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› Anern 6200W 48V Hybrid Solar Inverter User Manual

Anern AN-SCI02-PRO6.2K

Anern 6200W 48V Hybrid Solar Inverter User Manual

Model: AN-SCI02-PRO6.2K

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation of your Anern 6200W 48V Hybrid Solar Inverter. This off-grid inverter integrates the functions of a solar inverter and a battery charger, featuring a 120A MPPT PV charge controller. It delivers a pure sine wave output at 220V/230V and is designed for household applications. Please read this manual thoroughly before installation and use.

6200W ハイブリッドソーラー インバーター 48VDC

オフグリッド用太陽光発電用インバーター

6200W

最大交流出力

120A

最大MPPT太陽光発電充電電流

120V

太陽電池モジュールの最低電圧

500V

PVアレイの最大動作電圧



✧ ECO 6.2kWインバーターには、2つのAC出力端子が備わっています。このインバーターは単相型であり、多相または三相の接続、および並列接続には対応していません。

Figure 1: Front view of the Anern 6200W 48V Hybrid Solar Inverter.

2. SAFETY INFORMATION

Always adhere to the following safety guidelines to prevent injury or damage to the inverter and connected equipment:

- The starting power of inductive load devices must be at least three times the rated power of the electrical devices. If the starting power exceeds the inverter's capacity, it may cause damage. Select the appropriate model before purchase.
- Connect circuits correctly according to instructions and install a circuit breaker for each electrical circuit.
- **Startup Sequence:** First, turn on the battery switch, then start the inverter, and finally turn on the PV, grid, and load circuit breakers.
- **Shutdown Sequence:** Turn off the load, PV, and grid circuit breakers, then turn off the inverter, and finally turn off the battery.
- Ensure proper grounding for solar panels to prevent generalized interference.

家庭用およびオフィス用機器の95%に対応

このインバーターは、家庭やオフィスにあるさまざまな電気機器に電力を供給することができます。これには、ランプ、扇風機、冷蔵庫、エアコン、コーヒーマーカーなどの電気機器が含まれます。

最大交流出力
6200W



Figure 2: The inverter features comprehensive 360-degree protection, including safeguards against short circuits, low voltage, overload, over-temperature, over-current, and surges.

3. PRODUCT FEATURES

The Anern 6200W 48V Hybrid Solar Inverter is designed with advanced features for reliable off-grid solar power management:

- **6200W Inverter/Charger:** An off-grid inverter that combines inverter and battery charger functions with an integrated 120A MPPT PV charge controller. It provides a pure sine wave output at 220V/230V. Note: This model does not support split-phase or tri-phase connections.
- **LCD Screen:** Equipped with an LCD screen that clearly displays real-time system data and operating status.
- **WIFI/GPRS Remote Monitoring:** Supports remote control via WIFI/GPRS module (WIFI module included), allowing you to monitor the inverter's operation remotely.
- **Multiple Charging and Output Modes:** Configurable battery charging current via LCD settings.

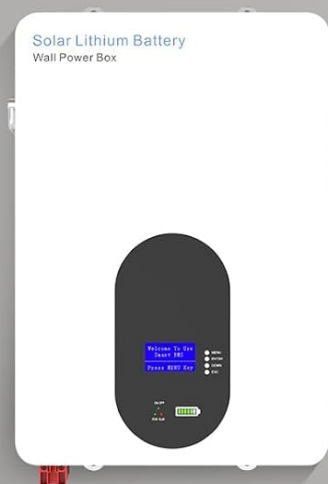
Charging Modes:

1. Solar Priority
2. Solar Only
3. Utility Priority
4. Solar and Utility Hybrid

Output Modes:

1. Solar Priority (SUB)
2. Utility Priority (USB)
3. SBU (Solar-Battery-Utility)

鉛蓄電池、ゲル電池、リチウム電池に対応



- このインバーターはバッテリーなしでご利用いただけます。PACE BMSにのみ接続可能
- で、他社製のBMSには接続できません。このインバーターは他のブランドのバッテリーとは通信できません。リチウムバッテリーを使用する場合は、プログラム05でバッテリータイプとして「ユーザー定義」を選択して設定してください。

Figure 3: The inverter is compatible with 95% of household and office appliances, including lamps, fans, refrigerators, air conditioners, and coffee makers.

