



L3 Series LimitLess Lithium™ Battery Energy Storage System

The most efficient, flexible, scalable and cost effective solution to battery energy storage

- Increase uptime and reliability
- Reduce demand charges with peak shaving
- Sell excess energy back to the grid
- Maximize ROI on energy assets
- Integrate electric vehicle charging stations
- Combine renewable energy sources

Modular Outdoor and Indoor Solutions

Integrated controls, grid transfer, AC or DC coupling



IP55 Outdoor: Up to 6 inverters / 36 battery cabinets
30K: 180kWac / 2.2 MWh / 234kWdc – 346kWac PV
60K: 360kWac / 2.2 MWh / 468kWdc – 720kWac PV



IP20 Indoor: Up to 10 inverters / 160 battery cabinets
30K: 300kWac / 6.4MWh / 390kWdc - 576kWac PV
60K: 600kWac / 9.6MWh / 780kWdc - 1.2 MWac PV

Features/Innovations



Prismatic cells offer maximum reliability, efficiency, and safety



Automatic configuration of batteries and BMS for quick commissioning



5kW battery modules include built-in aerosol fire suppression



High Voltage architecture built exclusively for Sol-Ark 30K and 60K inverters



Modular battery cabinets can be connected easily in parallel to increase capacity



10-Year Warranty



Preassembled IP55 outdoor option includes temperature control



Indoor IP20 option for maximum affordability

L3 BESS: 208V Outdoor and Indoor



Modular Solutions

L3 HV-40: Stack up to 10 inverters / 160 battery cabinets for 300kWac / 6.4MWh

L3 HVR-60: Stack up to 6 inverters / 36 battery cabinets for 180kWac / 2.2MWh

Efficient and Flexible

Increase business uptime and reliability with industry leading backup power.

Reduce utility demand charges with integrated peak shaving control.

Sell excess energy back to the grid or participate in DER programs.

Scalable and Cost Effective

Maximize ROI on your investment with industry leading cost per kWh.

Reduce wiring costs and integrate electric vehicle charging stations using the GEN port.

Combine renewable energy sources.

Innovative

Integrated controls, 200A transfer relays, AC and DC coupling

Reduce installation costs with built-in module and cabinet fire suppression

Integrated four channel MPPT's allow for maximum charging efficiency

208V Options

Battery Energy Storage System

Outdoor

Indoor

Battery Model Name:

ESS Model Name:

Sol-Ark Product SKU:

L3 HVR-60
L3 HVR-60KWH-30K
L3-HVR-60KWHL3 HV-40
L3 HV-40KWH-30K
L3-HV-40KWH

System Data

Compatible Inverter Model	Sol-Ark 30K-3P-208V	
Cell Chemistry	Lithium Iron Phosphate	
Nameplate Energy Capacity (DC)	61.44 kWh	40.96 kWh
Usable Energy Capacity (DC) ¹	55.30 kWh	36.86 kWh
Built-In DC Disconnect Rating	200A	
Internal Fuse Rating	160A	
Max. # Battery Units Per Inverter	6	16
Max. # Inverters in Parallel	6	10
Recommend Depth of Discharge	90%	
Roundtrip Efficiency Charge/Discharge (DC)	94% (25C, 0.5C)	
System Nominal Voltage (DC)	307V	410V
System Operating Voltage (DC)	294V – 336V	392V – 448V
Battery Pack Internal Configuration	6s6p	8s1p
Charge/Discharge Current (DC) ²		
• Recommend	100A	50A
• Max. Continuous	100A	
• Peak Discharge (60 sec @ 25°C)	125A	
Battery Max. Continuous Charge/Discharge Power (DC)	61.44kW	40.96kW
ESS Max. Continuous Charge/Discharge Power (AC)	30kW	
Fault Current Contribution per Battery	4,200A / 1.47ms	

