SP1S-1P-L Series / 3~6kW

Residential Hybrid Energy Inverter - Single Phase Low Voltage



IP66 Protection

Periodic Battery Maintenance

< 10 ms
UPS, Grid-to-off-grid Switch In 10ms

Support Max.8 In Parallel Usage

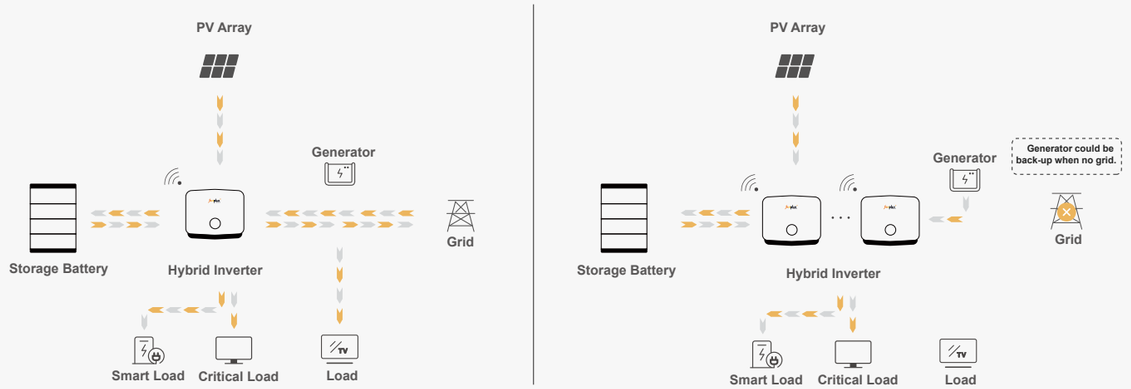
6 Operating Modes

Cloud Integration For Energy Management

Remote Upgrades And Diagnostics

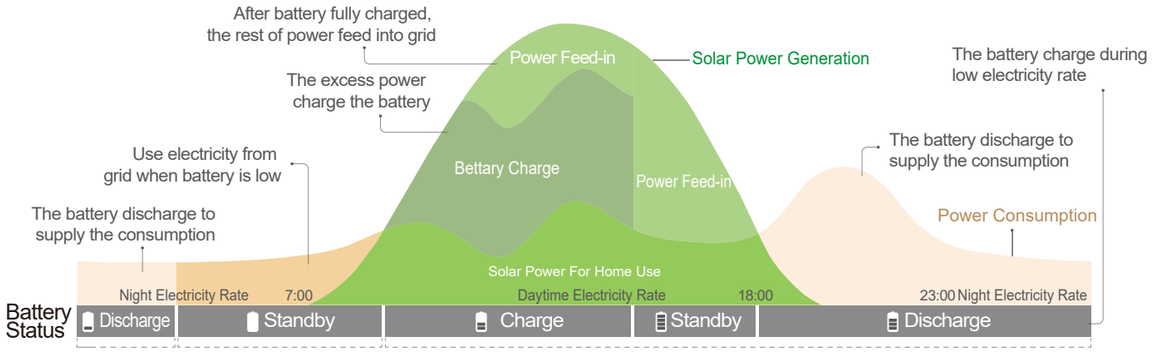
- Long Design Life
- Multiple Protection
- Parallel Functionality
- Versatile Operating Modes
- Remote Maintenance Capabilities

Optimizing Self-Consumption (on-grid) + Emergency Power Supply (off-grid)



Optimizing Self-Consumption Mode

With home energy storage installed, home owners may also be able to change from a flat rate electricity tariff to a time-of-use tariff. For the areas and regions, where peak shaving can be applied.



