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› Sol-Ark 15K All-in-One Hybrid Inverter User Manual

Liniotech 808227567531

Sol-Ark 15K All-in-One Hybrid Inverter User Manual

Model: Sol-Ark 15K-2P (808227567531) | Brand: Liniotech

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, maintenance, and troubleshooting of the Sol-Ark 15K All-in-One Hybrid Inverter. This advanced system is designed for residential and commercial applications, offering robust power conversion for solar energy, battery storage, and grid-tied or off-grid operations. Please read this manual thoroughly before installation and operation to ensure safe and efficient use of the inverter.



Figure 1.1: Front view of the Sol-Ark 15K All-in-One Hybrid Inverter, showing the display screen and the "15K" branding.

2. SAFETY INFORMATION

Always adhere to local electrical codes and regulations. Installation and maintenance should only be performed by qualified personnel. Failure to follow these instructions may result in electric shock, fire, or severe injury.

- **Disconnect Power:** Before performing any installation or maintenance, ensure all power sources (solar, battery, grid) are disconnected.
- **Proper Grounding:** The inverter must be properly grounded to prevent electrical hazards.
- **Ventilation:** Ensure adequate ventilation around the inverter to prevent overheating.
- **Outdoor Rated:** This unit is outdoor rated (NEMA 3R), but protect it from direct exposure to extreme weather conditions where possible.
- **Battery Safety:** Handle batteries with care. Refer to battery manufacturer's guidelines for safe handling and connection.

3. PRODUCT OVERVIEW

The Sol-Ark 15K is an all-in-one hybrid inverter designed for seamless integration into various power systems. It combines a powerful inverter, charge controller, and system controller into a single unit.

Key Features:

- 15,000W continuous power output with 22.5kW peak surge capacity.
- Supports 48V LiFePO4, lithium, and lead-acid batteries.
- Max solar input of 19kW.
- Dual MPPT tracking for optimized solar harvesting.
- Built-in WiFi for remote monitoring via the Sol-Ark app.
- Outdoor rated (NEMA 3R).



Figure 3.1: Angled view of the Sol-Ark 15K inverter, illustrating its key features including battery compatibility, solar input, output power, and generator support.

4. SETUP AND INSTALLATION

Proper installation is critical for the performance and safety of your Sol-Ark 15K inverter. Consult a certified electrician for installation if you are not experienced with electrical systems.

4.1. Mounting the Inverter

The inverter should be mounted on a sturdy, non-combustible surface in a well-ventilated area. Use the provided mounting bracket and hardware. Ensure sufficient clearance around the unit for airflow and access.



Figure 4.1: Side view of the Sol-Ark 15K inverter, illustrating its robust casing and potential mounting points.

4.2. Electrical Connections

All electrical connections must comply with national and local electrical codes. This includes AC input/output, DC solar input, and battery connections. Ensure all wiring is correctly sized and protected by appropriate circuit breakers.

- **AC Connections:** Connect the grid input and load output to the designated terminals. The inverter supports 120/240/208V AC.
- **DC Solar Connections:** Connect your solar PV array to the MPPT inputs. Observe correct polarity.
- **Battery Connections:** Connect the 48V battery bank to the battery terminals. Ensure correct polarity and secure connections.



Figure 4.2: Example installation of the Sol-Ark 15K inverter alongside two Liniotech battery units, demonstrating typical wiring and conduit setup.

5. OPERATING INSTRUCTIONS

Once installed, the Sol-Ark 15K inverter can be configured and monitored via its integrated display and the Sol-Ark app.

5.1. Initial Power-Up

1. Verify all electrical connections are secure and correct.
2. Turn on the battery disconnect switch.
3. Turn on the solar PV disconnect switch.
4. Turn on the AC grid input breaker.
5. Turn on the AC load output breaker.
6. The inverter will initiate its startup sequence. Monitor the display for status indicators.

5.2. Monitoring and Configuration

The inverter features a built-in display for real-time data and basic settings. For advanced monitoring and configuration, use the Sol-Ark app via WiFi connectivity.



Figure 5.1: Screenshot of the Sol-Ark mobile application, providing a visual representation of energy flow and system performance data. The app allows you to:

- View real-time power generation and consumption.
- Monitor battery state of charge.
- Adjust operating modes (e.g., self-consumption, time-of-use).
- Receive alerts and notifications.

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Sol-Ark 15K inverter.

- **Periodic Inspection:** Annually inspect all wiring connections for tightness and signs of corrosion.
- **Cleanliness:** Keep the inverter's vents clear of dust and debris to ensure proper cooling. Use a soft, dry cloth for cleaning the exterior.
- **Software Updates:** Periodically check for firmware updates via the Sol-Ark app or manufacturer's website to ensure your inverter has the latest features and bug fixes.

- **Battery Health:** Monitor battery health and perform maintenance as recommended by the battery manufacturer.

7. TROUBLESHOOTING

This section provides solutions to common issues you might encounter. For problems not listed here, contact technical support.

