REV20230422

FAQ

+ How to choose solar panels for integrated solar energy storage and control lithium batteries?

Several factors that affect battery life including weather, temperature, recharge cycles, depth of discharge (DOD), discharge current, charging current, charging method, vibration and duration of static use can all have dramatic effects on battery life. A properly maintained battery should last

+ What are the load requirements for integrated solar energy storage and control lithium batteries?

Before selecting a solar energy storage and control integrated lithium battery, it is first necessary to confirm the rated voltage of the load to ensure that it can be driven normally. Secondly, the rated power of the load can be confirmed to calculate the usage time of the battery, and the working output current of the battery can be calculated to prevent the controller from burning due to excessive overcurrent. The controller has configuration schemes for boost, flat, and buck types based on the application scenario of the load.

+ Is it okay to use a universal lead acid charger with high enough charging current?

Using a lead acid battery charger is not recommended because they charge at a lower 2.30V to 2.45V per cell in addition to charging in multiple stages with a final float charge setting. This is distinctly different from the Li-Ion 2-Stage charge profile. Mixing of chargers between chemistries will result in damage to the battery.

+ Can I connect two of the same Li-ion batteries together for more voltage/ capacity?

Linking our Li-ion batteries in series or parallel connection is NOT RECOMMENDED and may exceed factory recommended usage parameters. It is recommended to purchase a single battery with the requisite capacity and discharge characteristics. Our Battery Management System (BMS) is designed for operations within a singular battery unit and we cannot guarantee operability of multiple batteries connected together regardless of configuration. If, however, multiple batteries are required please ensure 1) the batteries are from the same batch 2) the batteries are of the same make and model and 3) peak discharge is maintained at <0.5C peak.

+ My battery will not charge/discharge?

There are multiple reasons including but not limited to 1) charger failure, 2) external damage to battery has compromised either the cell pack or BMS, 3) battery voltage has fallen to zero in one or more cells, 4) there is a connection error within the pack, 5) a malfunction(s) has occurred within the BMS component(s) or in extreme cases 6) extreme high/low temperatures may be inhibiting charging efficiency of the cell pack itself.

CONTACT

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WARRANTY

NMC 5-Year and LiFEPO4 10-Year, provided, Buyer must install battery within six (6) months after shipment. Aegis Battery shall not be liable for any defects that are caused by neglect, improper installation or original product being altered or modified in any way by an entity other than Aegis Battery. On Standard products 30-day money back guarantee for any initial quality issues originating from Aegis Battery. Only Standard products are eligible for Exchange or Returns subject to Shipping Cost Charges plus a 10% Restock Fee on Returns. All Exchanges or Returns, including warranty requests must have prior approval by Aegis Battery. Upon receipt of products, Aegis Battery has the right to inspect product for Return, Exchange and if defective, that the defect is covered by our limited warranty for repair, replace or prorated credit after 2 years from original purchase.

BATTERY

AEGIS

P/N: ALF-012020S LiFEPO4 LITHIUM IRON PHOSPHATE

12V	20AH	240WH	5A MAX DISCHARGE

*Subjects of this content pertains to Aegis Battery LiFePo4 (LFP) Batteries for Deep Cycle usage only and are not representative of any other type, chemistry, make, and/or model of battery thereof.

Thank you for purchasing an Aegis Battery product. It is advised to read and familiarize with the contents of this manual prior to use as failure to do so may result in degraded battery characteristics.

The model you have purchased is the **ALF-012020A 12V, 20Ah** rated LiFePo4 (LFP) Battery which built in controller with diverse functions and high level of intelligence, it can adjust the switching time of the output end according to customer needs, and is widely used in photovoltaic powered electrical products such as solar street lights and monitoring. The battery is equipped with an insulated ABS shell that has undergone special waterproof treatment to prevent electric leakage. It is sturdy and durable, and can adapt well to outdoor environments. The system hardly requires daily maintenance and is easy to install, but we still recommend that you take some time to study this manual and become familiar with our products. It will guide and help you solve problems encountered during installation and use.

