



Model: **A012S-50**

Lithium Iron Phosphate Battery LiFePO_4

Nominal Voltage: 38.4V

Rated Capacity: 50Ah

Group 31 / Bluetooth / IP67 Waterproof



Features

- **Wider temperature range:** $-20^{\circ}\text{C}\sim 60^{\circ}\text{C}$. (Lower temperatures will result in decreased capacity)
- **Lighter Weight:** About 40%~ 50% less weight of comparable lead acid battery.
- **Usable Capacity:** Delivers twice power of lead acid batteries.
- **Quality BMS:** BMS (Battery Management System) will protect your battery from over charging, discharging too low or short circuits with built in cell balancing.
- **Extraordinary cycle life:** Offers 2000+ life cycles, up to 5x longer than lead acid batteries, helping to minimize replacement cost and reduces total cost of ownership.
- **Series and Parallel Configurations:** Not Series Capable. Can be wired up to 4 in parallel for higher capacity.
- **Voltage:** Uniform voltage during discharge.
- **Bluetooth:** Built in Bluetooth monitoring with the Amped Outdoors App.

Applications

- Boat 36V Trolling Motors
- Kayak 36V Trolling Motors
- 36V Golf Carts
- Other 36V Lead Acid Applications

General Specifications

	Performance Specifications	General Parameters	Comments
Electrical Characteristics	Nominal Voltage	38.4V	
	Nominal Capacity	50Ah	Standard charge after Standard discharge
	Energy	1920Wh	
	Cell Combination	12S1P	
	Months Self Discharge	≤3.5% per month	@25°C (77°F)
	Cycle Life	>2000 Cycles 80% of initial capacity	0.5C Charge/0.5C Discharge at 80%DOD
	Short Circuit Protection	220A	
Charge Specifications	Charging Voltage	43.8V	
	Recommended Charge Voltage	42.0-43.2V	
	Recommended Charge Current	Up to 10A. We encourage below .5c (25A or lower)	
	Max.Charge Current	≤50A	@25°C (77°F)
	Charge Cut-off Voltage	43.8V	Resting voltage 41.4V
Discharge Specifications	Standard Discharge	≤25A	@25°C (77°F)
	Max. Continuous Discharge Current	≤50A	@25°C (77°F)
	Max.Pulse Current	130A(<3s)	@25°C (77°F)
	Discharge Cut-off Voltage	30.0V	Resting voltage 12.0V
Environmental	Charge Temperature	-8 to 45°C(17 to 113°F)	Charge rate at .1C @65±20% Relative Humidity
	Discharge Temperature	-20 to 60°C(-4 to 140°F)	
	Storage Temperature	-20 to 45°C(-4 to 113°F)	
	IP Rating	IP67 Case Rating	
Mechanical	Length*Width*Height	12.9x8.66x6.77" 327*220*171mm	Height without terminals
	Case Material	ABS	
	Weight	Approx. 18.5Kg or 38lbs	
	Terminals	M8	

User Guide

Charging: Using the Amped Outdoors charger, connect the battery to the charger and then plug in the AC cable into the wall outlet. The charging light will turn blink red when charging and when the charge is complete, the light will turn green. When the charge is complete, disconnect the charger from the wall outlet as a float is not needed with our batteries. Our 36V Batteries requires our 43.8v charger or may be charged with any other designed 43.8v LiFePO4 charger.

Connecting your battery: With your source being turned off, connect your battery to you source. Ensure that you have tight, solid connection and use the provided hardware such as lock washers and washers if you have a battery with bolts. It is highly encouraged to use dielectric grease on all connections to prevent any corrosion from water exposure. Check your connections regularly along with cables, connectors or other components to make sure they are free of corrosion, wear and all connections remain tight.

Housing and mounting: Please ensure your battery is mounted or in the proper box before use. Depending on your application, it is important to keep you battery from moving around or being exposed to elements. Our batteries do not require venting so a sealed case or enclosure will only help protect the battery. Although our batteries have a superior water proof rating, it is encouraged to keep your products free from elements to prevent buildup of water, corrosion and debris. This will ensure your battery will look and perform like new for the expected life of the product.

Long term battery storage: Never store your battery fully discharged. It is best to put a 50%to full charge on your battery and then remove it from the charger. To ensure the best performance from your batteries for many years, put a short charge or use your battery at least once every 2-3 months. The best temperature to store a lithium battery is between 40-80 degrees F. A cool and dry place is ideal. The maximum discharge rate of our batteries would not exceed 3.5% per month in storage. Do not place a lithium battery on a charger for extended periods of time when not in use. Lithium batteries will last longer if not stored at a 100% charge rate for a long period of time.

Frequently Asked Questions

- 1. Do I need a special charger?** A- Yes, our 36v batteries requires our 43.8V charger.
- 2. How to I store my battery?** A- Never store your battery fully discharged. It is best to put a 50% to full charge on your battery and then remove it from the charger. To ensure the best performance from your batteries for many years, put a short charge or use your battery at least once every 2-3 months.
- 3. Can I lay my battery on its side?** A- Yes, all of our batteries can be mounted in any orientation as long as you secure them appropriately. Ensure that all terminal posts are free from all metal to prevent a short circuit. We do recommend upright as the battery is intended for stability.
- 4. Do I need to discharge my battery before recharging?** A- No, it is advised that your charge your battery before each use. Lithium batteries will not have a memory and even though it is safe to drain the battery 100%, it is advised to drain lower depth of discharge.

For Additional FAQ: <https://ampedoutdoors.com/pages/faq>

Troubleshooting

- 1. Battery will not hold or accept a charge:**
 - a. Lithium Batteries have a built in BMS (Battery Management system) that will trigger when a battery is depleted or it is triggered into protection. The voltage of the battery may read less than 10v. Our chargers will reset a BMS to begin charging.**
 - b. If your battery is connected to our charger and will not charge, disconnect the charger from the wall and battery. Let the charger reset then plug it into the wall and back into the battery again.**
- 2. Battery just stops:** This is typical of a battery BMS (Battery Management System) being triggered. One of the following has happened: Depleted Capacity, Short Circuit, Over Current, Excessive Heat. You can reset the BMS by connecting to the proper charger. The BMS is built in to protect the battery and your components.

Contact for additional troubleshooting: Service@ampedoutdoors.com

Warnings

Lithium batteries are very safe as long as they are used correctly. Please contact us if you have any questions on your applications.

- Do not crush, puncture or attempt dismantle the battery.**
- Do not place the battery near an open flame and try to avoid direct heat.**
- Do not dispose the battery in to the trash. Please find a local lithium recycler.**
- Do not place the battery in fluids such as salt water, acid or alkaline.**
- Do not short circuit the battery terminals.**
- Do only use the approved chargers.**
- Never store the battery at a fully depleted state of charge.**

**Warning: Cancer and Reproductive Harm
WWW.P65WARNINGS.CA.GOV**