SUNSYS HES L©

Scalable outdoor Energy Storage System

from 100 kVA / 189 kWh to 600 kVA / 1827 kWh

sunsy_s92.png

SUNSYS HES L is an outdoor energy storage system suitable for on-grid energy storage, for both the generation and distribution application. It supports dedicated applications to optimise photovoltaics and self-consumption, peak shaving and backup power, in particular for commercial and industrial buildings and EV charging infrastructure.

The solution is also ideal for off-grid installations where it can provide an energy reserve in the event of an electrical blackout, replacing generators to supply power to areas without electricity. Furthermore, in dual on-grid with "islanding" mode, it enhances the resilience of the connected smart grid.

High safety standards

The SUNSYS HES L system has been designed using first-class battery technologies, primarily to achieve a high level of safety.
The B-Cab (battery storage cabinet) is based on lithium iron phosphate (LFP) chemistry and an efficient thermal management system, ensuring safety thanks to liquid cooling and a fire protection system. The latter includes heat and smoke detectors, an aerosol fire extinguishing system, a dry pipe to connect a water inlet and a deflagration panel.
The B-Cab is certified UL 9540A, guaranteeing that it will withstand thermal runaway.

Extremely flexible

Based on 4 cabinets, and 2 types of battery cabinet (0.5C and 1C), SUNSYS HES L is a modular energy storage system. Thanks to its convenient sizing and flexibility, it can adapt to the specific needs of your system. In fact, our AC-Cab (power distribution cabinet) is designed on a case-by-case basis in full compliance with your own installation and requirements.
Based on standardised equipment and pre-tested configurations, the design, quotation, installation and commissioning process is much streamlined as a result.

Quick and safe installation

SUNSYS HES L is powered by all its pre-assembled internal energy modules, and plug and play power modules, to ensure the highest quality, optimisation of installation time and ease of transportation.
Furthermore, the power-supply kit always includes a set of DC, communication and auxiliary power supply cables, configured and tailor-made to connect the storage units of the B-Cab to the conversion and control units of the C-Cab.

Combining the best technologies

Thanks to joint-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 and power supply.

The solution for

- Commercial and industrial buildings
- EV charging infrastructure
- Isolated microgrids
- Resilient microgrids
- Colocation with renewable energies

Strong points

- High safety standards
- Flexibility
- Fast and safe installation
- Combines the best technologies

Conformity to standards

- Safety: IEC62368-1, IEC62933-5-2, UL9540A
- EMC: EN61000-6-2/4
- Mechanical: EN60529, EN62262
- Environment: RoHS, REACH, IEC61249-2-21, 2012/19/EU (WEEE)
- Communication protocol: Modbus TCP
- Grid codes: Europe: EN 50549-1, EN 50549-2
  Germany: VDE AR-N 4110
  Italy: CEI 0-16 ; UK: G99/1
  Belgium: C10-11
  Spain: UNE 217001, 217002, NTS 631 SEPE and SENP

  Non-exhaustive list. Please contact us for other codes.