4. SETUP AND INSTALLATION

Proper installation is crucial for the inverter's performance and safety. Follow these guidelines carefully.

4.1 System Architecture

The inverter can be integrated into a system with solar panels, a generator, utility power, and external battery packs to power household appliances.

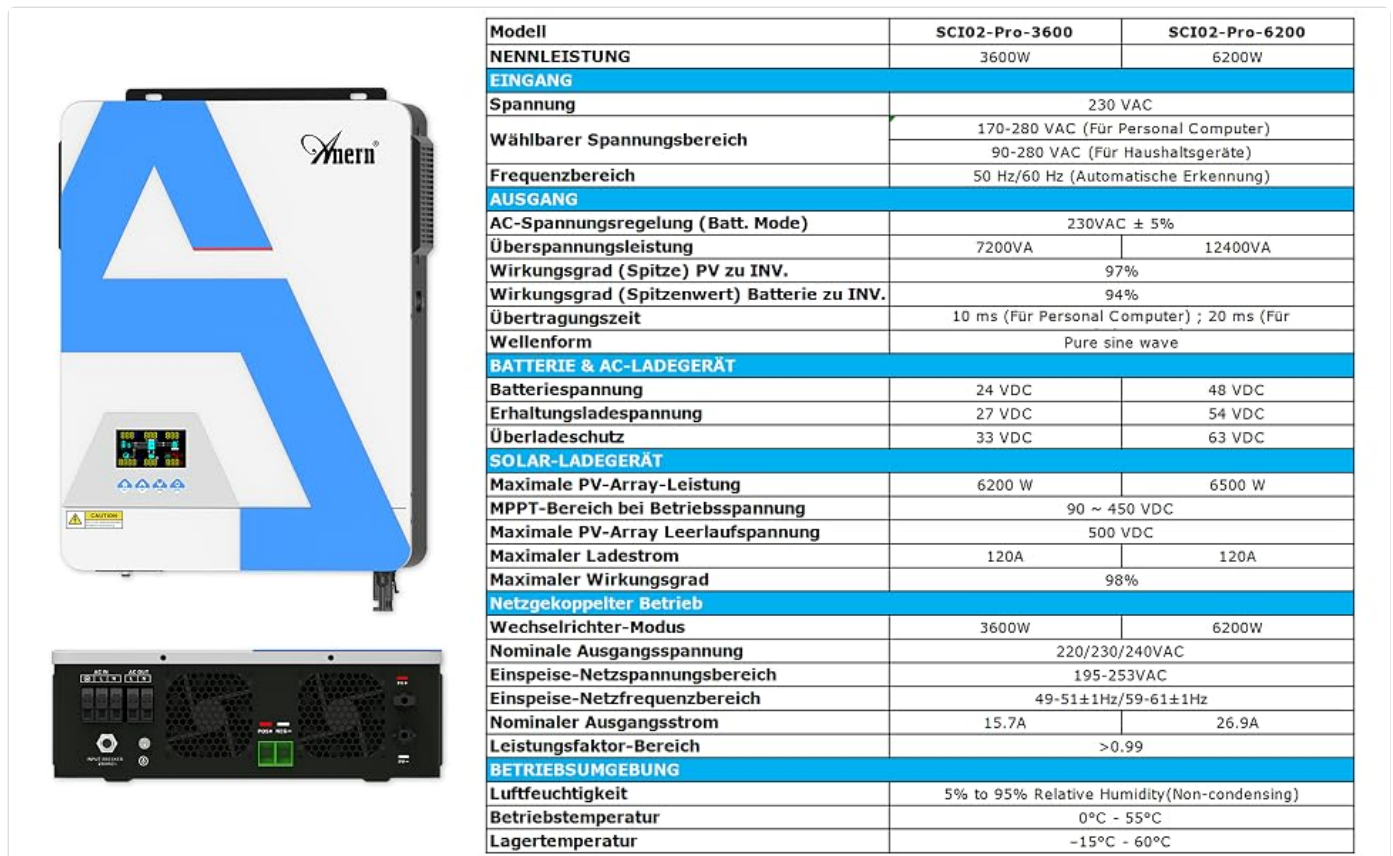


Figure 4: Basic system architecture showing connections between solar panels, generator, utility, inverter, batteries, and household loads. WIFI/GPRS module allows monitoring via app or web.