Mechanical Specifications

Product Dimensions (WxDxH)	76x107x226 cm (30x42x89 in)	58x58x163 cm (23x23x64 in)
Net Weight	950 kg (2,095 lbs)	628 kg (1,384 lbs)
Mounting Type	Outdoor Enclosure	Freestanding Rack Mount
Material and Finish	Steel – Corrosion Resistant Powder Coat	Steel – Powder Coated
Operating Temperature ³ and Humidity	-20°C – 50°C (14°F – 122°F) – 5%–85% RH	4°C – 43°C (40°F – 110°F) – 5%–85% RH
Operating Altitude ⁴	3000m (9,843 ft)	
Storage Conditions ⁵	-4°F – 95°F – Up to 85% RH (non-condensing) and State of Charge (SOC) 30%	
Ingress Rating	IP55 (NEMA 3R)	IP20 (NEMA 1)
Noise Level @ 1m	75 dBA at 30°C (86°F)	< 40 dBA at 30°C (86°F)
Seismic Mounting	Up to Category F	
Communication Ports	CAN2.0/RS485	

Battery Module Specifications

Battery Module Nominal Energy Capacity	5.12kWh
Battery Module Nominal Voltage and Capacity	51.2V / 100Ah
Terminal Type	Amphenol SurLok – Push Lock Connector

Warranty and Certification

Performance Warranty ⁶	10 years or 196MWh Throughput	10 years or 130MWh Throughput
Product Warranty	10 Years	
Certifications	UL1973, UL9540, UL9540a, UN38.3, FCC, Prop 65	

1. DC usable energy, test conditions: 90% DOD, 0.3C charge and discharge at 25°C. System usable energy may vary due to system configuration parameters.

2. Output current is affected by battery temperature and SOC.

3. Temperature is based on the average cell temperature as measured by the BMS. Charging is disabled below 0°C (32°F). Derating occurs above 45°C (113°F). See Sol-Ark technical sales for outdoor sites.

4. Battery will operate at a maximum of 1C charge/discharge up to 2000m, above 2000m maximum output is derated to 0.8C, contact Sol-Ark for details.

5. Storage temperature of the battery with no charge or discharge

6. EOL (End of Life) 70% retained capacity. See L3 Series warranty document for details.

Sol-Ark has a policy of continuous improvement and reserves the right to modify its specifications at any time and without prior notice. Please visit sol-ark.com for the latest information.

L3 BESS: 480V Outdoor and Indoor



Modular Solutions

L3 HV-60: Stack up to 10 inverters / 160 battery cabinets for 600kWac / 9.6MWh

L3 HVR-60: Stack up to 6 inverters / 36 battery cabinets for 360kWac / 2.2MWh

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Reduce utility demand charges with integrated peak shaving control.

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Maximize ROI on your investment with industry leading cost per kWh.

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Integrated four channel MPPT's allow for maximum charging efficiency

480V Options

Battery Energy Storage System

Battery Model Name:

ESS Model Name:

Sol-Ark Product SKU:

Outdoor

L3 HVR-60

L3 HVR-60KWH-60K

L3-HVR-60KWH

Indoor

L3 HV-60

L3 HV-60KWH-60K

L3-HV-60KWH

System Data

Compatible Inverter Model	Sol-Ark 60K-3P-480V	
Cell Chemistry	Lithium Iron Phosphate	
Nameplate Energy Capacity (DC)	61.44 kWh	
Usable Energy Capacity (DC) ¹	55.30 kWh	
Built-In DC Disconnect Rating	200A	
Internal Fuse Rating	160A	
Max. # Battery Units Per Inverter	6	16
Max. # Inverters in Parallel	6	10
Warranted Depth of Discharge	90%	
Roundtrip Efficiency Charge/Discharge (DC)	94% (25C, 0.5C)	
System Nominal Voltage (DC)	614.4V	
System Operating Voltage (DC)	588V-672V	
Battery Pack Internal Configuration	12s1p	12s1p
Charge/Discharge Current (DC) ²		
• Recommend	50A	
• Max. Continuous	100A	
• Peak Discharge (60 sec @ 25°C)	125A	
Battery Max. Continuous Charge/Discharge Power (DC)	61.44kW	
ESS Max. Continuous Charge/Discharge Power (AC)	60kW	
Fault Current Contribution per Battery	4,200A / 1.47ms	

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