Expert Services

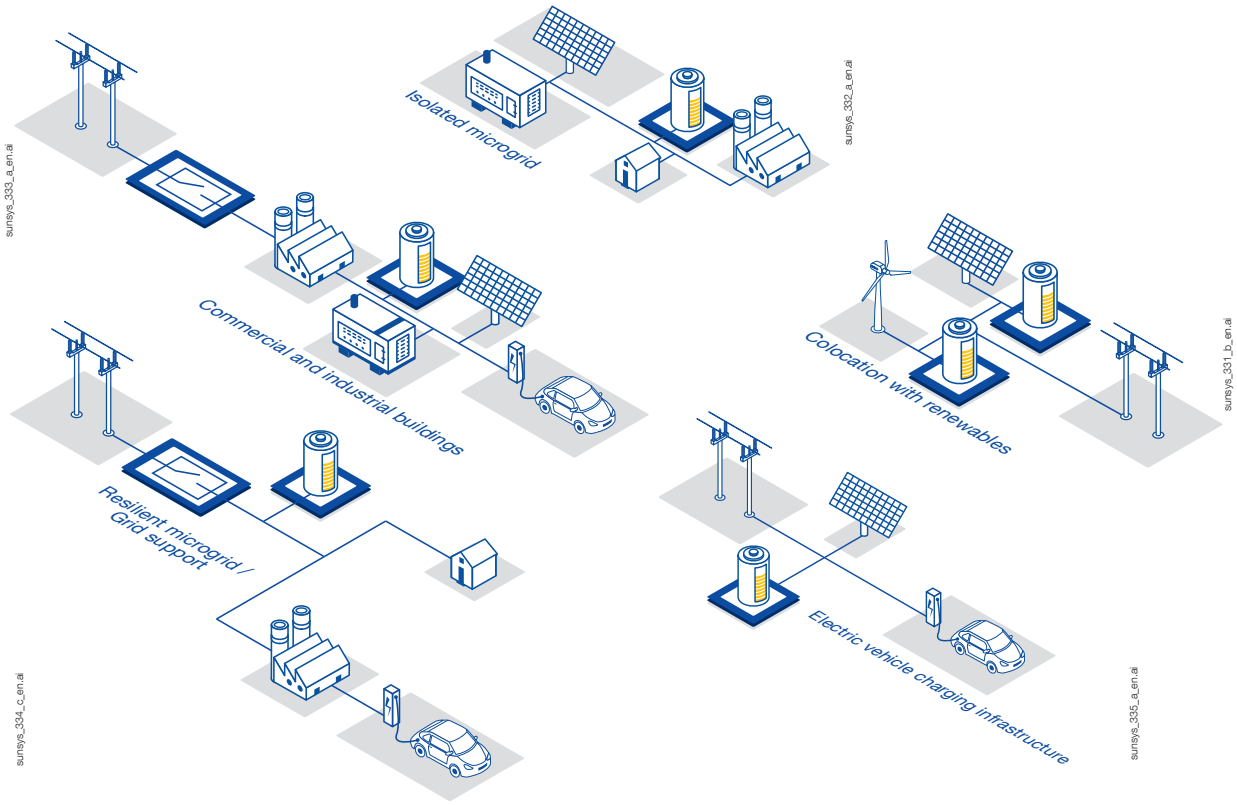
An experienced and skilled team is at your service to ensure your project is a success.

- **Project development:** pre-sales support and project design.
- **Deployment & integration:** training, field inspection, commissioning.
- **Operation:** maintenance contracts, replacement of spare parts, remote monitoring.
- Extended product warranty and performance guarantee.

For more information, please contact us.

socomec Innovative Power Solutions

Suitable for all of the following applications:



4 modular units for maximum flexibility

Dimensions (W x D x H):
1000 x 1300 x 2160 mm
Up to 1005 kg

Dimensions (W x D x H):
1390 x 1344 x 2348 mm
2300 kg

Optional

Dimensions (W x D x H):
1026 x 1300 x 2160 mm
700 kg

Optional

Specific

C-Cab L
Converter Cabinet

- Bidirectional power converter
- 100 to 300 kVA / cabinet
- Automation functions
- AC / DC distribution & protection
- Battery management system
- IoT ready

B-Cab L
Battery Cabinet

- Lithium ion battery
- LFP technology
- 203 kWh / rack 0.5C
- 189 kWh / rack 1C
- Liquid cooling thermal management
- Integrated fire safety detection and suppression system

DC-Cab L
DC Power Distribution Cabinet

- DC distribution panel
- Required for configurations with 7 to 9 B-Cabs per C-Cab
- Battery protection
- Battery auxiliaries power supply

AC-Cab L
AC Power Distribution Cabinet

- AC power distribution cabinet
- Multi-source paralleling
- Islanding function
- Synchronisation after mains return
- Short interruption transition

