

# SUNSYS HES L<sup>©</sup>

## Scalable outdoor energy storage system

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

SUNSYS HES L



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SUNSYS HES L is a scalable 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. Thanks to this, 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 ( battery storage cabinet) uses liquid-cooled, lithium iron phosphate chemistry, with an integrated fire protection 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 scalability

Based on 2 standard cabinets, 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. Based on standard equipment and pre-tested configurations, the design, quotation, installation and commissioning process is much faster as a result.

### Fast and safe installation

SUNSYS HES L is supplied with all internal energy modules pre-assembled and plug and play power modules to guarantee maximum quality, the rapid installation and ease of transport.

It includes all cables and hardware to connect the B-Cabs and C-Cabs. The battery cabinets are delivered fully assembled, and include made-to-measure cable kits for DC, communication and auxiliary power connections.

### Combines the best technologies

Thanks to a co-design between CATL and Socomec, you can be assured of compatibility between products, and that the complete system has been validated and certified.

The C-Cab (power conversion cabinet) has been designed to include everything required for battery operation, including the management system as well as the power supply.

### The solution for

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

### Strong points

- > High safety standards
- > Extreme scalability
- > Fast and safe installation
- > Combines the best technologies

### 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; Rule 14H
- > 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!

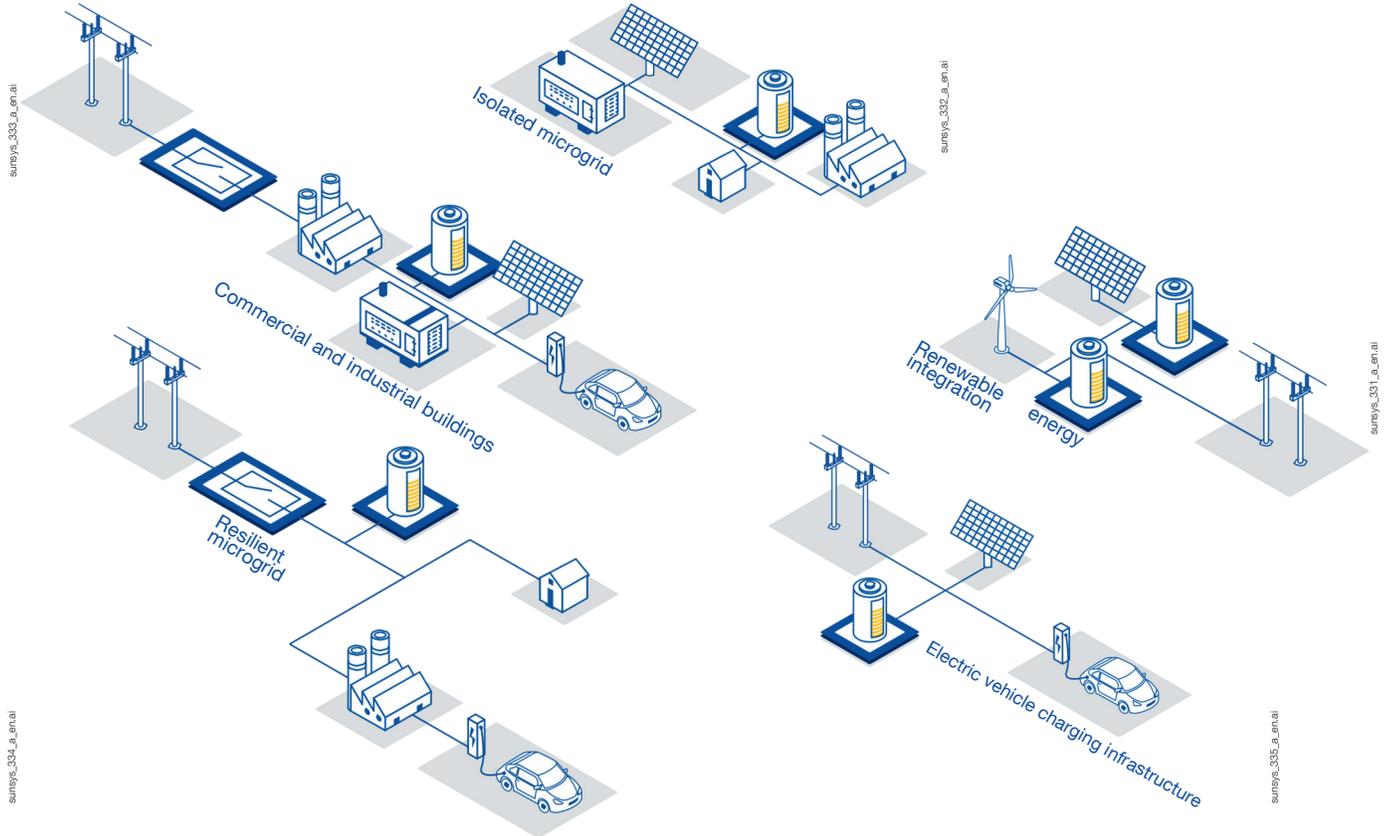
- > **Project development:** pre-sales support, project design
- > **Deployment:** training, field inspection, commissioning
- > **Operation:** maintenance contracts, spare parts replacement, remote monitoring
- > Cloud data storage
- > Extended warranty on both product and performance

