battery. Use a damp cloth to wipe down the battery always being aware not to short the terminals
- For extended periods of storage, keep batteries in a dry environment between 10-35 degrees Celsius at a SOC of 30%

Lithium Tips and Tricks

- Avoid temperature extremes, both high and low, when using or storing MEGALiFe batteries. Elevated temperatures can accelerate degradation of almost every battery component and can lead to significant safety risks
- Minimize the amount of time the battery spends at either 100% or 0% state of charge to prolong battery life

Lithium batteries have linear discharge voltage curves due to their ability to maintain a higher voltage for much longer than AGM or flooded/sealed batteries therefore voltage isn't the most accurate method for disconnecting loads and monitoring capacity.



"State of Charge" (SOC%) percentage is the most accurate and effective method of disconnecting loads from the battery - this requires a battery monitor which uses a "shunt" to measure the current going into (Charging) and coming out of (Discharging) the battery.

Example;

200 Amp Battery Fully Charged State of Charge = 100%

50 Amps used State of Charge = 75%

100 Amps used State of Charge = 50%

It is recommended that MEGALiFe Lithium batteries not be discharged below 20% State of Charge or the battery life may be shortened.

Flat Battery Reset

If your DC system has shut down your battery may be discharged below the BMS cut off point Please use the steps below to reconnect;

1. Turn OFF all loads
2. Connect a Lithium compatible charging source (AC Charger, Solar, DC2DC)*
3. Power should now be restored and the charging source will now be charging the battery
4. Open the MEGALiFe app on your Smart Phone to confirm battery is charging
5. Allow the battery to charge a minimum of 30 minutes before switching loads back ON

Some charging sources may not start the charge process due to the low voltage disconnect in the battery. In this case a jump pack or another 12v battery connected with Jumper leads connected to the battery may be required for the charger to start the charging process.

Using Jumper cables and another 12v battery, follow the below steps in sequence to reset your MEGALiFe lithium battery.

1. Turn OFF all loads
2. Connect the your MEGALiFe battery in parallel (positive to positive) and (negative to negative) to battery number
3. Cross reference the voltage on each battery now they are in parallel – they should both now read a similar voltage.
4. Connect a Lithium compatible charging AC to DC Charger to you MEGALiFe Battery
5. Your charge source will now commence the charging process
6. Once the charger begins to charge your MEGALiFe battery, disconnect battery number 2
7. The charger should continue to charge the MEGALiFe battery
8. Allow the charger to fully charge the battery.

If you have a portable Jump Starter, follow the below steps in sequence your MEGALiFe lithium battery.

1. Turn OFF all loads
2. Connect the Jump Starter cables to the battery (Positive to Positive, Negative to Negative)
3. Connect a Lithium compatible charging AC to DC Charger to you MEGALiFe Battery
4. Activate the jump starter to supply power to the MEGALife battery. The charger will now detect the battery and begin to charge.
5. When the charger begins to charge your MEGALiFe battery, disconnect the Jump Starter from the battery.
6. The charger should continue to charge the MEGALiFe battery
7. Allow the charger to fully charge the battery.

Warranty

Different MEGALiFe products hold different warranty conditions that are available at www.megalifebattery.com.au FAQ section.

Thank you again for choosing your new energy solution for a MEGALiFe. For further information, please contact us at info@megalifebattery.com.au or via social media.