

SP1S-3P-H Series / 29.9-60kW

C&I Three Phase Hybrid Inverter



The Sunplus SP1S-3P-H series (29.9kW to 60kW three phase storage inverters) are designed to increase energy independence for C&I users, compatible with high voltage (135-800V) batteries including residential storage battery and battery cabinet from 30kwh to 225kwh.

Energy management is based on time-of-use and demand charge rate structures, significantly reduce the amount of energy purchased from public grid.

Thanks for the UPS function (switch time < 10ms), that enables the crucial loads power on during outages. Additionally, under the backup operation mode, the inverter provides up to 130% peak output overloading.



Flexible Design & Use

- 4 MPPT inputs , DC 40A current input, compatible with highpower PV module;
- Provides 130% power to unbalance loads in backup mode & Grid mode;
- Supports application in retrofit scenario;
- Switching time <10ms;
- 135-800 V wide battery voltage range;
- Generator input is supported;
- Support multi-machine anti-flow prevention;



Energy Independence

- 3 battery inputs , Fast charging / discharging to meet the demand of higher consumption;
- 110% continuous AC output overloading;
- 130% max. AC output overloading @85s;



Convenient Installation & Operation

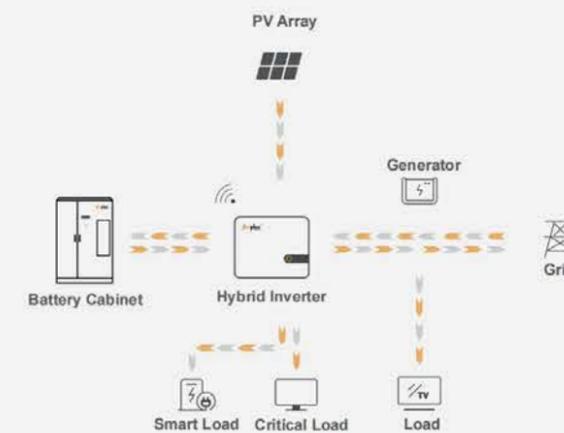
- Unique push-in connectors for time-saving installation;
- Touch free commissioning with smartphone;
- Compact size and elegant appearance ;
- DRM socket ready;
- Built-in RCMU(RCD), Type-B 300mA;
- LED display to show its running status clearly;



Smart Management

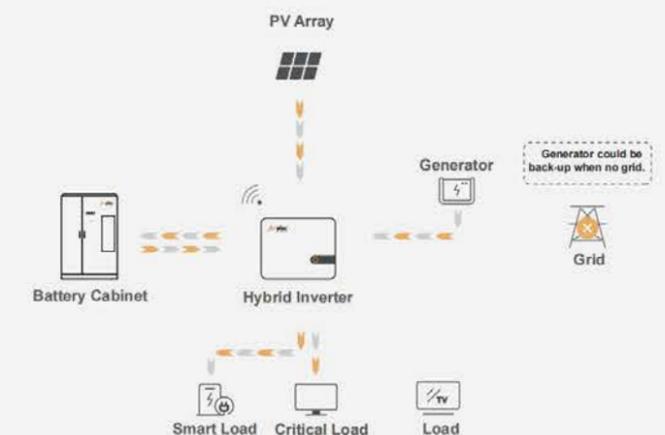
- Support inverter/BMS software remotely upgrade;
- Remote firmware update and customisable settings;
- Free online monitoring to enhance energy management for end user, installer and retailer;
- Programmable supply priority for PV, Battery or Grid;
- Support battery remote activation;

Optimizing Self-Consumption (on-grid)



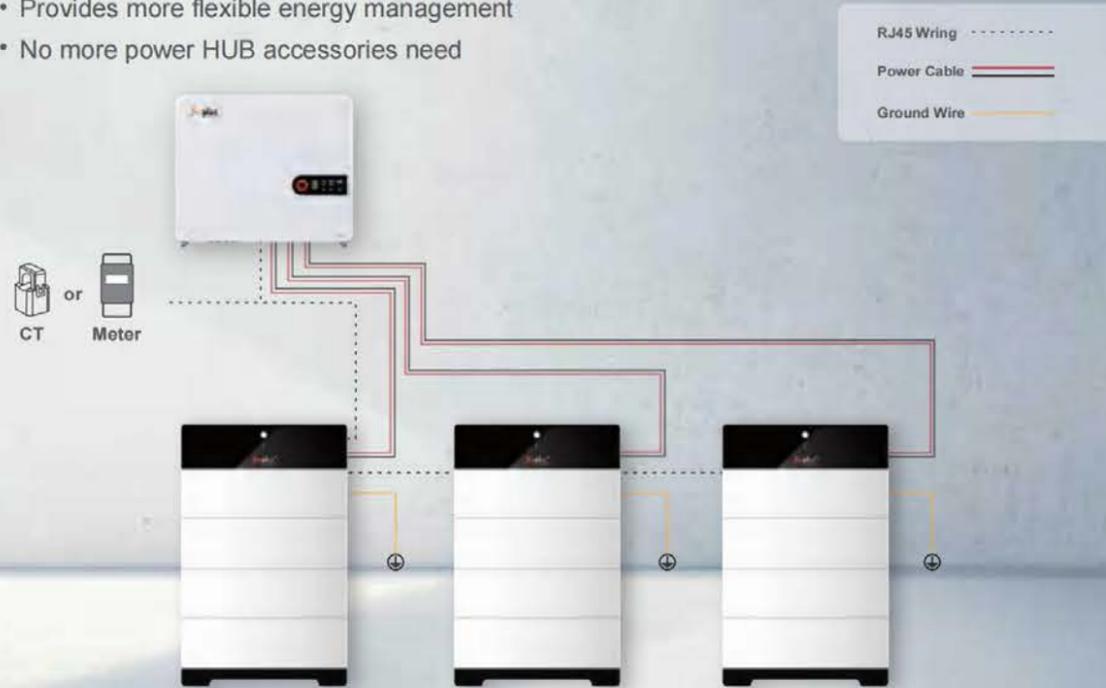
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Emergency Power Supply (off-grid)



