

# Lion Sanctuary 2™ Technical Specifications

## Lion Sanctuary 2™ Energy Storage System (ESS)

- Sanctuary ESS 12-14.3
- Sanctuary ESS 12-28.6
- Sanctuary ESS 12-42.9
- Sanctuary ESS 12-57.2
- Sanctuary ESS 12-71.5
- Sanctuary ESS 12-85.8

### Major System Components

- Lion LFP Battery 14.3kWh
- Lion Hybrid Inverter 12kW - Grid Support
- Interactive Inverter

## System Configurations



Sanctuary ESS 12-14.3



Sanctuary ESS 12-28.6



Sanctuary ESS 12-42.9



Sanctuary 12-57.2



Sanctuary 12-71.5



Sanctuary ESS 12-85.8

### System Details

<b>Full System Weight:</b>	12-14.3	400lbs	12-57.2	1,270lbs
	12-28.6	690lbs	12-71.5	1,560lbs
	12-42.9	980lbs	12-85.8	1,890lbs

Single Cycle Round Trip Efficiency (SCRTE): 89%



**Install in shaded locations.  
Do NOT install in direct sunlight.**

# Lion Hybrid Inverter (12kW) - Grid Support Interactive Inverter

## PV Input

Max PV Input Power	12kW
MPPT Input Voltage Range	120-500V
Max Input Current per MPPT	14A*4
Max Short Circuit Current per MPPT	22A
AC Solar Max	8kW

## AC Output (On Grid)

Nominal Output Power	8kW
Max Apparent Power Output	8.8kW
Nominal AC Output Current	33.3A
Max. AC Power Output	36.7A
Output Voltage Range	120V/240V Split phase
Grid Frequency (Optional)	60Hz
Max Grid Passthrough	100A
Output THDI	< 3%
Maximum Output Fault Current (AC) and Duration	71.5A (1 Cycle)/ 72.0A (3 Cycles) / 72.4 (5 Cycles)

## AC Output (EPS)

Nominal Output Power	8kW
Power Factor Range	-0.8~+0.8
EPS Voltage Range	110-120/220-240V Split-Phase
EPS Frequency (Optional)	60Hz
Output THDU	< 2%

## Battery

Battery Voltage Range	40V~60V
Max Charging Current	190A
Max Discharging Current	190A

## General Data

Humidity	0-95%
Ingress Protection	Type 3R, IP65
Max Efficiency	97.8%
PV DC AFCI	Type 1
PVRSS	Tigo RSS Transmitters (RS2)
Weight	110lbs
Dimensions (HxWxD)	33.6" x 18.50" x 10.08"
Compliance	UL9540, UL1741:2021, UL1741 SB:2021, UL1741 SA:2018, UL1699B:2018, IEEE Std 1547:2018, IEEE Std 1547a:2020, IEEE Std 1547.1:2020, CPUC Rule21:2017, FCC 15 class-B, HECO IEEE 1547.1-2020 SRD V2.0, UL1741 Photovoltaic Rapid Shutdown Systems, UL1741 (April 20, 2010 Ed.2) CRD, Subject: Power Control Systems (PCS)

## GEN / AC-Coupled PV Connection

Terminals	L1, L2, N, PE (split-phase 120/240V)
Source	Single source only—generator or AC-coupled solar
Max Apparent Power	8kW per inverter
Auto-Start	Supported

# Lion LFP Battery 14.3kWh

Battery Type	Lithium Iron Phosphate
Voltage Range	40 - 58.4VDC
Rated Voltage	51.2VDC
Nameplate Energy Capacity (NEC)	14.3kWh
Usable Capacity	90%
Isc rating (SCCR)	2040A/7ms
Parallelable Capacity	85.8kWh Max
Max Parallelable Overcurrent Protective Device	240A
Quantity	6 Max
Charging Temperature Range / Current	32° to 131° F / 150A
Discharging Temperature Range / Current	-4° to 131° F / 160A
Derate Range	Below 50°F, Above 104°F
Maximum Continuous Discharge Rate (MCDR)	8.2 kW
Weight	290lbs
Dimensions (HxWxD)	44.4" x 18.50" x 9.75"
Compliance	UL1973, UL9540, UL9540A