SUNSYS HES L©

Modular outdoor energy storage system

from 50 kVA / 186 kWh to 550 kVA / 1116 kWh

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SUNSYS HES L is a modular outdoor energy storage system designed for both on-grid and off-grid applications. It is available in a variety of configurations, to provide the ideal system size for a range of project requirements.
It supports dedicated applications such as optimization of photovoltaics with self consumption, peak shaving, backup power, and EV charging infrastructure support.
SUNSYS HES L combines the economic returns of on-grid operation with the security of a microgrid when the grid may fail.

High safety standards

SUNSYS HES L integrates advanced power conversion and LFP battery technologies to create a winning formula.
The B-Cab L (Battery Cabinet) uses liquid-cooled thermal management, with an integrated fire safety system, and meets the requirements of the latest international fire code.
The complete system is certified to the latest UL 9540, the safety standard for energy storage systems in both the Canada and the USA.

Extreme modularity

SUNSYS HES L is a modular energy storage system that uses 2 standard cabinets to enable 32 UL certified configurations, providing ideal system sizing for a variety of projects.

- C-Cab L: Converter Cabinet from 50 to 300 kVA per Cabinet.
- B-Cab L: Battery Cabinet of 186 kWh.

2 C-Cabs L can be stacked in parallel with up to 6 B-Cabs L reaching a maximum configuration of 550 kVA / 1116 kWh.
Standard configurations simplify the design, quotation, installation and commissioning process of your projects.

Fully bankable historical supplier

Socomec is a 100+ years old company with expert knowledge in power conversion, switching and monitoring.
With our energy storage experience of 10+ years and 420+ systems installed worldwide, we have proven our knowledge and support process on the field.

Integrated ready to use certified system

SUNSYS HES L systems, including inverter, batteries and control components, are fully integrated, tested and certified.
Our systems have undergone a type-testing procedure to guarantee reliable behavior and performance, reducing the time and effort required for commissioning.
Specially adapted software for internal communication between all cabinets has been developed allowing efficient monitoring and control of the system, called PMS. Going a step further, we enabled thanks to SunSpec standard an easy integration with external EMS if you require it.
Whether you have a switchboard, solar system, generators or other equipment on site, our systems are designed to be compatible with a wide range of existing installations.

The solution for

- Commercial and industrial buildings
- EV charging infrastructures
- Isolated microgrids
- Resilient microgrids
- Renewable energy integration

Strong points

- High safety standards
- Extreme modularity
- Fully bankable historical supplier
- Integrated ready to use certified system

Conformity to standards

- **Safety:** UL 9540; UL 9540A; UL 1973; NFPA 855; NFPA 68
- **EMC:** FCC part 15 Level A
- **Environment:** RoHS; REACH, IEC 61249
- **Communication protocol:** Modbus TCP; SunSpec 2.0
- **Grid code:** UL 1741 SB; UL 1741 PCS CRD; IEEE 1547-2018; IEEE 1547.1-2020; CA Rule 21; HI Rule 14
- CEC, HECO listed

Please consult us for additional ones.

Expert Services

An experienced and skilled team is at your service to make your project a success!

- **Project development:** pre-sales support, project design
- **Deployment:** training, field inspection, commissioning
- **Operation:** maintenance contracts, spare parts replacement, remote monitoring
- Cloud data storage
- Extended product and performance warranties

For more information, please contact us.

