

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

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 4-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	
Mechanical Specifications		
Product Dimensions (WxDxH)	76x107x226 cm (30x42x89 in)	58x58x218 cm (23x23x86 in)
Net Weight	950 kg (2,095 lbs)	773 kg (1,705lbs)
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 (-4°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) – 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	
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 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.