/ SHPS 100-30 / SHPS 150-30 / SHPS 172-30 / SHPS 180-30

preliminary



Sunny Highpower Storage

Battery inverter for medium-sized battery systems

25 YEAR DESIGN LIFE

SMA Smart Connected

Commercial
- High power density with 180 kW thanks to its compact structure

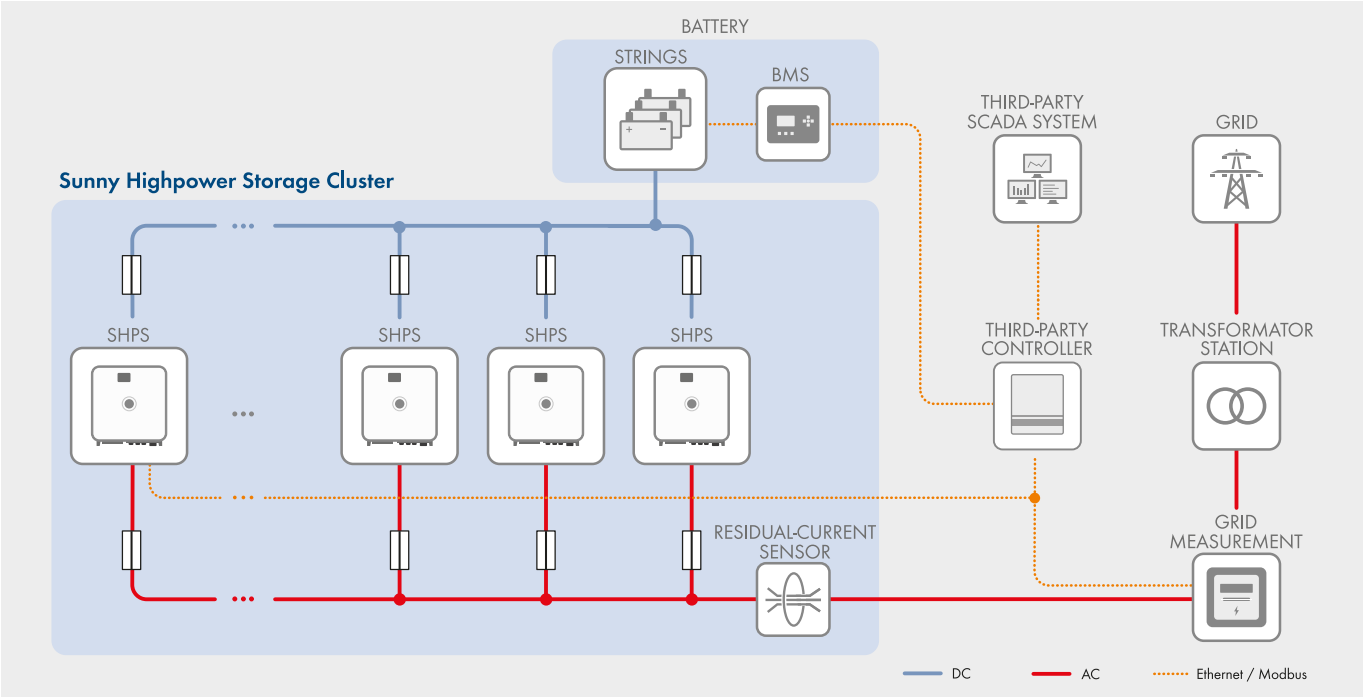
Safe
- Superior PV system availability with 180 kW units
- Innovative digital features aligned with the energy management platform ennexOS

Flexible
- For DC input voltages up to 1500 V
- Modular parallel connection of up to 14 inverters for AC-coupled battery systems

Easy installation
- Ergonomic handling and simple connection for quick installation
- Centralized commissioning and control of the storage power plant via SMA Data Manager

The Sunny Highpower Storage supports system voltages of up to 1500 V DC. By connecting up to fourteen inverters in parallel, it enables modular and flexible system planning for storage power plants with a total output of 1 to 5 MVA and a battery capacity of 5 to 40 MWh.

With an output of 180 kW, the battery inverter offers the automatic SMA Service Smart Connected for proactive servicing that facilitates operation and maintenance and significantly reduces service costs throughout the entire project lifetime.
The Sunny Highpower Storage is the perfect solution for your next storage power plant project. It combines high performance, flexibility, and cost efficiency in a compact package.



Technical Data	Sunny Highpower Storage 100-30	Sunny Highpower Storage 150-30	Sunny Highpower Storage 172-30	Sunny Highpower Storage 180-30
Battery side (DC)				
DC battery voltage range	590 V to 1500 V	880 V to 1500 V	968 V to 1500 V	1012 V to 1500 V
Max. DC current IDC, max	180 A			
Grid side (AC)				
Rated power at nominal voltage	100 kW	150 kW	172 kW	180 kW
Max. apparent AC power	100 kVA	150 kVA	172 kVA	180 kVA
Nominal AC voltage / AC voltage range	400 V / 320 V to 460 V	600 V / 480 V to 690 V	660 V / 528 V to 759 V	690 V / 552 V to 793 V
AC grid frequency / range	50 Hz / 44 Hz to 55 Hz 60 Hz / 54 Hz to 66 Hz			
Rated grid frequency	50 Hz			
Max. output current	151 A			
Power factor at rated power/adjustable displacement power factor	1 / 0 overexcited to 0 underexcited			
Harmonic (THD)	< 0.5%			
Feed-in phases / AC connection	3 / 3-grounding conductor			
Efficiency				
Max. efficiency[1] / Europ. efficiency[1]	98.8% / 98.5%	99.1% / 98.8%	99.2% / 98.9%	99.2% / 98.9%
Protective devices				
Ground fault monitoring / grid monitoring / DC reverse polarity protection	● / ● / ●			
AC short-circuit current capability / galvanically isolated	● / –			
All-pole-sensitive residual current monitoring unit	●			
Monitored surge arrester (type II) AC / DC	● / ●			
Protection class (according to IEC 62109-1) / overvoltage category (according to IEC 60664-1)	I / DC:II; AC:III			
General data				
Dimensions (W / H / D)	770mm / 830 mm / 462 mm (30.3 in / 32.7 in / 18, in)			
Weight	104 kg (229 lb)			
Operating temperature range	-25°C to +60°C (-13°F to +140°F)			
Noise emission, typical	69 dB(A)			
Topology	Transformerless			
Cooling method	OptiCool, active cooling, speed-controlled fan			
Degree of protection (according to IEC 60529)	IP65			
Maximum permissible value for relative humidity (non-condensing)	100%			
Features/functions/accessories				
LED display (status/fault/communication)	●			
Ethernet interface	● (2 ports)			
Data interface: SMA Modbus / SunSpec Modbus / Speedwire	● / ● / ●			
Battery interface: Ethernet (Modbus)	●			
Mounting type	Rack mounting			
OptiTrac / Integrated Plant Control	● / ●			
Warranty: 5 / 10 / 15 / 20 / 25 years	● / ○ / ○ / ○ / ○			
Certificates and permits (pending)	IEC/EN 62109-1/-2, VDE-AR-N 4110/4120, IEC 62116, IEC 61727, EN 50549, C10/11, CEI 0-16, G99/1 (>16A), PO 12.3, ABNT NBR 16149			
Model type number	SHPS 100-30	SHPS 150-30	SHPS 172-30	SHPS 180-30

● Standard equipment ○ Optional – Not available Data at nominal conditions 1) Preliminary efficiency Last revised: 12/2025

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