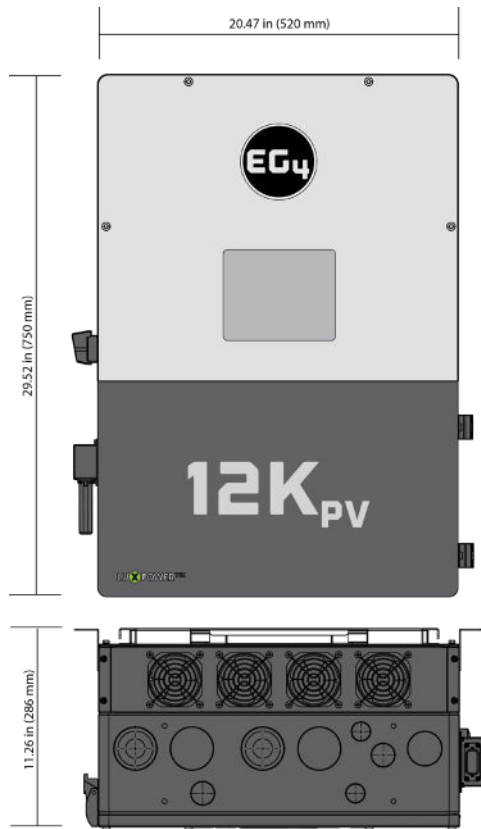




# EG4<sup>®</sup> 12kPV HYBRID INVERTER

The EG4 12kPV is a 48V split-phase, hybrid inverter/charger capable of utilizing 12kW of PV input and efficiently outputting 8kW of power while also charging your battery bank. Parallel up to 10 units for 80kW of output power and control multiple stations and units using the new EG4 monitoring software.

HIGH  
FREQUENCY  
SPLIT-PHASE  
DESIGN

10-YEAR  
WARRANTY

REMOTE  
ADJUSTMENT  
VIA EG4  
SOFTWARE

## ALL-IN-ONE HYBRID INVERTER

Capable of running entirely off the grid, using grid electricity, or selling power back to the grid.

## UP TO 600VDC INPUT

The extra high voltage enables lower cable sizing for the 2 MPPTs and a maximum recommended PV input of 15kW, eliminating the need for a combiner box.

## PLUG IN WI-FI DEVICE

Enables wireless connection between our new monitoring platform and the 12kPV through the EG4 app or EG4 Monitor system.

## CLOSED-LOOP COMMUNICATIONS

Able to communicate with EG4 48V batteries and other battery brands. A battery firmware update is required for closed-loop communications with LifePower4 batteries.

## RAPID SHUT DOWN

The 12kPV is CSA C22.2#330:2017 and NEC 690.12 ready with its built-in RSD capabilities.



## TECHNICAL SPECIFICATIONS

## AC INPUT DATA

|                                     |                                           |
|-------------------------------------|-------------------------------------------|
| NOMINAL AC VOLTAGE                  | 120/240VAC; 120/208VAC (L1/L2/N required) |
| FREQUENCY                           | 50/60Hz                                   |
| MAX. AC INPUT POWER                 | 8000W                                     |
| MIN. GENERATOR SIZE                 | >5000W                                    |
| MAX. GEN   GRID PASSTHROUGH CURRENT | 80A   80A                                 |

## AC GRID OUTPUT DATA

|                             |                                     |      |       |          |
|-----------------------------|-------------------------------------|------|-------|----------|
| MAX. OUTPUT CURRENT         | 33.3A@240VAC   38.5A @208VAC        |      |       |          |
| OUTPUT VOLTAGE              | 120/240VAC; 120/208VAC              |      |       |          |
| NOMINAL POWER OUTPUT        | 8000W                               |      |       |          |
| OUTPUT FREQUENCY            | 50/60Hz                             |      |       |          |
| POWER FACTOR                | 0.99 @ Full Load                    |      |       |          |
| REACTIVE POWER ADJUST RANGE | ±0.8                                |      |       |          |
| MAX CONT. LINE WATTAGE      | 4000W                               |      |       |          |
| PEAK POWER                  | 0.5 s                               | 1 s  | 1 min | 12 min   |
|                             | 16kW                                | 12kW | 10kW  | 8.8kW    |
| OPERATING FREQUENCY         | 50/60Hz                             |      |       |          |
| THD (V) @FULL LOAD          | <3%                                 |      |       |          |
| TRANSFER TIME               | Single                              |      |       | Parallel |
|                             | 20 ms – Default, 10 ms – Selectable |      |       | 20 ms    |