Multiple Battery Connection

- High capacity, highly scalable
- Ideal for high energy demands
- Provides more flexible energy management
- No more power HUB accessories need



Commercial & Industrial Energy Storage Solution

- Simple and User-Friendly
- Economical and high efficient
- Store solar power and use it flexibly & safely



PV (DC)	SP1S-3P29.9K-H	SP1S-3P30K-H	SP1S-3P35K-H	SP1S-3P40K-H	SP1S-3P50K-H	SP1S-3P60K-H
Recommended Max. PV Input Power	38870 Wp	39000 Wp	45500 Wp	52000 Wp	65000 Wp	90000 Wp
Max. Input Voltage	1000 V					
Start-up Voltage	135 V					
Rated Input Voltage	600 V					
MPPT Input Voltage Range	135-900 V					
MPPT Max. Input Current	40A / 40 A / 40A			40A / 40 A / 40A / 40 A		
MPPT Short-circuit Current	50A / 50 A / 50A			50A / 50 A / 50A / 50 A		
No. of MPPT	3			4		
No. of Strings per MPPT	2/2/2			2/2/2/2		
Grid (AC)						
Max. Input Apparent Power	59800 VA	60000 VA	70000 VA	80000 VA	100000 VA	120000 VA
Rated Output Power	29900 W	30000 W	35000 W	40000 W	50000 W	60000 W
Max. Output Apparent Power	29900 VA	33000 VA	38500 VA	40000 VA	55000 VA	66000 VA
Rated AC Voltage	3L/N/PE, 220/380 V, 230/400 V					
Input/Output Voltage Range	180-300 V/312-519 V; 200-253 V/347-438 V					
Rated Output Voltage Frequency	50 / 60 Hz					
Input/Output Voltage Frequency Range	(45-55) ; (55-65) Hz					
Rated Output Current	43.33 A	43.48 A	50.72 A	57.97 A	72.5 A	86.96 A
Max. Input/Output Current	90.6 A / 58.89 A	90.9 A / 59.09 A	106.1 A / 68.94 A	121.2 A / 78.79 A	151.5 A / 98.48 A	181.8 A / 181.8 A
Power Factor (Rated)	>0.99					
Power Factor (Adjustable)	0.8 leading ... 0.8 lagging					
Total Harmonic Distortion	<3% (Rated Power)					
Grid Connection Mode	3L/N/PE					
AC Load Output (Off-grid)						
Rated Output Power	29900 W	30000 W	35000 W	40000 W	50000 W	60000 W
Max. Output Apparent Power	29900 W	33000 W	38500 W	44000 W	55000 W	66000 W
Rated Output Voltage	3L/N/PE, 220/380 V, 230/400 V					
Output Voltage Range	200-253 V/347-438 V					
Rated Output Frequency	50/60 Hz					
Rated Output Current	43.33 A	43.48 A	50.72 A	57.97 A	72.5 A	86.96 A
Max. Output Current	58.89 A	59.09 A	68.94 A	78.79 A	98.48 A	181.8 A
Total Harmonic Distortion	3% (R Load)					
On-grid/Off-grid Switching Time	<10 ms					
Battery (DC)						
Rated Output Power	29900 W	30000 W	35000 W	40000 W	50000 W	60000 W
Max. Charge/Discharge Power	29900 W/32890 W	30000 W/33000 W	35000 W/38500 W	40000 W/44000 W	50000 W/55000 W	60000 W/66000 W
Rated Voltage	210 V	210 V	245 V	280 V	350 V	420 V
Battery Voltage Range	135-800 V					
Max. Charge/Discharge Current	150 A / 150 A					
Communication Port	CAN / RS485					
Efficiency						
Max. Efficiency	97.6%					
Max. MPPT Efficiency	99.9%					
Max. Euro Efficiency	97.0%					
Protection						
Integrated Protection	LVRT/HVRT, Anti-islanding protection, PV DC reverse protection, AC output short circuit protection, Leakage current protection, Insulation Resistance Monitoring, Battery reverse polarity protection, RSD, Arc fault protection, DC switch (solar)					
Surge Protection	DC Type II, AC Type II					
General Data						
Dimensions (WxHxD)	714 x 628 x 290 mm					
Weight	72.5 kg					
Operating Temperature Range	-30~60°C					
Noise	<65 dB					
Cooling	Intelligent air cooling					
Installation Style	Wall-mounted					
Ingress Protection Rating	IP66					
Warranty	5 Years (10 Years Optional)					
Standards Compliance						
Grid Connection	NB/T 32004, EN 50549-1, CEL 0-21, VDE-ARN 4105, NTS Type A&B, C10/11, RD 1699/661/413/647/244/2019, PSE TypeA+NC RfG+PTPIREE, UNE 206006/206007/217001/217002, G98/G99 AS 4777.2 PEA, MEA, NRS 097-2-1 (Ed 2.1), IEC 61727/62116.					
Safety Regulation	EN/IEC 62109-1/2					
Others	EN/IEC 61000-6-1/2/3/4, IEC 61683					