

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

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

System Details

Full System Weight: 12-14.3 400lbs.
12-28.6 690lbs.
12-42.9 980lbs.

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

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
Capacity	14.3kWh
Usable Capacity	90%
Isc rating (SCCR)	2040A/7ms
Parallelable Capacity	43kWh Max
Max Parallelable Overcurrent Protective Device	240A
Quantity	3 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
Weight	290lbs
Dimensions (HxWxD)	44.4" x 18.50" x 9.75"
Compliance	UL1973, UL9540, UL9540A