SUNSYS HES L© SKID

Drop and start energy storage systems

from 100 kVA / 189 kWh to 600 kVA / 1218 kWh

The SUNSYS HES L SKID is a compact modular battery energy storage system, ideal for easy installation, transport and maintenance. This system is available in a wide range of configurations, with power from 100 to 600 kVA and energy storage capacity from 189 to 1218 kWh. This system has been designed for on-grid and off-grid applications. Delivered fully assembled, the SUNSYS HES L SKID system is factory tested, wired and delivered ready for use.

Fast and easy installation

All cabinets within the energy storage system are delivered pre-assembled, mounted and factory wired on a specially designed metal structure (SKID).
This solution considerably reduces installation time, limiting the cost of associated structural works whilst still ensuring optimum quality.
Once the system is delivered on site, the only tasks left are connecting the AC power and communication cables.

Multiple configurations available

The system offers several configurations thanks to a complete range of SKID modules, consisting of the SUNSYS HES L cabinets: C-Cab, B-Cab and, optionally, AC-Cab.

This flexibility enables the size of the system to be adjusted to precisely meet the specific needs of each project.

Thanks to these configurations, we are able to cover a wide range of energy storage projects and applications.

Easy to redeploy

The entire system is integrated onto a metal SKID, making it easily transportable and moveable. It can easily be moved to a different site to meet future needs.
Our one-piece integrated SKID-based systems make transport especially easy.
The smallest standard configurations (up to 5m) are easy to handle and can be forklifted, minimising transport and handling costs.

Ready to start

Systems are pre-commissioned in our factory, significantly reducing the time needed for on-site commissioning by our technical team. Every system is also factory tested with initial battery cycling completed, ensuring successful on-site installation and operation.

This reduces the time and cost of installation for our customers, enabling them to achieve faster return on investment.

Combines the best technologies

The SUNSYS HES L SKID brings together the very best of conversion, battery and distribution technologies. Jointly designed with CATL, the products are fully compatible. Batteries are available with 0.5C 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. Its fire protection system includes heat and smoke detectors, an aerosol fire extinguishing system, a dry pipe to connect a water inlet and a deflagration panel.

The solution for

- EV charging infrastructure
- Commercial and industrial buildings
- Microgrids

Strong points

- Fast and easy installation
- Multiple configurations available
- Easy to redeploy
- Ready to start
- Combines the best 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/EU
- Communication protocol: Modbus TCP
- Grid codes: Germany, France, Italy, United Kingdom, Belgium, Netherlands, Sweden, Denmark, Switzerland, Spain and European Grid Code.

Non-exhaustive list. Please contact us for full detailed list of countries and grid codes.

Expert Services

Our experienced and skilled team is at your service to make your projects a success!

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

For more information, please contact us.