Problem	Possible Cause	Solution
Inverter not powering on.	No power from battery or grid; tripped breaker.	Check battery connections and voltage. Verify all breakers (AC and DC) are in the ON position.
Low power output.	Insufficient solar input; battery low; system overload.	Check solar panel cleanliness and shading. Ensure batteries are adequately charged. Reduce load on the inverter.
Error code on display.	Specific system fault.	Refer to the Sol-Ark app or the full technical manual for specific error code definitions and remedies.
No remote monitoring.	WiFi connection issue; app configuration error.	Ensure inverter's WiFi is enabled and connected to your network. Check app settings and internet connectivity.

8. SPECIFICATIONS

Detailed technical specifications for the Sol-Ark 15K All-in-One Hybrid Inverter.

Attribute	Value
Product Dimensions	18 x 11 x 32 inches
Item Weight	135 pounds
Item Model Number	808227567531
Brand	Liniotech
Manufacturer	Sol-Ark
Power Source	Solar and Battery Powered
Wattage	15 KW
Model Name	Sol-Ark 15K-2P
Color	Silver

Attribute	Value
Max Solar Input	19kW (from feature bullets)
Battery Compatibility	48V LiFePO4, lithium, and lead-acid batteries (from feature bullets)
AC Output Voltage	120/240/208V AC (from feature bullets)
Enclosure Rating	NEMA 3R (Outdoor Rated) (from feature bullets)



Solar	Input Power 17000W
Max Allowed PV Power	17000W
Max PV Power Delivered to Battery & AC Outputs	15000W
Max DC Voltage (Voc)	500V @ 18A, 450V @ 20A
MPPT Voltage Range	150-425V
Starting Voltage	125V
Number of MPPT	3
Max Solar Strings Per MPPT	2
Max DC Current per MPPT (Self Limiting)	26A
Max AC Coupled Input (Micro/String Inverters)	19200W

Battery (optional)	Output Power 12000W
Type	Lead-Acid or Li-Ion
Nominal DC Input	48V
Capacity	50 — 9900Ah
Voltage Range	43.0 — 63.0V
Continuous Battery Charging Output	275A
Charging Curve	3-Stage w/ Equalization
Grid to Batt Charging Efficiency	96.0%
External Temperature Sensor	Included
Current Shunt for Accurate % SOC	Integrated
External Gen Start Based on Voltage or %SOC	Integrated
Communication to Lithium Battery	CanBus & RS485

General	
Dimensions (H x W x D)	31.8" x 18.3" x 10.9"
Weight	101 lbs
Enclosure	IP65 / NEMA 3R
Ambient Temperature	-40~60°C, >45°C Derating
Installation Style	Wall-Mounted
Wi-Fi & LAN Communication	Included
Standard Warranty (verified by HALT Testing)	10 Years

Figure 8.1: Partial spec sheet detailing Solar and Input Power specifications for the Sol-Ark 15K-LV.

AC Output Power 15kW On-Grid & Off-Grid		Protections & Certifications	
Connections	120/240/208V Split Phase	Electronics Certified Safety by SGS Labs to NEC & UL Specs - NEC 690.4B & NEC 705.4/6	Yes
Continuous AC Power from PV	15000W 62.5A-L (240V)	Grid Sell Back — UL1741-2010/2018, IEE-E1547a-2003/2014, FCC 15 Class B, UL1741SA, CA Rule 21, HECO Rule 14H	Yes
Continuous AC Power from Batteries	12000W 50A-L (240V)	PV DC Disconnect Switch — NEC 240.15	Integrated
Surge AC Power 10sec	24,000W L-L (240V)	Ground Fault Detection — NEC 690.5	Integrated
Surge AC Power 100ms	TBD	PV Rapid Shutdown Control — NEC 690.12	Integrated
Parallel Stacking	Yes - 12 Max	PV Arc Fault Detection — NEC 690.11	Integrated
Frequency	60/50Hz	PV Input Lightning Protection	Integrated
Continuous AC Power with Grid or Generator	48000W 200A L-L (240V) 24000W 200A L-N (120V)	PV String Input Reverse Polarity Protection	Integrated
CEC Efficiency	96.5% (Peak 97.5%)	AC Output Breakers - 63A	Integrated
Idle Consumption Typical—No Load	90W	250A Battery Breaker / Disconnect	Integrated
Sell Back Power Modes	Limited to Household/Fully Grid-Tied	Surge Protection	DC Type II / AC Type II
Design (DC to AC)	Transformerless DC		
Response Time (Grid-Tied to Off-Grid)	4ms		
Power Factor	+/- 0.9 - 1.0		

Figure 8.2: Partial spec sheet detailing AC Output Power, Protections, and Certifications for the Sol-Ark 15K-LV.

9. WARRANTY

The Sol-Ark 15K All-in-One Hybrid Inverter comes with a 10-year warranty, as verified by HALT Testing. This warranty covers defects in materials and workmanship under normal use and service conditions. Please retain your proof of purchase for warranty claims. For detailed warranty terms and conditions, refer to the official Sol-Ark documentation or contact customer support.

10. SUPPORT

For technical assistance, troubleshooting beyond this manual, or warranty inquiries, please contact Liniotech customer support. You can also visit the official Sol-Ark website for additional resources, FAQs, and the latest software updates.

Online Resources: www.sol-ark.com (Please note: This is a placeholder URL as specific support contact information was not provided in the product data.)

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question