## PV INPUT DATA

|                                  |                               |
|----------------------------------|-------------------------------|
| NUMBER OF MPPTS                  | 2                             |
| INPUTS PER MPPT                  | 2                             |
| MAX. USABLE INPUT CURRENT        | 25/25A                        |
|                                  | 25A per MPPT   41.6A in total |
| MAX. SHORT CIRCUIT INPUT CURRENT | 31/31A                        |
| DC INPUT VOLTAGE RANGE           | 100-600 VDC                   |
| UNIT STARTUP VOLTAGE             | 100 VDC                       |
| MPPT OPERATING VOLTAGE RANGE*    | 120-500 VDC                   |
| NOMINAL MPPT VOLTAGE             | 360 VDC                       |
| MAXIMUM UTILIZED SOLAR POWER     | 12000W                        |
| RECOMMENDED MAXIMUM SOLAR INPUT  | 15000W                        |

## EFFICIENCY

|                                      |       |
|--------------------------------------|-------|
| MAXIMUM EFFICIENCY (PV TO GRID)      | 97.5% |
| MAXIMUM EFFICIENCY (BATTERY TO GRID) | 94%   |
| CEC WEIGHTED EFFICIENCY              | 96.4% |
| MAXIMUM EFFICIENCY (PV TO BATTERY)   | 99.9% |
| IDLE CONSUMPTION (STANDBY MODE)      | <55W  |

## BATTERY DATA

|                                           |                                            |
|-------------------------------------------|--------------------------------------------|
| COMPATIBLE BATTERY TYPES                  | Lead-Acid/Lithium                          |
| MAX. CHARGE/DISCHARGE CURRENT             | 167A @ 48 VDC                              |
| NOMINAL VOLTAGE                           | 48 VDC                                     |
| VOLTAGE RANGE                             | 40-60 VDC (Lithium); 40-60 VDC (Lead-Acid) |
| RECOMMENDED BATTERY CAPACITY PER INVERTER | >200Ah                                     |

## GENERAL DATA

|                                     |                                                                                                                                                                                        |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MAX. UNITS IN PARALLEL              | 10                                                                                                                                                                                     |
| PRODUCT DIMENSIONS (H×W×D)          | 29.5×20.5×11.2 in (750×520×285 mm)                                                                                                                                                     |
| UNIT WEIGHT                         | 110 lbs. (50 kg)                                                                                                                                                                       |
| DESIGN TOPOLOGY                     | High Frequency - Transformerless                                                                                                                                                       |
| RELATIVE HUMIDITY                   | 0-100%                                                                                                                                                                                 |
| OPERATING ALTITUDE                  | <2000m (<6561 ft)                                                                                                                                                                      |
| OPERATING AMBIENT TEMPERATURE RANGE | -13°F – 140°F (-25°C – 60°C)                                                                                                                                                           |
| STORAGE AMBIENT TEMPERATURE RANGE   | -13°F – 140°F (-25°C – 60°C)                                                                                                                                                           |
| NOISE EMISSION (TYPICAL)            | <50 dB @ 3 ft                                                                                                                                                                          |
| LOCKED ROTOR AMPS (LRA)             | 195A                                                                                                                                                                                   |
| COMMUNICATION INTERFACE             | RS485/Wi-Fi/CAN                                                                                                                                                                        |
| STANDARD WARRANTY**                 | 10-year standard warranty                                                                                                                                                              |
| ENCLOSURE RATING                    | NEMA 4X                                                                                                                                                                                |
| SAFETY FEATURES                     | PV Arc Fault Protection, PV Ground Fault Protection, PV Reverse Polarity Protection, Pole Sensitive Leakage Current Monitoring Unit, Surge Protection Device, integrated PV disconnect |

## STANDARDS AND CERTIFICATIONS

UL1741 SB

CSA C22.2#107.1:2016

CSA C22.2#330:2017 ED. 1

HECO SRD-IEEE-1547.1:2020 ED. 2

RAPID SHUT DOWN (RSD) NEC 2020:690.12

FCC PART 15, CLASS B

\*When sizing the system, it is best practice to follow the nominal MPPT voltage specifications and not the minimum/maximum voltage of the MPPT operating voltage range.

\*\*For information regarding warranty registration on EG4® Electronics products, please navigate to <https://eg4electronics.com/warranty/> and select the corresponding product to begin the registration process.

## CHANGELOG

### V1.0.6

- Added an asterisk to MPPT Operating Voltage Range line in spec sheet
- Added note after the spec sheet regarding MPPT Operating Voltage Range asterisk

### V1.0.4

- Modified max AC input power from 12000 to 8000W

### V1.0.3

- 3-10-25 - Added Locked Rotor Amps value to specifications

### 12-30-24

- Removed (Pending) from FCC Part 15 cert

### 11-15-24

- Published v1.0.2
- Removed IP rating and added NEMA 4X rating
- Modified warranty information