



EG4® FLEXBOSS18 HYBRID INVERTER

The EG4® FlexBOSS18 is a 13kW, 120/240VAC split-phase, all-in-one hybrid sine wave inverter, designed for residential and small commercial applications. It supports up to 18kW (STC) of solar PV input across two MPPTs (26A each) and can deliver 10kW of continuous power from the battery or 13kW with solar PV assistance when grid-connected. The FlexBOSS18 also features a 90A grid bypass capability, allowing seamless power flow from the grid to connected loads.



As the more affordable, entry-level counterpart to the FlexBOSS21, the FlexBOSS18 offers a powerful solution for energy independence. While fully capable as a standalone inverter, it is optimized for use with EG4's GridBOSS power gateway, unlocking enhanced functionality and performance for the end user.

HIGH
FREQUENCY
SPLIT-PHASE
DESIGN

10-YEAR
WARRANTY

REMOTE
ADJUSTMENT
VIA EG4
SOFTWARE

ALL-IN-ONE HYBRID INVERTER

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

UP TO 600 VDC INPUT

The extra high voltage enables lower cable sizing for the 2 MPPTs and a maximum recommended PV input of 18kW, eliminating the need for a combiner box.

PLUG-IN WI-FI DEVICE

Enables wireless connection between our monitoring platform and the FlexBOSS18 through the EG4® app or EG4 Monitor system for remote system management.

CLOSED-LOOP COMMUNICATIONS

Able to communicate with EG4 48V batteries and other battery brands. A battery firmware update is required for closed-loop communication with LifePower4 V1 batteries.

RAPID SHUTDOWN

The FlexBOSS18 is CSA C22.2#330:2017 and NEC 690.12 ready with its built-in RSD capabilities.



TECHNICAL SPECIFICATIONS

INVERTER TYPE & MODEL #	
HYBRID	IV-13000-HYB-AW-FX-XX (XX is a number between 0-99)
AC OUTPUT/INPUT	
NOMINAL GRID VOLTAGE (INPUT & OUTPUT)	240 VAC 208 VAC
FREQUENCY	60Hz Default (50Hz Capable)
MAX. CONTINUOUS DISCHARGE RATE	10kW
MAX. APPARENT POWER	13kW (54A @240V) 11.2kW (54A @208V)
MAX. CONTINUOUS CURRENT @ 45°C	54A
MAX. CONTINUOUS DISCHARGE W/ PV & GRID ONLY @ 45°C	10kW 13kW
POWER FACTOR (OUTPUT)	0.6 – 1.0
PEAK POWER	20000W (.5 sec) 15000W (1 sec) 13500W (1 min) 12500W (6 min) 11000W (12 min)
MAX. OUTPUT FAULT CURRENT	156A peak @ 100us
MAX. PASSTHROUGH FROM GRID	90A
THD V (VOLTAGE)	<3% @ full load
THD I (CURRENT)	<5% @ full load
BACKUP SWITCHING TIME (TRANSFER TIME)	20ms (Default), 10ms (Configurable), 20ms (Parallel)
OPEN LOOP RESPONSE TIME (OLRT)	≤2 sec
TIME TO STEADY STATE	<10 sec
MAX. CONTINUOUS PER-LINE WATTAGE	6.5kW
EFFICIENCY	
BATTERY TO GRID/LOAD	94%
PV TO GRID/LOAD	97.5%
PV TO BATTERY	94.5%
CEC EFFICIENCY (CALIFORNIA ENERGY COMMISSION)	Pending
SOLAR TECHNICAL SPECS	
MAX. SOLAR STC INPUT POWER	18kW
MAX. PV INPUT VOLTAGE*	600 VDC
MPPT VOLTAGE RANGE**	120V – 440 VDC
MPPT FULL POWER VOLTAGE RANGE	250V – 440 VDC
# OF MPPTS # OF STRINGS PER MPPT	2/2
MAX. CURRENT PER MPPT	26A/26A
MAX. SHORT-CIRCUIT CURRENT RATING PER MPPT	31A/31A
NOMINAL MPPT VOLTAGE	360 VDC
UNIT STARTUP VOLTAGE	100 VDC
MPPT VOLTAGE HIGH PROTECTION***	550 VDC

*Do not exceed the high end of the DC Input Voltage Range. Any damage caused by reaching >600VDC will not be covered under warranty.

When sizing the system, it is best practice to follow the MPPT full power voltage range specifications and not the minimum/maximum voltage of the MPPT voltage range. **Only qualified personnel need to perform these calculations.

***The value at which the inverter will fault to protect the MPPT from the overvoltage spec of 600VDC. Ensure **geographical considerations, weather patterns, and panel specifications** are factored into string sizing.

See <https://eg4electronics.com/wp-content/themes/hello-elementor/eg4-solar-panel-string-sizer/> for the EG4® String Sizing Tool.

BATTERY TECHNICAL SPECS	
COMPATIBLE BATTERY TECHNOLOGIES	Lithium/Lead-acid
OPERATING VOLTAGE	40 – 60 VDC
NOMINAL VOLTAGE	48 VDC
MAX. CHARGE/DISCHARGE CURRENT	208A (10kW)
BATTERY COMMUNICATION PROTOCOL	CAN/RS485
ENVIRONMENTAL	
OPERATING TEMPERATURE RANGE	-13°F – 140°F (-25°C – 60°C); > 45°C Derating
OPERATING HUMIDITY	0 – 100%
MAX. ALTITUDE OF OPERATION	<2000m (<6561ft)
ENCLOSURE RATING	NEMA 4X
STORAGE TEMPERATURE RATING	-13°F – 140°F (-25°C – 60°C)
COOLING (OR COOLING CONCEPT)	Fans
GENERAL SPECIFICATIONS	
DIMENSIONS (H x W x D)	30.43 x 22.28 x 11.22 in. (773 x 566 x 285 mm)
TOTAL WEIGHT	115 lbs. (52 kg)
MOUNTING OPTION(S)	Wall
USER INTERFACE	APP/Web/LCD (optional)
SCALABILITY	10
INVERTER IDLE CONSUMPTION @ NO LOAD	<60W (Standby) @ 25°C
NOISE	<50dB @ 3 ft.
LOCKED ROTOR AMPS (LRA)	195A
COMPLIANCE	
CERTIFICATIONS	UL1741, SA, SB, PCS CRD California Rule 21 Phase I, II, III CSA 22.2.107.1:2016 Ed. 4 CSA 22.2.330:2017 Ed. 1 IEEE 1547.1:2020; IEEE 1547:2018 Hawaii Rule 14H [HECO SRD IEEE 1547.1-2020 Ed.2]
PROTECTIONS	Arc-Fault Circuit Interrupter (AFCI) NEC 2020:690.11/UL1699B Ground Fault Monitoring (GFDI) NEC 2020:690.41(B) Rapid Shutdown (RSD) NEC 2020:690.12
WARRANTY*	10 years
EMISSIONS	FCC Part 15 Class B
SAFETY	Integrated DC disconnect, Reverse polarity protection, Output over-voltage protection varistor, Output over current protection, Ground fault monitoring, Grid monitoring, Pole sensitive leakage current monitoring unit, AFCI, RSD

***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

Ver 1.0.5

- Added PV Protect High value to spec sheet

Ver 1.0.4

- Modified Compliance section in the Technical Specifications table
- Corrected typos

Ver 1.0.3

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

Ver. 1.0.2

- Modified product dimensions

Ver. 1.0.1

- Added Open Loop Response Time & Time to Steady State
- Added Peak Power
- Updated formatting

Ver. 1.0

- Published