






# SP1D-1P-L Series / 8-12kW

Residential Single Phase Hybrid Inverter



 <b>IP65</b> High Ingress Protection Level	<b>2Times</b> PV Oversizing Capability	<b>26A</b> PV Input High-current PV Module Compatible	<b>&lt; 10ms</b> UPS, Grid-to-off-grid Switch In 10ms
 Support Diesel Generator/Wind Access	 Max.240A Charge & Discharge Current	 Support Max.8 In Parallel Usage	 Remote Upgrades And Maintenance

- Easy Operation
- Intelligent Cooling
- Lightweight Installation
- High Compatibility
- Strong Surge Load Support
- Multiple Protection

PV Input	SP1D-1P8K-L	SP1D-1P10K-L	SP1D-1P12K-L
Max.Input Power [W]	16000	20000	24000
Max.PV Voltage [d.c.V]		500	
MPPT Voltage Range [d.c.V]		90-450	
MPPT Voltage Range(Full Load) [d.c.V]	80-550	250-450	300-450
Rated Voltage [d.c.V]		360	
Max. Input Current [d.c.A]		54 (18+18/18)	
Isc PV [d.c.A]		81 (54/27)	
Number of MPPTs/Number of Input Strings	2/2		2/3

Battery	
Battery Type	Lithium-ion/Lead-acid
Battery Rated Voltage [d.c.V]	51.2
Battery Voltage Range [d.c.V]	42-60
Max.Charging/Discharging Power [W]	8000 10000 12000
Max.Charging/Discharging Current [d.c.A]	160 200 240
Battery Charging Wake-up	Support
Battery Communication Wake-up	Support
Charging Method	Constant Current, Constant Voltage, Floating

AC Input	
Max.Input Power [W]	8000 10000 12000
Max.Continuous Input Current [a.c.A]	34.9 43.5 52.2
Rated Input Voltage/Frequency [a.c.V/Hz]	230(L/N/PE); 50/60
Input Voltage Range [a.c.V]	180-270

Back Up	
Rated Output Power [W]	8000 10000 12000
Rated Output Current [a.c.A]	34.9 43.5 52.2
Rated Output Voltage/Frequency [a.c.V/Hz]	230(L/N/PE); 50/60
Output Voltage Range [a.c.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%

General Parameters	
Ingress Protection Rating	IP65
Operation Temperature Range [ C ]	-25-60(Derating Above 40)
Max.Operation Altitude [m]	4000(Derating Above 2000)
Relative Humidity Range	0-95%RH(Non-condensing)
Protection Class	Class I
Standby Power [W]	< 15
Parallel Connection	Support, Max, 8 Units
Communication Interface	RS485, CAN(Battery); RS485(Electricity Meter); WiFi+Bluetooth, GPRS(WiFi)
Display	LCD; APP
Inverter Topology	Non-Isolated
Cooling Method	Wind Cooling
Noise Level [dB]	< 60
Dimension [Width*Height*Depth] [mm]	375*535*205
Packing Dimension [Width*Height*Depth] [mm]	450*640*300
Net Weight [kg]	27
Gross Weight [kg]	32
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/IEC 61000-6-3: 2021; EN 62920: 2017/A1:2021
Grid Certifications	CEI 0-21: 2022; VDE-AR-N 4105, VDE 0124-100: 2020; G99 1-9: 2022, typeA, G100-1/2: 2022; EN 50549-1: 2019; C10/11: 2021; IEC 61727: 2024, IEC 62116: 2014, IEC 61683: 1999