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› Synergy Digital LiFePO4 3.2V 1800mAh Solar Battery Instruction Manual (Model SDOTH-L18838)

## Synergy Digital SDOTH-L18838

# Synergy Digital LiFePO4 3.2V 1800mAh Solar Battery Instruction Manual

Model: SDOTH-L18838

## 1. INTRODUCTION

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This manual provides essential information for the safe and effective use of your Synergy Digital LiFePO4 3.2V 1800mAh Solar Battery, Model SDOTH-L18838. This battery is designed as a replacement for Gama Sonic GS32V06 batteries and is compatible with various solar applications, including Gama Sonic IFR18650 Solar products. Please read this manual thoroughly before installation and operation.

## 2. SAFETY INFORMATION

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Observe the following safety precautions to prevent injury or damage to the battery and connected devices:

- **Do not disassemble:** Attempting to disassemble the battery can cause short circuits, fire, or chemical exposure.
- **Do not dispose of in fire:** Batteries can explode or leak when exposed to fire.
- **Charge only with specified charger:** Use only chargers designed for LiFePO4 3.2V batteries. Using an incompatible charger can lead to overcharging, overheating, and damage.
- **Avoid high temperatures:** Do not store or operate the battery in temperatures exceeding 60°C (140°F). High temperatures can reduce battery life and pose safety risks.
- **Keep dry:** Avoid exposing the battery to water or moisture.
- **Handle with care:** Do not drop, puncture, or apply excessive force to the battery.
- **Keep out of reach of children:** This product is not a toy.

## 3. PRODUCT OVERVIEW

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The Synergy Digital LiFePO4 3.2V 1800mAh Solar Battery is a rechargeable battery designed for solar-powered devices. It features a standard connector for easy integration.

### 3.1 Battery Components

- **Battery Cell:** LiFePO4 (Lithium Iron Phosphate) chemistry.
- **Voltage:** 3.2 Volts.

- **Capacity:** 1800 Milliampere-hours (mAh).
- **Connector:** Two-pin connector (red and black wires) for power connection.



Figure 3.1: Overview of the Synergy Digital LiFePO4 3.2V 1800mAh Solar Battery. This image shows the full battery unit with its blue casing and attached red and black wires leading to a black connector.



Figure 3.2: Battery label displaying "SYNERGY DIGITAL", "Model No.: SDOTH-L18838", and "Rating: 3.2V/1800mAh". Safety warnings such as "DON'T DISASSEMBLE" and "DON'T DISPOSE OF IN FIRE" are also visible.