SUNSYS HES L©

Scalable outdoor Energy Storage System

from 100 kVA / 189 kWh to 600 kVA / 1827 kWh

Many system configurations are available to meet customers' requirements*

	Energy / Power	1B-CAB	2B-CAB	3B-CAB	4B-CAB	5B-CAB	6B-CAB	7B-CAB	8B-CAB	9B-CAB
	0.5C	203 kWh	406 kWh	609 kWh	812 kWh	1,015 kWh	1,218 kWh	1,421 kWh	1,624 kWh	1,827 kWh
	1C	189 kWh	378 kWh	567 kWh	756 kWh	945 kWh	1,134 kWh	1,323 kWh	1,512 kWh	1,701 kWh
C-CAB 1	50 kVA									
	100 kVA									
	150 kVA									
	200 kVA									
	250 kVA									
	300 kVA									
C-CAB 2	350 kVA									
	400 kVA									
	450 kVA									
	500 kVA									
	550 kVA									
	600 kVA									

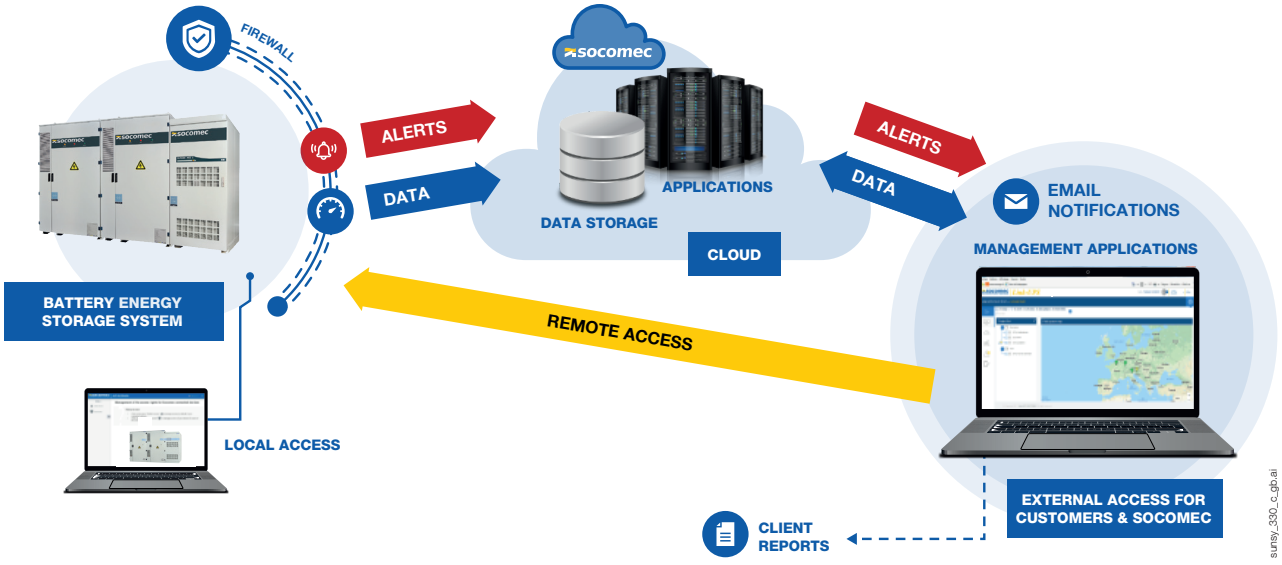
Configurations available with 1C batteries.

Configurations available with 0.5C batteries.

Configurations available with a DC-Cab

* This table shows our standard configurations. For specific configurations, please contact us.

Maximum savings and fast ROI



Local management

We have developed a modular and adaptive platform, our Power Management System (PMS), which is the brain of the system.

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

- peak shaving, energy shifting, self-consumption and fuel saving to maximise valuable savings,
- transition from on-grid to off-grid mode via the black start function,
- multi-source microgrid autonomous management and the potential for additional customisation,
- compatibility with third-party supervision systems (EMS, SCADA) for additional functionality.

