

SUNSYS HES L[©] SKID

Drop and start energy storage systems

from 100 kVA / 186 kWh to 600 kVA / 1116 kWh



The solution for

- > EV charging infrastructure
- > Commercial and Industrial buildings
- > Microgrids

Strong points

- > Fast and easy installation
- > Flexible and scalable
- > Easy to redeploy
- > Ready to start
- > Best of ESS technologies

Conformity to standards

- > Safety: IEC 62368-1, IEC 62933-5-2; UL 9540A
- > EMC: EN 61000-6-2/4
- > Mechanical: EN 60529; EN 62262
- > Environment: RoHS; REACH, IEC 61249-2-21; WEEE 2012/19/UE
- > Communication Protocol: Modbus TCP
- > Grid code: Germany, France, Italy, United-Kingdom, Belgium, Netherlands, Sweden, Denmark, Switzerland, Spain and European Grid Code

Non-exhaustive list, please consult us for full detailed list of countries and grid codes.

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 & integration:** training, field inspection, pre-commissioning, commissioning
- > **Operation:** maintenance contracts, spare parts replacement, remote monitoring
- > Cloud data storage
- > Extended product and performance warranties

For more information, please contact us.

SUNSYS HES L SKID is a compact modular battery energy storage system that has been designed to facilitate its transportation, installation and maintenance. Available in a wide range of configurations, power from 100 to 600 kVA and energy from 186 to 1 116 kWh for on-grid and off-grid applications. The system is delivered factory tested and cycled and comes as a fully assembled and cabled structure.

Fast and easy installation

All cabinets within the energy storage system are shipped assembled, mounted and internally cabled on an adapted SKID. This guarantees the minimum installation time and effort, limits investment in civil works and ensures that the installation is of optimum quality.

Once on site, all that remains to do is to connect the AC power and communication cables.

Flexible and scalable

Multiple system configurations are possible thanks to a range of SKID bricks. The bricks consist of the SUNSYS HES L cabinets – C-Cab, B-Cab and optional AC-Cab.

This flexibility helps to achieve adjusted system sizing in order to more closely match specific project requirements. Our existing configurations allow us to answer to a wide range of projects.

Easy to redeploy

The complete system is integrated on a SKID, making it transportable and deployable with minimal effort; this means that the system can easily be installed on an alternative site to satisfy future needs.

Our modular SKID brick-based architecture is a real advantage in terms of transportation. Our smallest standard configurations (up to 5m) are easy to handle and can be forklifted, keeping transportation costs low.

Ready to start

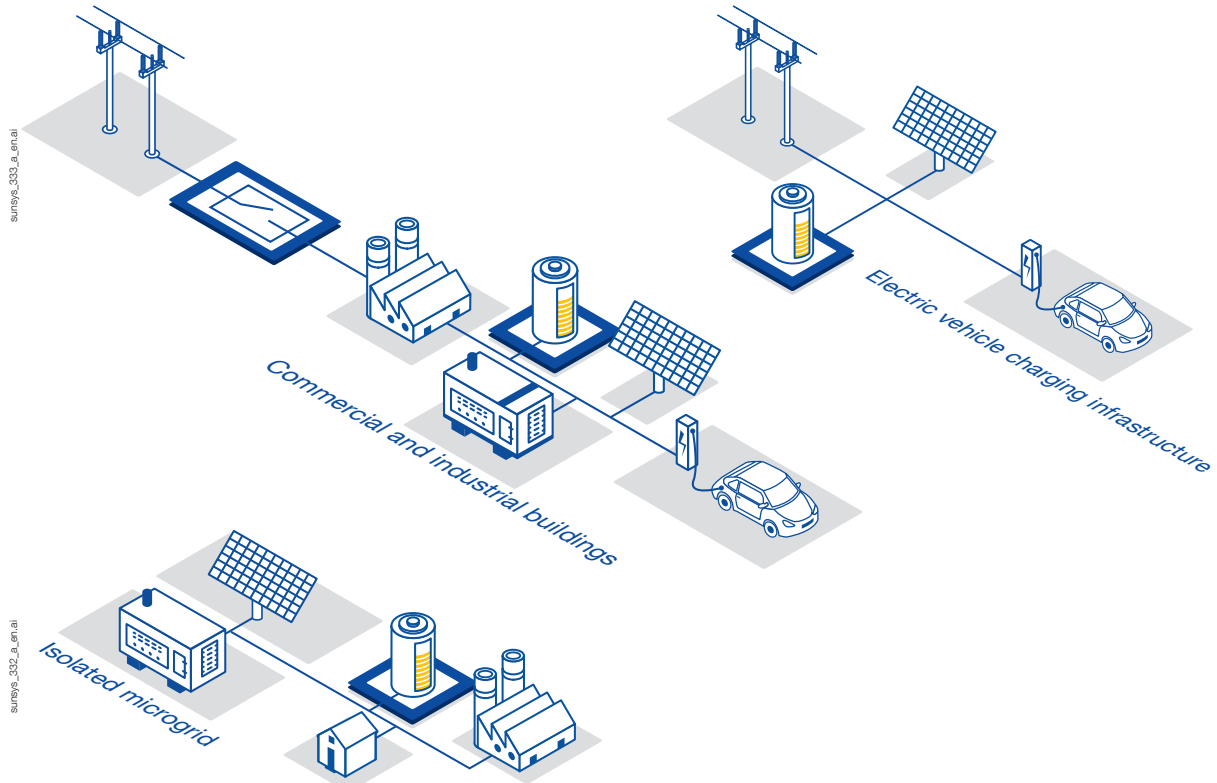
Systems are pre-commissioned in our factory, thus highly reducing the time needed on site for our technical team. This means every system is factory tested with initial battery cycling accomplished, ensuring on-site installation and operational success; saving our customers precious installation time and costs to achieve faster return on investment.