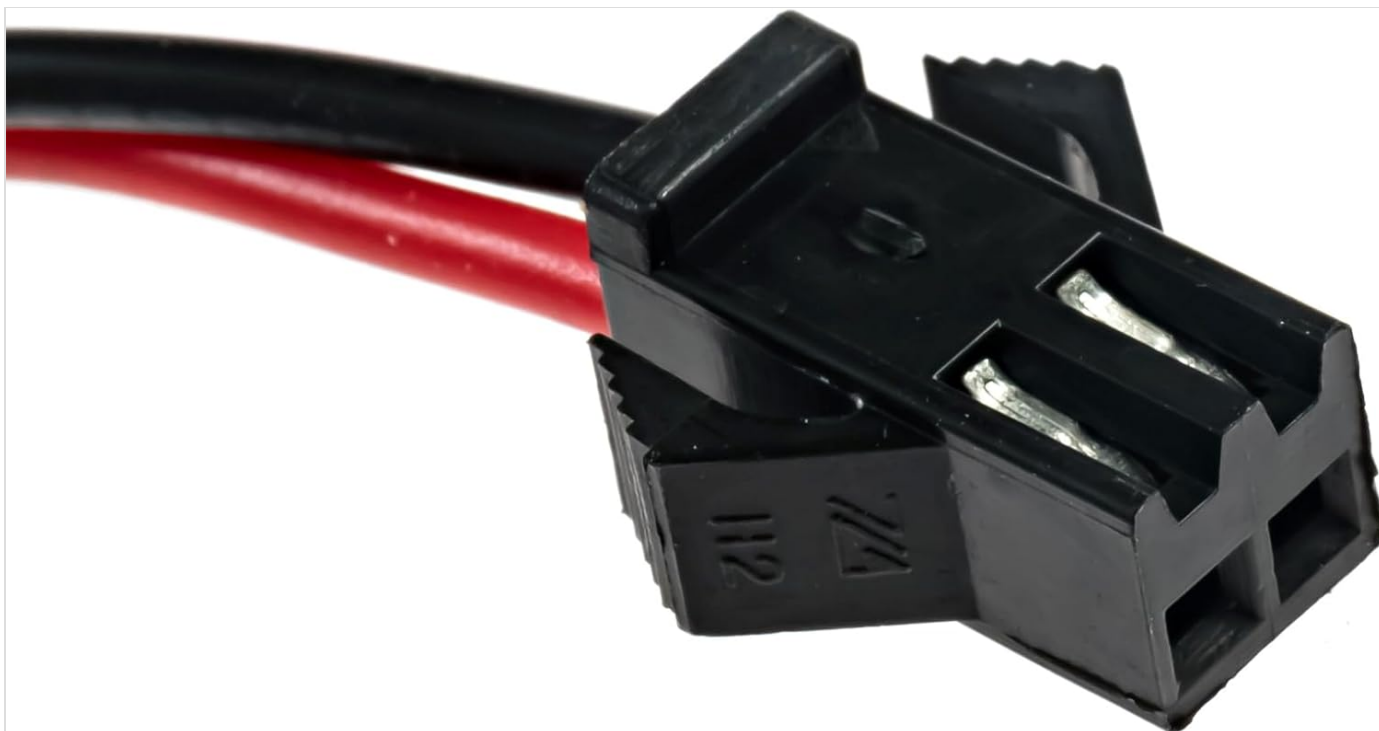


Figure 3.3: A close-up view of the two-pin black connector attached to the battery's red and black wires. This connector is used to plug the battery into compatible devices.

## 4. SETUP AND INSTALLATION

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This battery is intended as a direct replacement for compatible solar device batteries. Ensure the device is powered off before proceeding.

1. **Identify the old battery:** Locate the existing battery in your solar device (e.g., Gama Sonic IFR18650 Solar light).
2. **Disconnect the old battery:** Carefully unplug the connector of the old battery from the device's port. Note the orientation if necessary.
3. **Remove the old battery:** Extract the old battery from its compartment.
4. **Insert the new battery:** Place the Synergy Digital battery (Model SDOTH-L18838) into the battery compartment, ensuring it fits securely.
5. **Connect the new battery:** Plug the battery's two-pin connector firmly into the corresponding port on your device. Ensure the connection is secure.
6. **Secure the compartment:** Close and secure the battery compartment of your device.

After installation, place your solar device in an area with adequate sunlight to allow the battery to charge.

## 5. OPERATION

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The Synergy Digital LiFePO4 solar battery operates by storing energy from a solar panel and releasing it to power your device. Its operation is largely automatic once installed in a compatible solar product.

- **Charging:** The battery charges when the solar panel of your device receives sunlight. The charging process is managed by the solar device's internal circuitry.
- **Discharging:** The battery discharges to power the device (e.g., illuminate a solar light) when light levels are low or as per the device's operational settings.
- **First Use:** For optimal performance, allow the battery to fully charge under direct sunlight for at least 24-48 hours before its first use, if possible.

## 6. MAINTENANCE

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Proper maintenance ensures the longevity and performance of your battery.

- **Regular Cleaning:** Keep the battery and its compartment clean and free from dust and debris.
- **Temperature Control:** Avoid prolonged exposure to extreme temperatures (both hot and cold) outside the recommended operating range.
- **Storage:** If storing the battery for an extended period, ensure it is partially charged (around 50%) and stored in a cool, dry place. Recharge it every 3-6 months to prevent deep discharge.
- **Inspection:** Periodically inspect the battery and its wires for any signs of damage, corrosion, or wear.

## 7. TROUBLESHOOTING

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If your solar device is not functioning correctly after battery installation, consider the following:

Problem	Possible Cause	Solution
Device not turning on	Battery not charged; incorrect installation; faulty device.	Ensure battery is fully charged by placing the solar device in direct sunlight for 1-2 days. Check battery connection. Verify device functionality with another known good battery if possible.
Device runs for a short period	Insufficient charging; battery degradation.	Ensure solar panel is clean and receives adequate direct sunlight. Allow longer charging time. If battery is old, consider replacement.
Battery connector loose	Improper connection during installation.	Power off device, open compartment, and firmly re-seat the battery connector.

If issues persist, contact customer support.

## 8. SPECIFICATIONS

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Feature	Detail
Battery Chemistry	LiFePO4 (Lithium Iron Phosphate)
Voltage	3.2V
Capacity	1800mAh
Model Number	SDOTH-L18838
Compatible with	Gama Sonic GS32V06 Battery, Gama Sonic IFR18650 Solar
Product Dimensions	2.6 x 0.83 x 0.73 inches
Item Weight	1.7 ounces
Manufacturer	Synergy Digital

## 9. DISPOSAL INFORMATION

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Do not dispose of this battery with household waste. LiFePO4 batteries contain materials that require special handling for

recycling. Please dispose of the battery at an authorized recycling center or according to local regulations for battery disposal. Contact your local waste management authority for information on recycling options.

## **10. WARRANTY AND SUPPORT**

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For warranty information or technical support, please refer to the contact details provided with your purchase or visit the official Synergy Digital website. Keep your proof of purchase for warranty claims.