

L3 BESS: 480V Outdoor and Indoor



Modular Solutions

L3 HV-60: Up to 10 inverters / 160 battery cabinets

600kWac / 9.6MWh / 780kWdc - 1.2MWac PV

L3 HVR-60: Up to 6 inverters / 36 battery cabinets.

360kWac / 2.2MWh / 460kWdc - 720kWac PV

Efficient and Flexible

Increase uptime and reliability

Reduce demand charges with peak shaving

Sell excess energy back to the grid

Scalable and Cost Effective

Maximize ROI on energy assets

Integrate electric vehicle charging stations

Combine renewable energy sources

Innovative

Integrated controls, grid transfer, AC or DC coupling

Automatic configuration of batteries and BMS

Battery modules include built-in fire suppression

HV architecture built for Sol-Ark 60K inverters

480V Options

Battery Energy Storage System

Outdoor

Indoor

Battery Model Name:		L3 HVR-60	L3 HV-60
ESS Model Name:		L3 HVR-60KWH-60K	L3 HV-60KWH-60K
Sol-Ark Product SKU:		L3-HVR-60KWH	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
Recommend 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 (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) – 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		

Commented [DZ1]: @Liam O'Brien Confirm peak discharge current

Commented [LO2R1]: 125 is fine, adjusted the time

Commented [LO3]: is this number for net or gross

Commented [LO4R3]: @David Zuren do you know?

Commented [LO5]: need the noise level of the HVAC system at 86F or other temp

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.