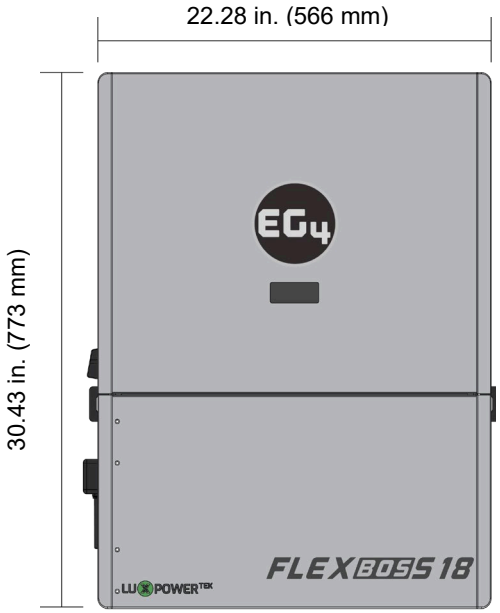

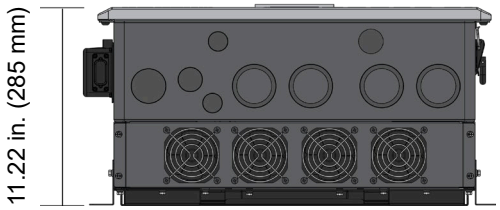

EG4® FLEXBOSS18 HYBRID INVERTER

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.

VERSION 1.0.7 | INFORMATION SUBJECT TO CHANGE WITHOUT NOTICE.
MODEL#: IV-13000-HYB-AW-FX-**XX** (**XX** is a number between 0-99)

TECHNICAL SPECIFICATIONS

INVERTER	
MODEL #	IV-13000-HYB-AW-FX-**XX** (**XX** is a number between 0-99)
CEC MODEL #	IV-13000-HYB-AW-FX-XX (240V) / IV-13000-HYB-AW-FX-XX (208V)
TYPE	Hybrid
DESIGN TOPOLOGY	High Frequency - Transfromerless
AC SYSTEM	
NOMINAL VOLTAGE	120/240 or 208 VAC
FREQUENCY	50/60Hz
PHASE SUPPORT	1ø
AC OUT	
NOMINAL OUTPUT VOLTAGE	120/240 or 208 VAC (L1/L2/N required)
MAX. CONTINUOUS OUTPUT	54A | 13kW
MAX. CONTINUOUS OUTPUT – BATTERY ONLY	41.67A | 10kW
MAX. CONTINUOUS OUTPUT – PV AND GRID @25C	41.67A | 13kW
PEAK POWER	20000W (.5 sec) | 15000W (1 sec) | 13500W (1 min) | 12500W (6 min) 11000W (12 min)
LOCKED ROTOR AMPS	195A
MAX. CONTINUOUS OUTPUT PER-LEG	41.67A | 5kW
POWER FACTOR	.99 @ Full Load
MAX. PASS-THRU CURRENT FROM GRID	90A
REACTIVE POWER ADJUST RANGE	+0.8/-0.8
THDV	<5%
MAX. APPARENT POWER WITH BATTERY	10kVA
MAX. APPARENT POWER WITH PV AND GRID	13kVA
AC IN	
NOMINAL GRID VOLTAGE	120/240 VAC | 120/208 VAC (L1/L2/N required)
MAX. GRID INPUT POWER (TO INVERTER W/O PASS-THRU)	41.67A | 11kW
MAX. GRID CIRCUIT RATING (W/ PASS-THRU)	90A
MAX. INPUT SHORT CIRCUIT CURRENT RATING	10kA