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Innovative Power Solutions

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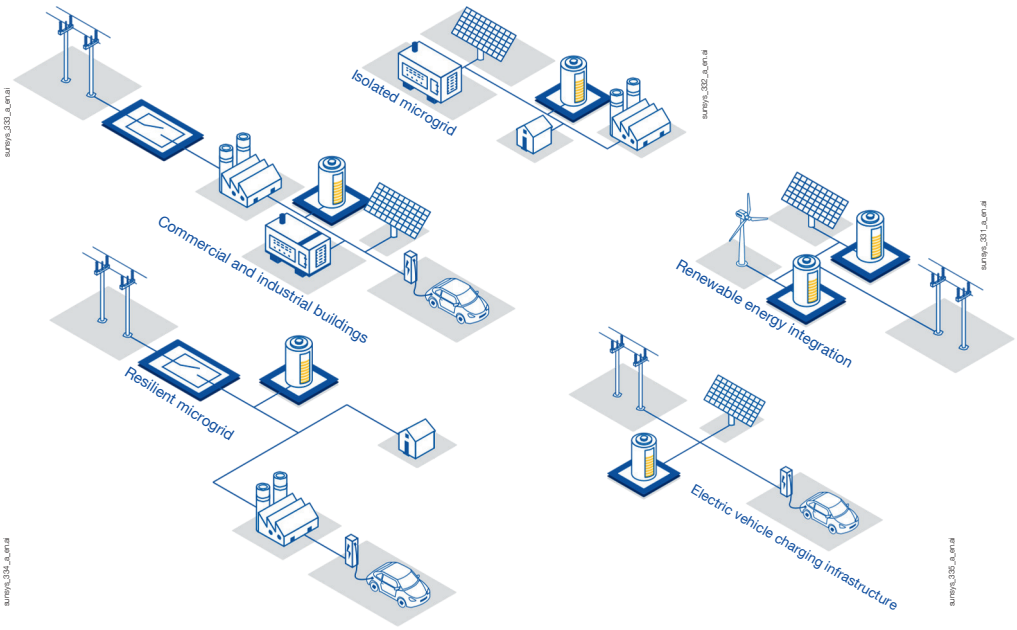
Suitable for all of the following applications



Native services supported by SUNSYS HES L

- Demand reduction
- Peak shaving
- Time-of-Use
- Energy arbitrage
- Energy smoothing
- Energy shifting
- Emergency back-up
- PV self-consumption
- External EMS agnostic to unlock more services

Modular Design enables Variety without Complexity

(W x D x H): 1000 x 1300 x 2160 mm
39.4 x 51.2 x 85 in
Up to 1125 kg / 2480 lbs

(W x D x H): 1300 x 1300 x 2280 mm
51.2 x 51.2 x 89.8 in
2180 kg / 4806 lbs

C-Cab L - Converter Cabinet

- Bidirectional hot swappable power converter
- 50 to 300 kVA / cabinet
- Automation functions and EMS connection
- AC/DC distribution and protection
- Battery management system
- IoT Ready

B-Cab L - Battery Cabinet

- Lithium Iron Phosphate (LFP) Chemistry
- 186 kWh / rack
- Liquid cooling thermal management
- Integrated fire safety detection and suppression system
- Life cycle of 8000 cycles at 25°C; 0.5P

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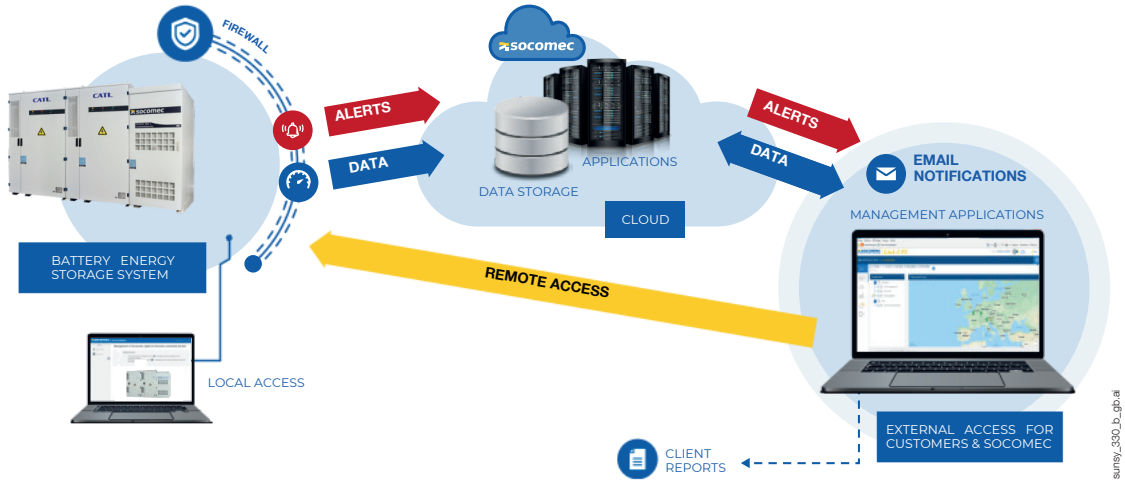
Many system configurations are available to meet customer requirements

Power (kVA) \ Energy (kWh)	186	372	558	744	930	1116
50	3.4 h	7.0 h				
100	2.0 h*	3.4 h	5.3 h			
150		2.3 h	3.4 h	4.7 h	5.8 h	
200		2.0 h*	2.6 h	3.4 h	4.4 h	5.3 h
250			2.1 h	2.7 h	3.4 h	4.2 h
300			2.0 h*	2.3 h	2.9 h	3.4 h
350				2.0 h	2.5 h	2.9 h
400				2.0 h*	2.1 h	2.6 h
450					2.0 h*	2.3 h
500						2.1 h
550						2.0 h*