4.2 Solar Panel Connection

- For normal inverter startup, the solar panel voltage should be between 300V-400V, not exceeding 500V.
- The solar panel power should not exceed 6.2kW/6.5kW.
- Example: 10 pieces of 250W, 30V solar modules connected in series.
- Recommended PV cable: 10 AWG/6mm².

4.3 Battery Connection

The inverter can operate with or without batteries. If operating without batteries, the solar module voltage must exceed 360VDC.

- Compatible battery types: Lead-acid, Gel, and Lithium batteries.
- For the 6.2kW model, a 48V battery system is required.
- Battery capacity should not be less than 100Ah. A 200Ah capacity is recommended to avoid insufficient current for device startup.
- If using Lithium batteries, set the battery type to 'User-Defined' in program 05.
- Recommended battery cable and terminal size: 2 AWG / 25mm².
- Recommended fuse: 100A.

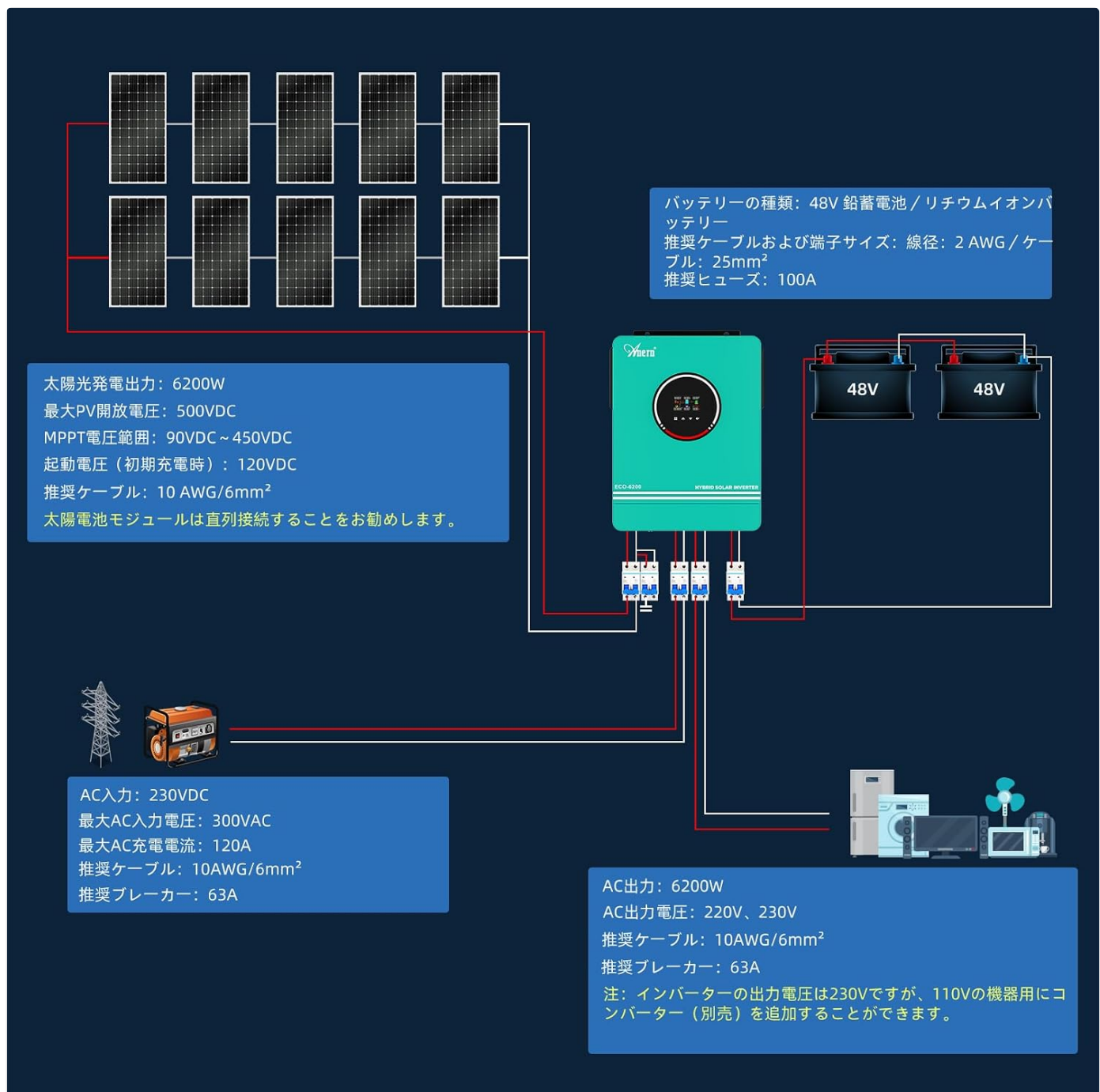


Figure 5: The inverter supports GEL, AGM, FLD (Flooded), LI (Lithium), and SLD (Sealed Lead-Acid) battery types. For Lithium batteries, configure as 'User-Defined'.

5. OPERATING INSTRUCTIONS

5.1 LCD Display

The inverter features an LCD screen to display real-time system data and operating status. Use the display to configure charging currents and select operating modes.



Figure 6: The high-resolution RGB LCD display provides clear visibility of system data and operating modes, even in direct sunlight.

5.2 WIFI Monitoring

The included WIFI module allows for remote monitoring of the inverter's performance and status via a dedicated app (e.g., PVguarder APP) or web interface (PVguarder Web).



Figure 7: WIFI monitoring setup, illustrating how the inverter connects to the internet via a WIFI module for remote access through a smartphone app or web browser.

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your solar inverter. Always disconnect all power sources before performing any maintenance.

- Keep the inverter's ventilation openings clear of dust and debris to ensure proper cooling.
- Periodically check all electrical connections for tightness and signs of corrosion.
- Inspect cables for any damage or wear.
