



EG4[®] 18kPV HYBRID INVERTER

The EG4 18kPV is a 48V split-phase, hybrid inverter/charger capable of utilizing 18kW of PV and efficiently outputting 12kW of power while charging the battery bank. Parallel up to 10 units for 120kW of AC power. Control multiple stations and units using the new EG4 monitoring software.

AC COUPLING
CAPABILITY

REMOTE
ADJUSTMENT VIA
EG4 SOFTWARE

10-YEAR
WARRANTY

ALL-IN-ONE HYBRID INVERTER

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

UP TO 600VDC INPUT

The extra high voltage enables lower cable sizing for the 3 MPPTs with a recommended maximum PV input of 21kW, eliminating the need for a combiner box.

MOUNTABLE WI-FI DEVICE

Enables wireless connection between our new monitoring platform and the 18kPV 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.

HIGH FREQUENCY, SPLIT-PHASE OUTPUT

Allows for 120/240V single unit or 120/208 service operation.

T E C H N I C A L S P E C I F I C A T I O N S

AC INPUT DATA

| | |
|---------------------|-------------------------------------------|
| NOMINAL AC VOLTAGE | 120/240VAC; 120/208VAC (L1/L2/N required) |
| FREQUENCY | 50/60Hz |
| MAX. AC CURRENT | 50A @ 240VAC |
| MAX. AC INPUT POWER | 12000W |
| MAX. AC BYPASS | 200A |

AC GRID OUTPUT DATA

| | |
|-----------------------------|-------------------------------------------------------------------|
| MAX. OUTPUT CURRENT | 50A |
| OUTPUT VOLTAGE | 120/240VAC; 120/208VAC (L1/L2/N required) |
| OPERATING VOLTAGE RANGE | 180-270VAC |
| NOMINAL POWER OUTPUT | @240V 12000W @208V 10400W |
| OUTPUT FREQUENCY | 50/60Hz |
| POWER FACTOR | 0.99 @ Full Load |
| REACTIVE POWER ADJUST RANGE | (-0.8) ≈ (+0.8) Leading Adjustable |
| MAX CONT. LINE WATTAGE | 6000W |
| PEAK POWER (SURGE CAPACITY) | w/ PV: 14700W (10 min), 15500W (5 min) W/O PV: 13500W (10 min) |
| OPERATING FREQUENCY | 50/60Hz |
| THD @FULL LOAD | <5% |
| TRANSFER TIME | 20ms (Default), 10ms (Configurable) Parallel – 20ms |

BACKUP/UPS AC OUTPUT DATA

| | |
|------------------------------------------|-------------------------------------------------------------------|
| RATED OUTPUT CURRENT (240/208VAC) | 50A |
| AC BYPASS (GENERATOR) | 90A |
| NOMINAL OUTPUT VOLTAGE | 240 120/240 120/208VAC |
| RATED OUTPUT POWER | @240VAC 12000W @208VAC 10400W |
| MAX. CONTINUOUS LINE WATTAGE | 8000W per 120V |
| PEAK POWER | w/ PV: 14700W (10 min), 15500W (5 min) w/o PV: 13500W (10 min) |
| OPERATING FREQUENCY | 50/60Hz |
| THDV (TOTAL HARMONIC DISTORTION VOLTAGE) | <5% |
| SWITCHING TIME | 10ms |

PV INPUT DATA

| | |
|----------------------------------|--------------------------------------------|
| NUMBER OF MPPTS | 3 |
| INPUTS PER MPPT | 2 (MPPT 1) 1 (MPPT 2) 1 (MPPT 3) |
| MAX. USABLE INPUT CURRENT | 25A (MPPT 1) 15A (MPPT 2) 15A (MPPT 3) |
| MAX. SHORT CIRCUIT INPUT CURRENT | 31A (MPPT 1) 19A (MPPT 2) 19A (MPPT 3) |
| DC INPUT VOLTAGE RANGE | 100-600 VDC |
| UNIT STARTUP VOLTAGE | 100 VDC |
| MPPT OPERATING VOLTAGE RANGE | 140-500 VDC |

| | |
|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NOMINAL MPPT VOLTAGE | 360 VDC |
| MAXIMUM UTILIZED SOLAR POWER | 18000W |
| RECOMMENDED MAXIMUM SOLAR INPUT* | 21000W |
| EFFICIENCY | |
| CEC | 96.9% |
| MAXIMUM EFFICIENCY (PV TO GRID) | 97.5% |
| MAXIMUM EFFICIENCY (BATTERY TO GRID) | 94% |
| MAXIMUM EFFICIENCY (PV TO BATTERY) | 99.9% |
| IDLE CONSUMPTION (NORMAL STANDBY MODE) | ~70W ~18W |
| BATTERY DATA | |
| COMPATIBLE BATTERY TYPES | Lead-acid/Lithium |
| MAX. CHARGE/DISCHARGE CURRENT | 250A |
| 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) | 34.3×20.5×11.2 in (870×520×285mm) |
| UNIT WEIGHT | 121 lbs. (55kg) |
| DESIGN TOPOLOGY | High Frequency - Transformerless |
| RELATIVE HUMIDITY | 0-100% |
| OPERATING ALTITUDE | <2000m (<6561ft) |
| 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) | 68dB @ 3ft |
| COMMUNICATION INTERFACE | RS485/Wi-Fi/CAN |
| STANDARD WARRANTY* | 10-year standard warranty |
| OUTDOOR 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 | |
| UL1741B RULE 21 | |
| 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 | |

*See *EG4 Warranty Registration for terms and conditions*

CHANGELOG

Version 1.3.3

- Updated formatting
- Removed Ingress Protection and replace with Outdoor Rating.

Version 1.3.2

- Corrected MPPT Operating Voltage Range – changed from 120VDC to 140VDC

Version 1.3.1

- Fixed typos on AC output max. continuous line wattage & max. usable PV current per MPPT

Version 1.3

- Reformatted document to branding standards
- Added CEC efficiency ratings

Version 1.2

- Slight modification of verbiage for readability