

Understanding the Nomenclature of EG4 Electronics Inverters

1. INTRODUCTION

EG4 Electronics employs a systematic and thoughtful naming convention for our inverters to provide clear insight into each product's capabilities and technical specifications. By understanding this structure, installers and users can quickly identify the inverter's intended purpose, power capabilities, and additional features. This white paper explores the naming convention of EG4 hybrid and off-grid inverters, focusing on how each component of the name conveys key information.

2. MODEL NUMBER BREAKDOWN

1. Prefix (EG4)

The prefix "EG4" serves as the manufacturer identifier, indicating that the product was developed by EG4 electronics.

2. Numerical Identifier

The numerical identifier reflects either the inverter's photovoltaic (PV) input capacity or continuous AC output.

- **Hybrid Inverters:** For instance, in the "EG4 18kPV" model, "18kPV" indicates the inverter's capacity to handle 18 kW of solar PV input. Similarly, "12k" in "EG4 12kPV" show it can manage up to 12 kW of PV input. These numbers are crucial for installers to understand how much solar energy the inverter can process.
- **Off-Grid Inverters:** For off-grid models like the "EG4 6000XP," the numerical identifier (6000) signifies the inverter's continuous AC output, in this case, 6kW, ensuring users know the power limits for off-grid operation.

3. UNDERSTANDING ADDITIONAL DESIGNATIONS

1. Inverter Type

EG4 uses clear language to distinguish between various types of inverters:

- **Hybrid:** Indicates dual functionality. Hybrid inverters can operate with grid power, solar PV, and batteries, offering seamless transitions between energy sources. For example, the "EG4 18kPV Hybrid" inverter integrates grid-tied operations with off-grid capabilities, managing loads, charging batteries, and even offering time of use features which allow users to prioritize certain modes during various parts of the day.
- **Off-Grid:** Describes inverters that are not grid-tied and function independently of the grid. The "EG4 6000XP Off-Grid Inverter," for example, operates without feeding back to the grid, providing power solely for off-grid applications.

2. Phase Type

EG4 may sometimes include information about whether the inverter supports single-phase or split-phase operations. “120” indicates the inverter operates in single phase, and “240” indicates it is a split-phase system.

- **Single-phase(120V):** Common in smaller residential or off-grid setups, single-phase provides 120V for basic devices, such as lights.
- **Split-phase(120/240V):** Typically fused in larger residential or light commercial applications. Split phase combines two 120V lines to create 240V for higher demand applications, like air conditioners.

3. Additional Labels

Additional labels in the model name, such as “All-in-One,” specify the integrated charging capability of the inverter. An “All-in-One” inverter combines a solar inverter and a charge controller, simplifying installation by reducing the need for multiple components.

4. CASE IN POINT: EG4 18KPV HYBRID INVERTER

The EG4 18kPV Hybrid Inverter exemplifies EG4’s nomenclature:

- **18kPV:** This indicates the inverter can accept up to 18kW of solar PV input, making it suitable for larger installations.
- **Hybrid:** It manages both grid and off-grid scenarios, providing flexibility for installations that require grid interaction while maintaining battery backup as an option.
- **Insight:** Out of the 18kW, 12kW is dedicated to continuous AC output, while up to 6kW can be used for battery charging. This makes the inverter ideal for balancing load management with solar energy capture and storage.

5. CASE IN POINT: EG4 6000XP OFF-GRID INVERTER

The EG4 6000XP is another clear example:

- **6000:** Reflects the inverter’s continuous 6kW AC output, signifying the limitations of the system.
- **Off-Grid:** Ensures that users understand this model is meant for systems that don’t require back feeding the grid. It is ideal for remote or standalone power systems.
- **Insight:** It can handle an 8kW PV array, providing 5kW to loads while using 2kW for charging batteries.

6. CONCLUSION

EG4 Electronics’ nomenclature for its inverters is designed to offer users immediate clarity on the product’s capabilities, including power limits, compatibility, and operational modes. By understanding the structure of these model names, installers and end users alike can make informed decisions, ensuring that they get the right inverter for the job.