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:

- web dashboard for online monitoring,
- web access to the system KPIs,
- smartphone app,
- remote firmware upgrades.

socomec Innovative Power Solutions

Technical characteristics

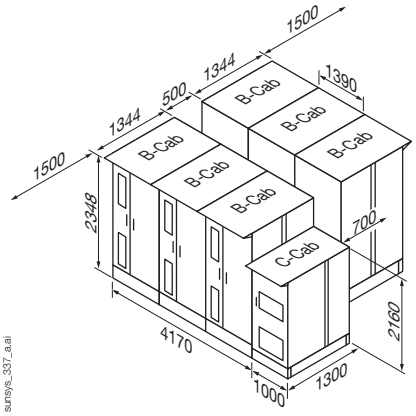
	0.5C Batteries	1C Batteries
System information		
Converter power modularity	50 kVA power modules – up to 600 kVA (12 power modules)	
Symmetrical overload	110% for 30 min – 125% for 10 min – 150% for 30 s	
Battery technology	LFP – Lithium Iron Phosphate	
Battery system DC voltage range	582.4 VDC – 759.2 VDC	
Battery capacity	306 Ah	285 Ah
Battery energy nameplate	203.7 kWh per rack	189.7 kWh per rack
Battery DoD factor	95%	94.2%
Battery life	20 years (1 cycle/day)	
AC/AC max round-trip efficiency	90%	
Maximum current	83 A charge / 87 A discharge per 50 kVA power module	
AC connections	2 x 185 mm² up to 300 kVA and 2 x 2 x 185 mm² from 350 to 600 kVA	
Nominal voltage (Un)	400 VAC (3ph+N) -20%/+10%	
Rated frequency	50 Hz +- 5Hz	
Fire safety system	Heat and smoke detectors, aerosol fire extinguishing system, a dry pipe and a deflagration panel.	
Environment		
Environment installation	Native outdoor	
Ingress Protection rating	IP 55	
Operating temperature	-20 to +45 C° without derating	
Ambient storage temperature	From -20 to +60 °C	
Relative humidity	From 4 to 100% without condensation (internal cabinet heating)	
Acoustic noise at 1 m	<70 dB	
Maximum altitude	1000 m without derating (please contact us for requirements above this)	
Marine environment*	>500m from seafront (Class C3)	

*SUNSYS HES L is designed to be installed in a site without salt air and without the risk of corrosion.

Two system installation options, dependent on the space available on your site

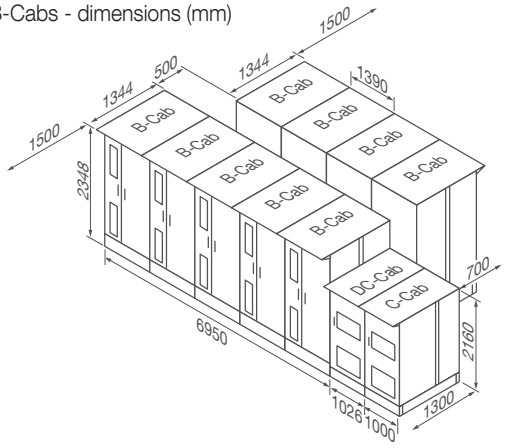
Back-to-back installation

Up to 6 B-Cabs - dimensions (mm)



sunsys_337_a.ai

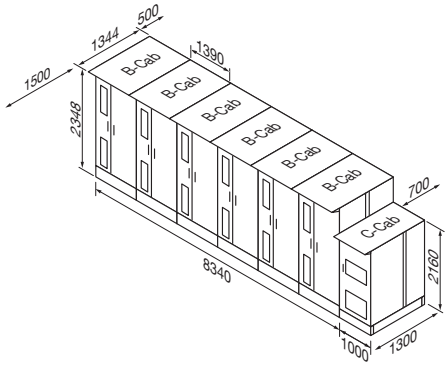
9 B-Cabs - dimensions (mm)



sunsys_338_a.ai

In-line installation

Up to 6 B-Cabs - dimensions (mm)



sunsys_336_a.ai

The dimensions given above are the largest and depend on the type of batteries.

Also available

sunsy_436.png

SUNSYS HES XXL

High power energy storage system
Systems from 1MVA/1MWh
Safe system enabling variety without complexity for on-grid and off-grid applications.