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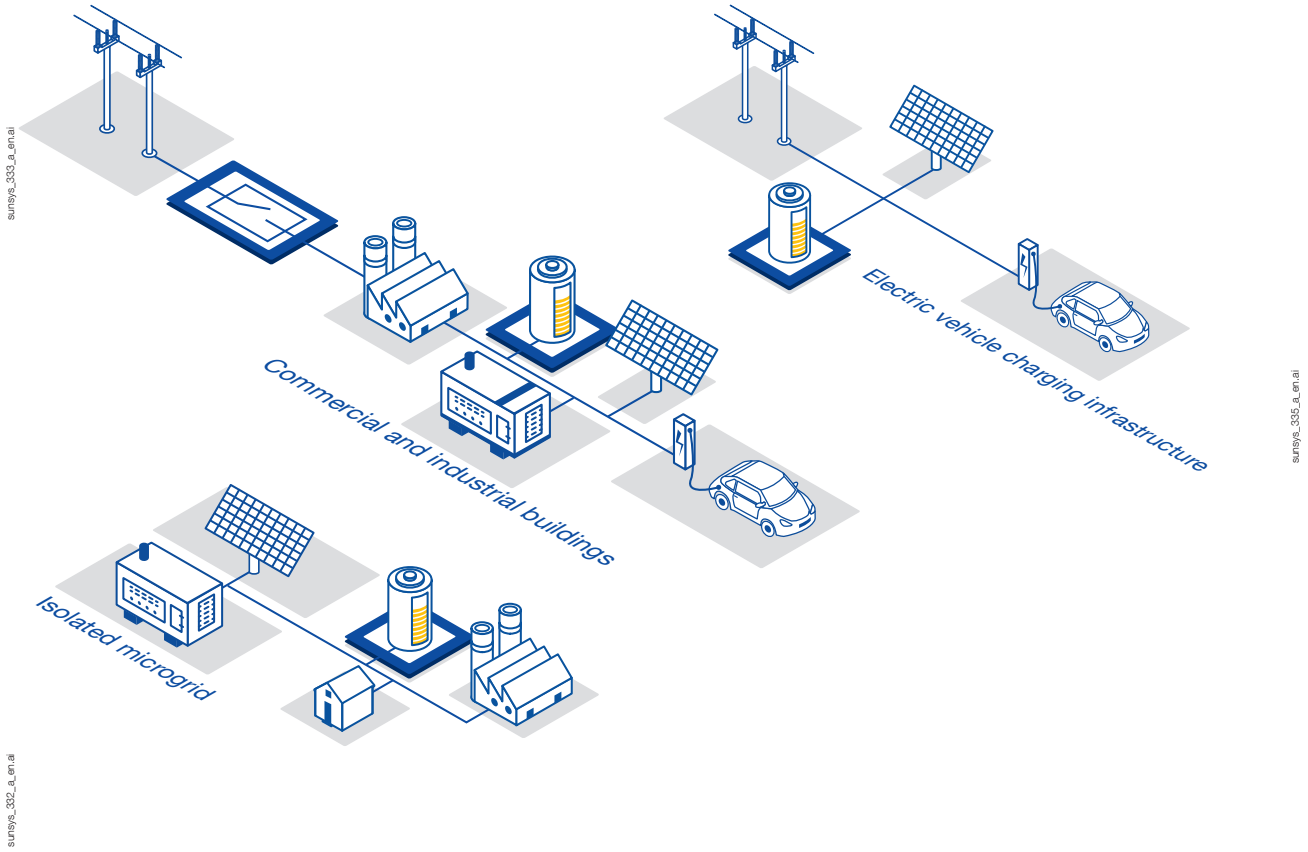
Particularly suitable for the following applications



A system that combines 3 cabinets

Optional

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

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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SUNSYS HES L SKID – with 0.5C battery racks

Various system configurations are available to meet our customers' requirements.
It is recommended that 0.5C batteries be used for applications requiring greater backup time.

		1B-CAB	2B-CAB	3B-CAB	4B-CAB	5B-CAB	6B-CAB
	Energy / Power	203 kWh	406 kWh	609 kWh	812 kWh	1,015 kWh	1,218 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	203	3,816	2,422	1,560	2,603	Forklift and lifting rings
1C-CAB 2B-CAB	150 200	406	6,297	3,815			
1C-CAB 3B-CAB	200 250 300	609	8,769	5,208			
1C-CAB 4B-CAB	250 300	812	11,428	6,601			Lifting rings
1C-CAB 5B-CAB	300	1,015	14,026	7,994			
2C-CAB 4B-CAB	350	812	12,688	7,651			
2C-CAB 5B-CAB	350 400 450	1,015	15,216	9,044			
2C-CAB 6B-CAB	500 550 600	1,218	17,746	10,437			

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

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SKIDS - with 1C battery racks

Various system configurations are available to meet our customers' requirements.
It is recommended that 1C batteries be used for applications requiring higher power.

	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 1B-CAB	150	189	3,816	2,422	1,560	2,603	Forklift and lifting rings
	200						
1C-CAB 2B-CAB	250	378	6,297	3,815			
	300						
2C-CAB 2B-CAB	350	378	7,414	4,865			Lifting rings
2C-CAB 3B-CAB	400	567	10,086	6,258			
	450						
	550						
2C-CAB 4B-CAB	500	756	11,428	7,651			
	550						
	600						

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	10% 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 deflagration panel.	
Environment		
Environment installation	Native outdoor	
Ingress Protection rating	IP 55	
Operating temperature	From -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)	