Battery

	SP1S-1P3K-L	SP1S-1P3.6K-L	SP1S-1P4K-L	SP1S-1P4.6K-L	SP1S-1P5K-L	SP1S-1P6K-L
Battery Type	Lithium-ion/Lead-acid					
Battery Rated Voltage (V)	51.2					
Battery Voltage Range (V)	42-60					
Max.Charging/Discharging Power (W)	5000					
Max.Charging/Discharging Current (A)	100					
Battery Charging Wake-up	Support					
Battery Communication Wake-up	Support					
Charging Method	Constant Current, Constant Voltage, Floating					

PV Input

Max.Input Power (W)	8000	8600	9000	9000	9000	9000
Max.PV Voltage (V)	600					
MPPT Voltage Range (V)	100-550					
MPPT Voltage Range (Full Load) (V)	250-520					
Rated Voltage (V)	360					
Max.Input Current (A)	16					
Isc PV (A)	20					
Number of MPPTs/Number of Input Strings	2/1					

AC Input

Max. Input Power (W)	6000	7360	8000	9200	10000	10000
Max.Continuous Input Current (A)	26.1	32	34.8	40	43.5	43.5
Max. Continuous Input Power(Grid to Battery) (W)	3000	3680	4000	4600	5000	6000
Max. Continuous Input Current(Grid to Battery) (A)	13	16	17.4	20	21.7	26.1
Rated Input Voltage/Frequency (V)	230(L/N/PE); 50/60					
Input Voltage Range (V)	170-280					

AC Output

Rated Output Active Power (W)	3000	3600	4000	4600	5000	6000
Rated Output Current (A)	13	16	17.4	20	21.7	26.1
Rated Output Voltage/Frequency (V/Hz)	230(L/N/PE); 50/60					
Output Voltage Range (V)	180-270					
Power Factor Range	0.8Leading-0.8Lagging					
THDi	<3%					

Back Up

Rated Output Power (W)	3000	3600	4000	4600	5000	6000
Rated Output Current (A)	13	16	17.4	20	21.7	21.7
Rated Output Voltage/Frequency (V)	230(L/N/PE);50/60					
Output Voltage Range (V)	180-270					
THDu(@Linear Load)	<3%					
Conversion Time (ms)	10					

Efficiency

Max.Efficiency	97.6%
European Efficiency	97.3%
Max. Efficiency On Battery Side and AC Side	94.7%
MPPT Efficiency	99.9%

Protection

Insulation Resistance Monitoring	Integrated
Residual Current Monitoring	Integrated
Reverse-Polarity Protection(input)	Integrated
Anti-Islanding Protection	Integrated
AC Over-Current Protection	Integrated
AC Short-Circuit Protection	Integrated
AC Over-Voltage Protection	Integrated
Surge Protection Level	TYPE II(DC), TYPE II(AC)
Remote Shutdown	Integrated
DC Switch	Standard supply

General Parameters

Ingress Protection Rating	IP66
Operation Temperature Range (°C)	-25-60(DeratingAbove 40)
Max.Operation Altitude (m)	4000(DeratingAbove 2000)
Relative Humidity Range	0-95%RH(Non-condensing)
Protection Class	Class I
Standby Power (W)	<10
Installation Method	Wall Mounting
Parallel Connection	Support, Max.8 Units
Communication Interface	RS485,CAN(Battery); RS485(Electricity Meter); WiFi+Bluetooth,GPRS(WiFi)
Display	LCD; APP
Isolation Method	High-frequency Isolation
Cooling Method	Natural Cooling
Noise Level (dB)	<25
Dimension (Width*Height*Depth) (mm)	510*450*186
Packing Dimension(Width*Height*Depth) (mm)	610*570*300
Net Weight (kg)	22.6
Gross Weight (kg)	27.2
Warranty Period	5 Years/10 Years(Optional)

Certifications

Production Compliance	IEC 62109-1:2010;IEC 62109-2:2010
CE-EMC	EN/IEC 61000-6-1:2019; EN/IEC61000-6-3:2021; EN 62920:2017/A1:2021
Grid Certifications	CEI 0-21:2022; VDE-AR-N4105, VDE0124-100:2020; G991-9:2022,typeA,G100-1/2:2022; EN 50549-1:2019:C10/11:2021; IEC 61727:2024,IEC 62116:2014.IEC 61683:1999