SUNNY HIGHPOWER PEAK3

SHP 110-JP-21 / SHP 143-JP-21

Japan specification
DC 1500 V / 143 kW
DC 1000 V / 100 kW

Efficient

- World class 99% max. efficiency
- Max. yield due to possible DC/AC ratio of up to 200%

Innovative

- Innovative digital features aligned with the energy management platform ennexOS

Flexible

- For DC input voltages of 1000 V and 1500 V
- Flexible DC solutions with customer-specific PV array junction boxes

Easy to install

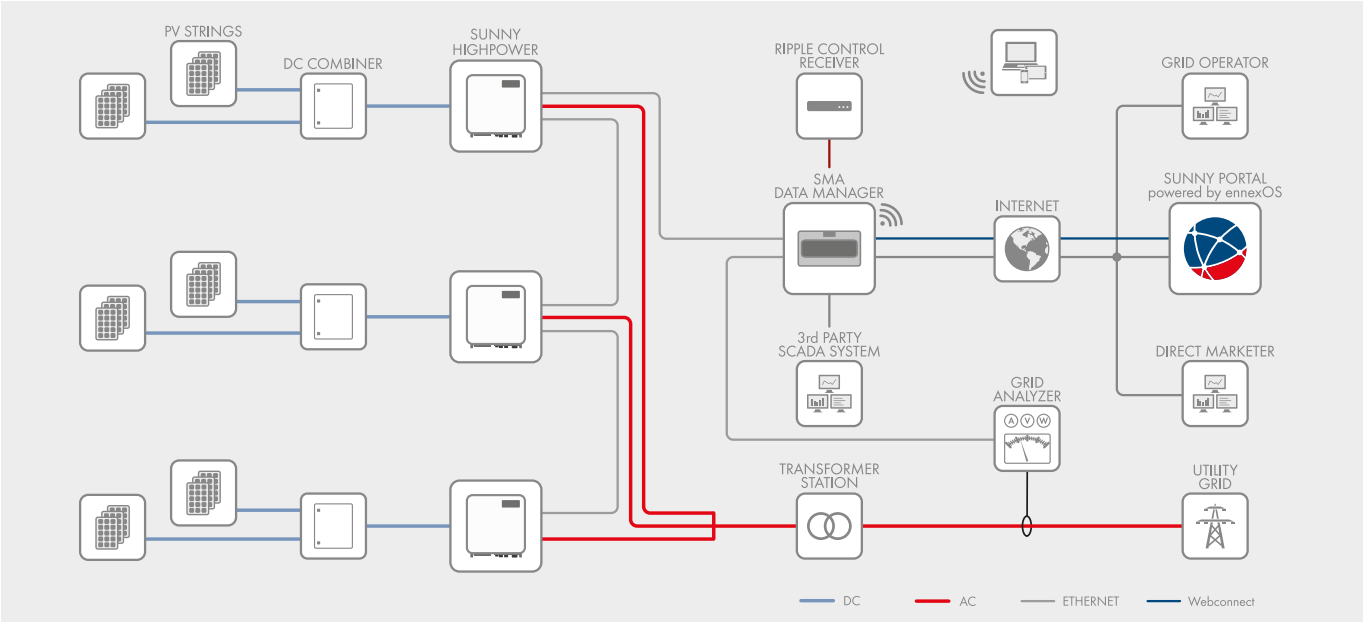
- Ergonomic handling and simple connection for quick installation
- Centralized commissioning and control of the PV power plant via SMA Data Manager

SUNNY HIGHPOWER PEAK3

Customized for tomorrow, today - Integrated the AC voltage feature for repowering

The Sunny Highpower PEAK3 is the central component of the SMA solution for PV power plants with a decentralized architecture and system voltages of 1000 V and 1500 V DC. This compact string inverter enables cost-optimized solutions for industrial PV applications thanks to its high power density. It also provides a simple way of transport and allows for quick installation and commissioning. This string inverter available in power classes of 100 kW and 143 kW is equipped with SMA Smart Connected* the unique service for automated system monitoring, failure diagnostics and replacement management and thus reduces lifecycle service costs.

* coming soon



Technical Data	Sunny Highpower 100-JP-21	Sunny Highpower 143-JP-21
Input (DC)		
Max. PV array power	200 kWp	300 kWp
Max. input voltage	1000 V	1500 V
MPP voltage range / rated input voltage	50 Hz: 620 V to 1000 V / 620 V 60 Hz: 645 V to 1000 V / 645 V	810 V to 1450 V / 810 V
Max. input current / max. short-circuit current	180 A / 325 A	180 A / 325 A
Number of independent MPP trackers	1	1
Number of inputs	2, for external PV array junction boxes	
Output (AC)		
Rated power at nominal voltage	100 kW	143 kW
Max. apparent power	100 kVA	143 kVA
Nominal AC voltage / AC voltage range	50 Hz: 420 V / 336 V to 483 V 60 Hz: 440 V / 352 V to 506 V	550 V / 480 V to 600 V
AC grid frequency / range	50 Hz / 44 Hz to 55 Hz 60 Hz / 54 Hz to 66 Hz	50 Hz / 44 Hz to 55 Hz 60 Hz / 54 Hz to 66 Hz
Rated grid frequency	50 Hz / 60 Hz	50 Hz / 60 Hz
Max. output current	151 A	151 A
Power factor at rated power / displacement power factor adjustable	1 / 0 overexcited to 0 underexcited	1 / 0 overexcited to 0 underexcited
Harmonic (THD)	< 3%	< 3%
Feed-in phases / AC connection	3 / 3-Ground	3 / 3-Ground
Efficiency		
Max. efficiency / according to JIS C8961	98.8% / 98.0%	99.0% / 98.5%
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 (as per IEC 62109-1)	I / AC: III; DC: II	I / AC: III; DC: II
General Data		
Dimensions (W / H / D)	770 mm / 833 mm / 470 mm	
Weight	99 kg	
Operating temperature range	–25°C to +60°C (–13°F to +140°F)	
Noise emission (typical)	< 69 dB(A)	
Self-consumption (at night)	< 5 W	
Topology	transformerless	
Cooling method	OptiCool, active cooling, speed-controlled fan	
Degree of protection (according to IEC 60529)	IP65	
Max. permissible value for relative humidity (non-condensing)	100 %	
Features / function / accessories		
DC connection / AC connection	Terminal lug (up to 185 mm²) / Screw terminal (up to 150 mm²)	
LED signals (Status / Fault / Communication)	●	
Ethernet interface	● (2 ports)	
Data interface: SMA Modbus / SunSpec Modbus / Speedwire	● / ● / ●	
Mounting type	Rack mounting	
OptiTrac / Integrated Plant Control / Q on Demand 24/7	● / ● / ●	
Warranty: 5 / 10 / 15 / 20 / 25 years	● / ○ / ○ / ○ / ○	
● Standard features ○ Optional features – Not available Data at nominal conditions Status: 02/2023		
Type designation	SHP 100-JP-21	SHP 143-JP-21