

ROCKSOLAR

6 kW Off Grid Solar Panel Kit

(7000 W Solar Panels)

User & Installation Manual – Professional Edition

1. Safety Information

Solar PV systems generate high DC voltage whenever exposed to sunlight. Installation must be performed by qualified personnel.

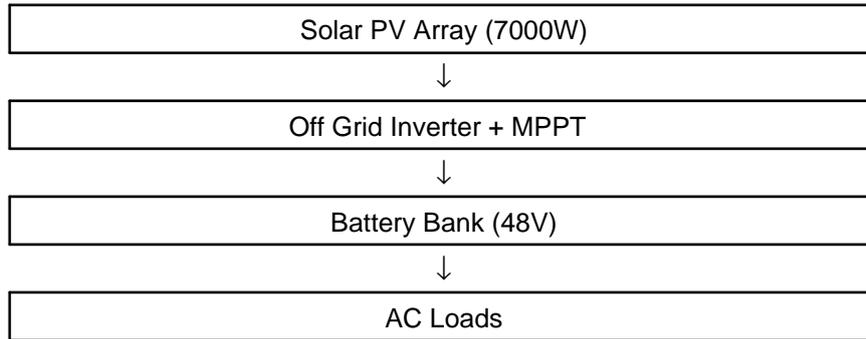
2. Product Overview

The ROCKSOLAR 6 kW Off Grid Solar Panel Kit provides renewable power for homes, cabins, farms and remote sites.

3. System Architecture

This system uses solar panels, an inverter with MPPT controller, and a battery bank to supply AC power.

4. System Power Flow Diagram



5. System Components

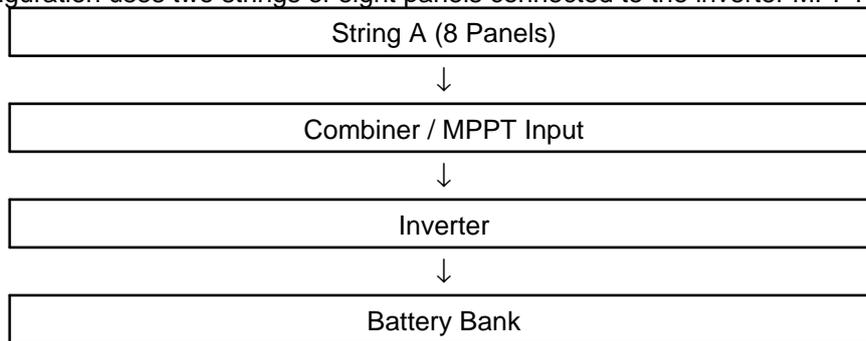
Component	Description
Solar Panels	16 × 440 W monocrystalline modules
Inverter	Growatt SPE6000US 6 kW Off Grid Inverter
Battery Bank	48 V lithium battery system
Charge Controller	Integrated MPPT controller

6. Technical Specifications

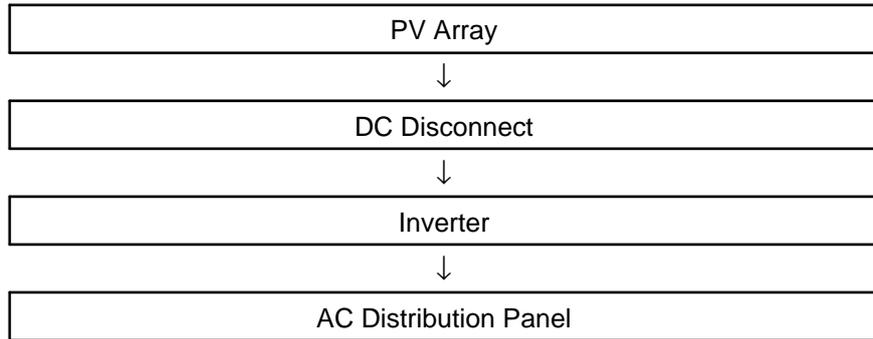
Specification	Value
System Size	6 kW
Solar Array	7000 W
Solar Panels	16 × 440 W
Battery Voltage	48 V
AC Output	120/240 V Split Phase

7. PV String Configuration

Typical configuration uses two strings of eight panels connected to the inverter MPPT inputs.



8. Single Line Electrical Diagram



9. Site Assessment

Perform shading analysis and roof inspection before installation.

10. Mounting System Installation

Install rails or ground mount according to manufacturer guidelines.

11. Solar Panel Installation

Secure modules and connect MC4 cables.

12. Inverter Installation

Mount inverter near battery bank with ventilation.

13. Battery Installation

Install battery bank in a ventilated environment.

14. AC Wiring

Connect inverter output to AC distribution panel.

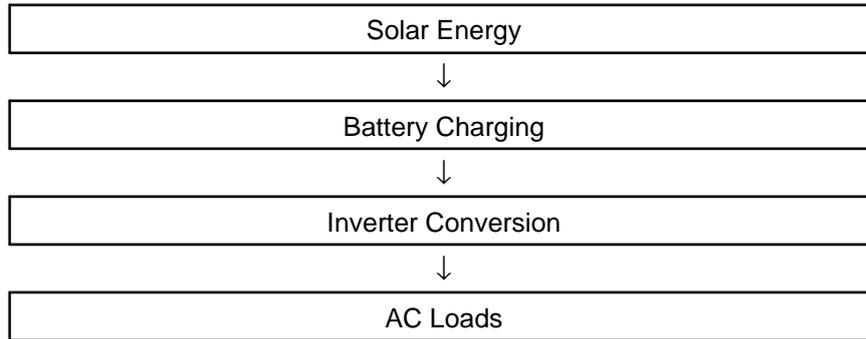
15. Grounding

Ensure proper system grounding according to electrical codes.

16. System Startup

Connect batteries, power inverter, then connect PV array.

17. System Operation



18. Maintenance

Inspect panels, wiring, and inverter every 6–12 months.

19. Troubleshooting

Problem	Solution
No AC Output	Turn inverter on
Battery not charging	Check PV wiring
Low production	Clean panels

20. Installer Checklist

Verify mounting, wiring polarity, inverter configuration and system startup.

21. Performance Expectations

Solar production varies depending on location and weather.

22. Compliance

Installations must follow CSA, NEC, and CEC requirements.

23. Warranty

Solar panels include 25 year performance warranty. Inverter includes 5 Year warranty

24. Technical Support

ROCKSOLAR – <https://rocksolar.io>;
support@rocksolar.io

25. Disclaimer

This manual provides general installation guidance.