



# Storage Procedure

Storing your battery at the correct specifications is important as it keeps the battery in the healthiest state possible for the fastest deployment when needed.

1. If your battery has the Lithionics Internal Heater, and you are subject to winter conditions, keep the battery ON, solar ON and plugged into shore power. Shut down all appliances, lights, and other DC loads. You may purchase a very small charger from Lithionics Battery (KF Series) and power this from an extension cord if shore power is not available. This will keep the heater running and protect your battery. Doing this will eliminate the procedures below.
2. If shore power or the use of an extension cord and charge is not possible, follow these notes below, observing the important storage times versus temperature conditions. Storage outside of these temperatures reduces battery life:

Storage Temperature & Humidity Range	< 1 Month	-4 to 95F (-20 to 35C), 45 to 75% RH
	< 3 Months	14 to 86F (-10 to 30C), 45 to 75% RH
	3 to 6 Months	>32F (0C) Above Freezing, <86F (30C)

### Short Term Storage: Up to 3 months:

1. Fully charge the battery. Record and maintain the storage VOLTAGE reading (not SoC%) for your warranty.
2. Turn the battery **OFF** by the On/Off/Storage switch. If you have an external BMS, it is preferred to fully disconnect the BMS from the MODULE by pulling apart the Anderson EURO DIN connector.
3. Keep the battery in an environment according to the specifications shown above.

### Long Term Storage: >3 Months and 6 Months Maximum

1. Reduce the battery SOC to 3.3V/cell which is 50% ±10% SOC. **Note:** See chart below for cell voltage calculation. In order to maintain your warranty, please RECORD the voltage reading at the 3-month date you reduced the state of charge. **Please keep a record of this value for warranty validation purposes.** (NOTE: for some it may be inconvenient to access the battery system at the 3-month mark to perform a charge-discharge cycle. You may choose to keep the battery at full charge voltage for the entire 6-month time period. Studies show that a small lossof capacity may occur with all lithium ion batteries.)
2. Turn the battery **OFF** via the On/Off/Storage switch. If you have an EXTERNAL BMS, we suggest you disconnect the BMS from the module or modules by pulling apart the large Anderson EURO DIN connector.
3. **Storage Temperature: the battery must be maintained ABOVE freezing temperatures (>32F/0C)**
4. Every 6 months, you must charge the battery to 100% SOC, then discharge the battery to RVC, then charge it back to 50% ±10% SOC. This cycle from full to reserve then up to the storage VOLTAGE is important for long life.

Battery Voltage	Number of Series Cells	~50% SoC Voltage
12V	4	13.2V
24V	8	26.4V
36V	12	39.6V
48V	15	49.5V
51V	16	52.8V
76V	24	79.2V
96V	30	99.0V
102V	32	105.6V
201V	63	207.9V