BATTERY	
NOMINAL VOLTAGE	51.2 VDC
OPERATING VOLTAGE RANGE	40 – 60 VDC
MAX. CHARGE CURRENT (DC AMPS)	208 ADC
MAX. DISCHARGE CURRENT (DC AMPS)	208 ADC
COMPATIBLE BATTERIES	See EG4 website
PV DC IN	
NO. OF MPPTS	2
RATED CURRENT PER MPPT	26A (MPPT 1) | 26A (MPPT 2)
INPUTS PER MPPT	3 | 2 (MPPT 1) | 2 (MPPT 2)
SHORT-CIRCUIT CURRENT RATING PER MPPT	31A (MPPT 1) | 31A (MPPT 2)
MAX. DC INPUT VOLTAGE	600 VDC
MPPT DC STARTUP VOLTAGE	200 VDC
MPPT FULL POWER VOLTAGE RANGE	250 – 440 VDC (360 VDC optimal)*
MPPT DC OPERATIONAL VOLTAGE RANGE	120 – 440 VDC
RECOMMENDED MAX. SOLAR ARRAY POWER (STC)	18kW
MPPT VOLTAGE HIGH PROTECTION	550 VDC**

**When sizing the system, it is best practice to follow the MPPT full power voltage.*
See https://eg4electronics.com/wp-content/themes/hello-elementor/eg4-solar-panel-string-sizer/ for the EG4® String Sizing Tool.
***The value at which the inverter will fault out to protect the MPPT from over voltage.*

RESPONSE	
TRANSFER TIME (GRID TO BATTERY SWITCHING TIME)	20ms (Default) | 10ms (Configurable)
OPEN LOOP RESPONSE TIME (OLRT)	<2 seconds
TIME TO STEADY STATE	<10 seconds
EFFICIENCY	
CEC WEIGHTED EFFICIENCY	97%
MAX. EFFICIENCY: PV TO GRID/LOAD	97%
MAX. EFFICIENCY: BATTERY TO GRID/LOAD	94%
MAX. EFFICIENCY: PV TO BATTERY	94.5%
MAX. EFFICIENCY: AC TO BATTERY	94%
IDLE CONSUMPTION (STANDBY MODE)	<60W @25°C
CONTROL & MONITORING	
DISPLAY	Optional EG4 FlexBOSS Screen Kit
USER INTERFACE	App/Web
REMOTE CONNECTIVITY	Wi-Fi, Cellular, and Ethernet (Wi-Fi dongle included by default)
ENVIRONMENTAL	
OPERATING TEMPERATURE RANGE	-13°F – 140°F (-25°C – 60°C)
STORAGE TEMPERATURE RANGE	-13°F – 140°F (-25°C – 60°C)
OPERATING HUMIDITY	0 – 95% relative humidity
OPERATING ALTITUDE	<6561 ft. (<2000 m)*
ENCLOSURE RATING	NEMA 4X
COOLING METHOD	Fans
NOISE	<50 dB @ 3 ft.
PHYSICAL SPECS	
DIMENSIONS (H × W × D)	30.43 × 22.28 × 11.22 in. (773 × 566 × 285 mm)
UNIT WEIGHT	115 lbs. (52 kg)
MOUNTING	Wall mount
MAX # OF INVERTERS IN PARALLEL	16
COMPLIANCE & SAFETY	
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]
EMISSIONS	FCC Part 15, Class B
WARRANTY	10 years**
SAFETY	Integrated DC disconnect, Reverse polarity protection, Output overvoltage protection varistor, Output over current protection, Ground fault monitoring, Grid monitoring, Pole sensitive leakage current monitoring unit, AFCI, RSD
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
BREAKER RATINGS	
BATTERY BREAKER	300A

**For installations above 2000 m, the inverter needs to be derated to specific values depending on the elevation. Refer to the "Inverter Altitude and Derating Usage Restrictions" guide by navigating to https://eg4electronics.com/wp-content/uploads/2026/04/EG4-Inverter-Altitude-Derating-Usage-Restrictions.pdf or by scanning the QR code below.*

***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 1.0.8

- Renamed “Max Altitude of Operation” to “Operating Altitude”

Ver 1.0.7

- Added information regarding inverter derating for higher altitude installations

Ver 1.0.6

- Renamed some line items to fall in with standard naming conventions
- Added MPPT voltage high protection and asterisk
- Added Design Topology

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