*For more information, please contact us.*

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Suitable for all of the following applications



2 modular units for maximum flexibility



(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 power converter
- > 50 to 300 kVA / cabinet
- > Automation functions
- > AC/DC distribution and protection
- > Battery management system
- > IoT Ready

## B-Cab L - Battery Cabinet

- > Lithium ion battery
- > LFP technology
- > 186 kWh / rack
- > Liquid cooling thermal management
- > Integrated fire safety detection and suppression system
- > Life cycle of up to 8000 cycles at 25°C; 0.5C

# SUNSYS HES L

Scalable outdoor energy storage system

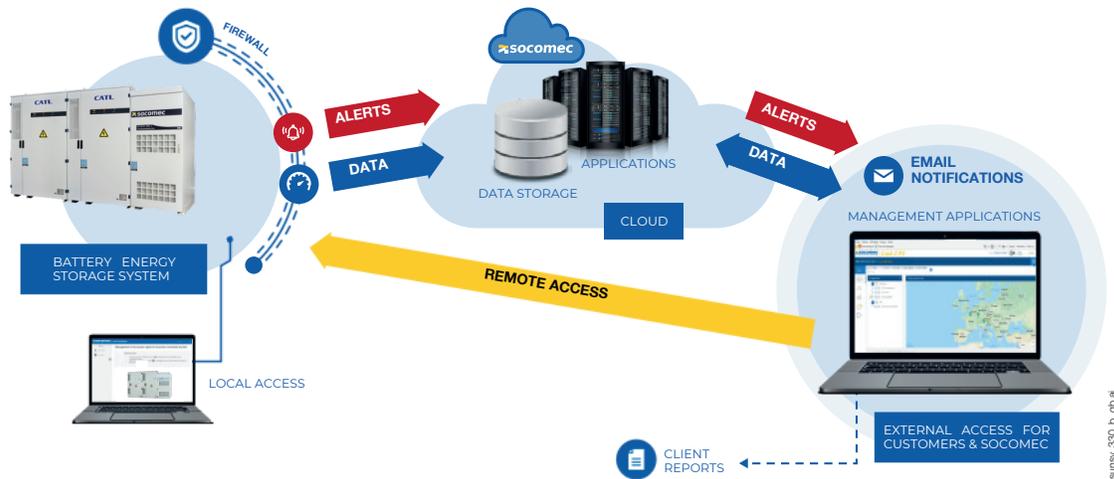
from 50 kVA / 186 kWh to 550 kVA / 1116 kWh

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 C-RATE

Maximum savings and fast ROI



## Local management

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

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

- peak shaving, energy shifting, self-consumption and fuel saving to maximise 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 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.

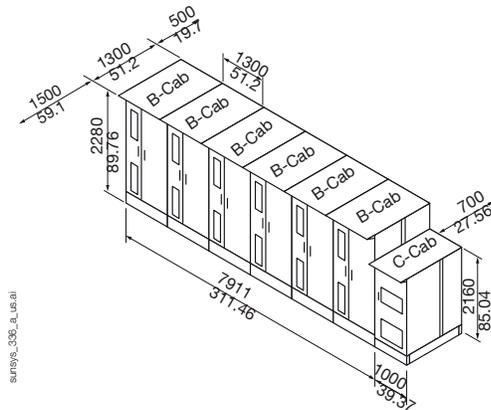
## Technical Data

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 C-rate	0.5 C										
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	90 A	180 A	271 A	361 A	451 A	541 A	631 A	721 A	811 A	902 A	992A
(overload) AC connections	Up to 4x95mm <sup>2</sup> /3/0AWG - 3x150mm <sup>2</sup> /300MCM - 2x185mm <sup>2</sup> /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

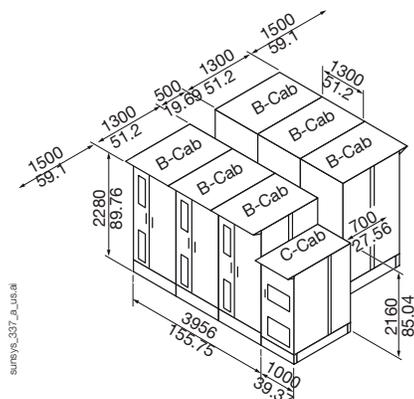
### In-line installation (with 1 C-Cab)

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