- Clean the exterior of the inverter with a dry, soft cloth. Do not use liquid cleaners.

7. TROUBLESHOOTING (FAQ)

This section addresses common questions and issues you might encounter.

Q: How many solar modules need to be connected?

A: To start the inverter normally, the solar panel voltage should be between 300V-400V, with a maximum of 500V. The solar panel power should not exceed 6.2kW/6.5kW.

Q: Can inverters be connected in series or parallel?

A: No, this inverter does not support series or parallel connection.

Q: Does the inverter require a battery connection?

A: It can be connected with or without batteries. However, without batteries, the solar module voltage must exceed 360VDC.

Q: What types of batteries can be used?

A: Lead-acid, Gel, and Lithium batteries can be used. A 48V battery system is required for this 6.2kW model. The battery capacity should not be less than 100Ah; 200Ah is recommended.

Q: Can it be used with air conditioners, water pumps, and wind turbines?

A: It can be used with air conditioners, but not with water pumps or wind turbines.

8. SPECIFICATIONS

Detailed technical specifications for the Anern 6200W 48V Hybrid Solar Inverter.

Feature	Specification
Brand	Anern

Feature	Specification
Model Name	6200W Hybrid Wechselrichter Solar
Model Number	AN-SCI02-PRO6.2K
Rated Power	6200 W
Input Voltage (DC)	48 Volts
Output Voltage (AC)	230 Volts (AC)
Waveform	Pure Sine Wave
Frequency	50 Hz
Max PV Array Power	6500 W
MPPT Operating Voltage Range	90 ~ 450 VDC
Max PV Array Open Circuit Voltage	500 VDC
Max Charging Current	120 A
Efficiency	High
Display Type	LCD
Operating Temperature	0°C - 55°C
Storage Temperature	-15°C - 60°C
Certifications	CE

9. WARRANTY AND SUPPORT

Anern provides a 12-month product warranty. For technical assistance or support, please contact our professional technical team online. The package includes the inverter, an English user manual, and a WIFI module. For further inquiries or support, please refer to the contact information provided with your purchase or visit the official Anern website.

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