



# 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, SA, SB, PCS CRD
RAPID SHUT DOWN (RSD) NEC 2020:690.12
ARC-FAULT CIRCUIT INTERRUPTER (AFCI) NEC 2020:690.11 / UL1699B
GROUND FAULT MONITORING (GFDI) NEC 2020:690.41(B)
CSA 22.2.107.1
CSA 22.2.330
IEEE 1547.1:2020; IEEE 1547:2018
HAWAII RULE 14H
CALIFORNIA RULE 21 PHASE I, II, III
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

V1.0.7

- Modified spec sheet Safety and Certifications and added more information

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