CONTENTS

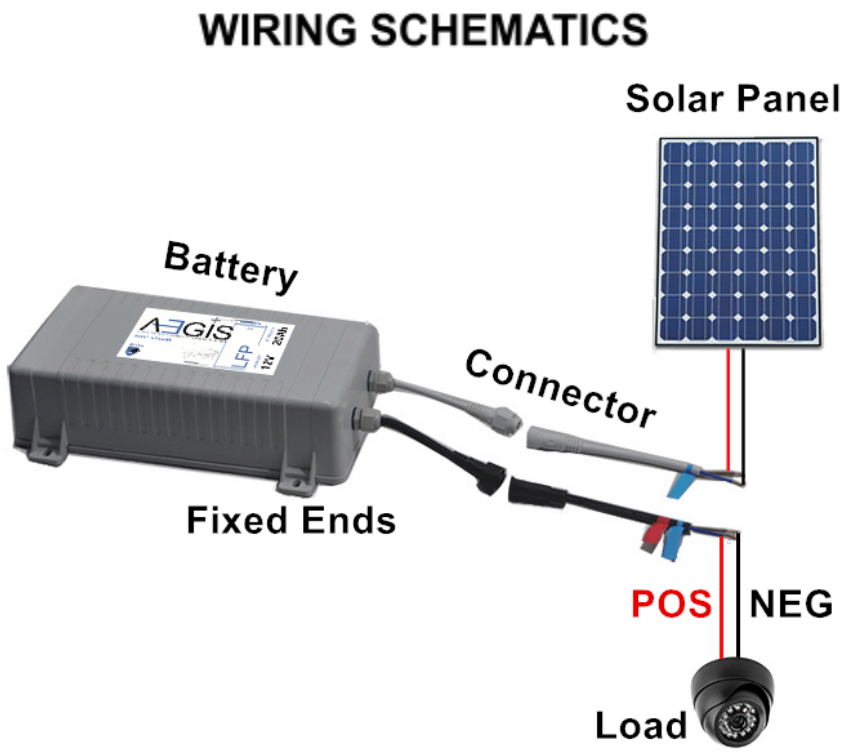
+ Aegis Energies (dba: Aegis Battery) LiFePo4 (LFP) Battery Pack
+ 2 Brackets
+ 1 Copy User Manual

SPECIFICATIONS*

Battery Type	ABS Case
Voltage (V)	12V
Capacity (Ah)	20Ah
Energy Stored (Wh)	240 Watt-Hours
Weight	5.5 lbs. (2.5 kg)
Dimension (L x W x H)	240 x 150(177) x 85mm 9.6in. x 6.0 (7.1)in. x 3.4 in.
Normal Charge Voltage	14.6V
Normal Charge Current	5.0 Amps
Normal Battery Cutoff Voltage	11.0V
Nominal Continuous Discharge Current	5.0 Amps
Maximum Continuous Discharge Current	8.0 Amps
Maximum Peak Pulse Discharge Current	8.0 Amps (*2 Seconds*)
Charge Temperature	0°C to 45°C
Discharge Temperature	-20°C to 60°C
Operating/Storage Humidity	60±25%R.H
Automatic Battery Protection Module/System	Low Voltage Disconnect Over Voltage Disconnect Short Circuit Protection Reverse Polarity Protection Cell Balancing

(**For full specifications, please visit www.aegisbattery.com*)

WIRING SCHEMATICS



Warming:The input voltage of the solar panel shall not exceed 18V, The power of the solar panel shall not exceed 120W.

SAFETY GUIDELINES

Please adhere to the following Safety Guidelines in addition to all disclosed information when using your battery. Any damage incurred as a result of a failure to adhere to the recommended usage guidelines as collectively disclosed may result in a partial or complete voiding of the warranty as provided upon purchase of this battery product. **Additional Safety Guidelines are as follows.**

1.Do not disassemble and/or attempt self-repair
2.Do not short circuit positive and negative terminals
3.Do not use lead acid chargers as they will cause damage to internal hardware
4.Do not dispose in normal refuse bin, recycle this product only at designated facilities
5.For long term storage, fully charge the battery and then discharge to 50% of the full capacity
6.Do not leave the battery unattended for more than 6 months or in the presence of children
7.Do not use the battery in or expose the battery to extreme temperatures