Best of ESS technologies

The SUNSYS HES L SKID brings together the very best of conversion, battery and distribution technologies. Co-designed with CATL, the products are fully compatible. Batteries are available with 0.5 and 1C ratings, covering a wide range of energy storage applications.

The complete system has been validated and certified in accordance with the most stringent European and American standards.

Particularly suitable for the following applications



3 cabinets combined to design your system

Optional



**C-Cab L
 Converter cabinet**

- > Bidirectional power converter
- > 100 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 0.5C
- > 189 kWh / rack 1C
- > Liquid cooling thermal management
- > Integrated fire safety detection and fire suppression system

**AC-Cab L
 AC power distribution cabinet**

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

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SKIDS - with 0.5C Battery racks

Many system configurations are available to meet customer requirement.

0.5C Batteries are advised for higher autonomy demanding applications.

	Energy Power	1B-CAB	2B-CAB	3B-CAB	4B-CAB	5B-CAB	6B-CAB
		186 kWh	372 kWh	558 kWh	744 kWh	930 kWh	1116 kWh
1 C-CAB	100 kVA						
	150 kVA						
	200 kVA						
	250 kVA						
	300 kVA						
2 C-CAB	350 kVA						
	400 kVA						
	450 kVA						
	500 kVA						
	550 kVA						
	600 kVA						

Please consult us for specific non-standard configurations.

SKID 0.5C Batteries	Max Power - kVA	Battery Capacity - kWh	Weight - kg	Length - mm	Width - mm	Height - mm	Transport
1C-CAB 1B-CAB	100	186	3,356	2,422	1,560	2,603	Forklift & Lifting Rings
1C-CAB 2B-CAB	150 200	372	5,343	3,815			
1C-CAB 3B-CAB	200 250 300	558	7,374	5,208			
1C-CAB 4B-CAB	250 300	744	9,469	6,601			
1C-CAB 5B-CAB	300	930	11,582	7,994			
2C-CAB 4B-CAB	350	744	10,728	7,651			Lifting Rings
2C-CAB 5B-CAB	350 400 450	930	12,773	9,044			
2C-CAB 6B-CAB	500 550 600	1,116	14,813	10,437			



SUNSYS HES L SKID 1C-CAB 3C-CAB

SKIDS - with 1C Battery racks

Many system configurations are available to meet customer requirement.
 1C Batteries are advised for higher power demanding applications.

	Energy Power	1B-CAB	2B-CAB	3B-CAB	4B-CAB
		189 kWh	378 kWh	567 kWh	756 kWh
1 C-CAB	150 kVA				
	200 kVA				
	250 kVA				
	300 kVA				
2 C-CAB	350 kVA				
	400 kVA				
	450 kVA				
	500 kVA				
	550 kVA				
	600 kVA				

Please consult us for specific non-standard configurations.

SKID 1C Batteries	Max Power - kVA	Battery Capacity - kWh	Weight - kg	Length - mm	Width - mm	Height - mm	Transport
1C-CAB	150	189	3,356	2,422	1,560	2,603	Forklift & Lifting Rings
1B-CAB	200						
1C-CAB	250	378	5,343	3,815			
2B-CAB	300						
2C-CAB	350	378	6,437	4,865			
2C-CAB	400	567	8,611	6,258			
3B-CAB	450						
2C-CAB	500	567	8,611	6,258			Lifting Rings
3B-CAB	550						
2C-CAB 4B-CAB	500	756	10,728	7,651			
	550						
	600						

Technical Data

	0.5C Batteries	1C Batteries
System information		
Converter power modularity	50 kVA power modules – up to 600 kVA (12 power modules)	
Symmetrical overload	10% during 30 min – 125% during 10 min – 150% during 30 s	
Battery chemistry	LFP – Lithium Iron Phosphate	
Battery System DC Voltage range	582.4Vdc – 759.2Vdc	
Battery capacity	280 Ah	285 Ah
Battery energy nameplate	186 kWh per rack	189 kWh per rack
Battery DoD factor	95%	94.2%
Battery Lifetime	20 years (1 cycle/day)	
AC/AC max round trip efficiency	90%	
Maximum current	83 A charging / 87 A discharging per 50 kVA power module	
AC connections	2*185 mm ² up to 300 kVA and 2*2*185 mm ² from 350 to 600 kVA	
Rated voltage (Un)	400 Vac (3ph+N) -20%/+10%	
Rated frequency	50 Hz +- 5Hz	
Fire protection	Fire safety system including smoke detector, heat detector and fire suppression system	
Environment		
Environment installation	Native outdoor	
Degree of protection	IP 55	
Operation temperature	-20 to +45 C° without derating	
Storage temperature	-20 to +60 C°	
Relative humidity	4 to 100% w/o condensation (internal cabinet heating)	
Acoustic level at 1 m	< 70 dB	
Maximum altitude	1000 m without derating (please contact us for requirements above this)	