(*) Power derating to respect 0.5 P-RATE

Remote Monitoring & Debugging



Local management

The Socomec Power Management System, coordinating the operation of all converter and battery components. Its capabilities include:

This open platform, integrated in the C-Cab L, provides access to:

- peak shaving, energy shifting, self-consumption and fuel saving to maximize valuable savings,
- transitions between on-grid and microgrid operation,
- autonomous microgrid management,
- compatibility with 3rd party energy management software suites, through a Sunspec 2.0 or Modbus interface,
- SCADA integration through Modbus/TCP.

Remote monitoring

In addition, the C-Cab L also integrates IoT devices that make it possible to continuously monitor the system remotely.

These devices enable the following, through 2 offers SoLive and SoLive Pro:

- web dashboard for on-line monitoring,
- web access to the system KPIs,
- smartphone app,
- remote firmware upgrade.

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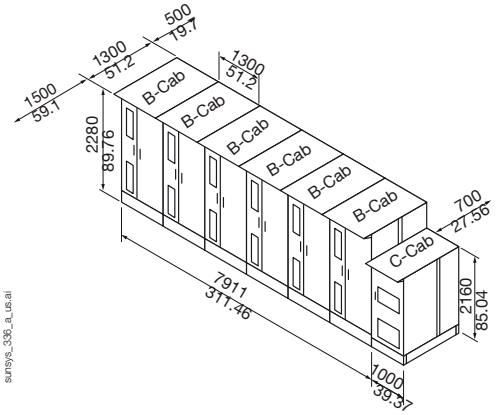
Technical Data

System information											
Power modularity	50 kVA power modules - up to 550 kVA										
Symmetrical overload	110% during 60 min - 125% during 20 min - 150% during 60 sec										
Chemistry	LFP - Lithium Iron Phosphate										
Energy Nameplate	186 kWh per rack										
AC/AC Max Round Trip Efficiency	90%										
Maximum P-rate	0.5 P										
Maximum DC current	82 A charging / 87 A discharging per 50 kVA power module										
Power rating	50 kVA	100 kVA	150 kVA	200 kVA	250 kVA	300 kVA	350 kVA	400 kVA	450 kVA	500 kVA	550 kVA
AC rated current	60 A	120 A	180 A	241 A	301 A	361 A	421 A	481 A	541 A	602 A	662 A
AC max. temporary current (overload)	90 A	180 A	271 A	361 A	451 A	541 A	631 A	721 A	811 A	902 A	992A
AC connections	Per C-Cab L: Up to 4x95mm²/3/0AWG - 3x150mm²/300MCM - 2x185mm²/350MCM										
Rated voltage (Un)	480 Vac (3ph+N) ±20%										
Rated frequency	60 Hz ±5 Hz										
Fire protection	Fire Safety System including smoke detectors, heat detectors and aerosol										
Environment											
Degree of protection	IP 55 / NEMA 3R (Outdoor)										
Operation temperature	-20 to +45 C° / -4 to +113°F without derating - up to +50°C / 122°F with derating										
Storage temperature	-20 to +60 C° / -4 to +140°F										
Acoustic level at 1 m	< 64.8 dB										
Maximum altitude	1000 m / 3280 ft. without derating (consult us for requirements above this)										

Two system installation options according to the space available on your site

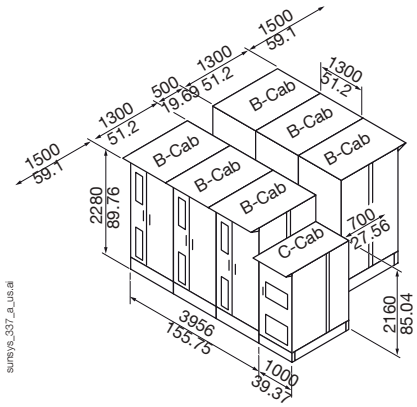
In-line installation (with 1 C-Cab)

Up to 6 B-Cabs - dimensions (mm/in)



Back-to-back installation (with 1 C-Cab)

Up to 6 B-Cabs - dimensions (mm/in)



Also available

SUNSYS HES XXL

High power energy storage system

from 1 MVA / 2 MWh to 6 MVA / 23 MWh systems