

ASP 16~20kW

Three-Phase Off-Grid Solar Storage Inverter

- ☐ 2+2 High-Efficiency MPPT Input, efficiency up to 99.9%
- ☐ Max. Input Current per MPPT 36A
- ☐ 2x Rated Power Input (Grid/Generator)
- ☐ Max. 60A Bypass Current Input (Grid/Generator)
- ☐ Single-phase overload up to 150%
- ☐ Max. support for 6 units parallel, Scalable to 120kW for commercial applications
- ☐ No Neutral Connection Required
- ☐ 2 power supply modes: PV-only, hybrid charging
- ☐ External Load Anti-Backflow Protection
- ☐ Dual activation function for lithium batteries
- ☐ Generator Port with Smart Load Compatibility
- ☐ Three-phase pure sine wave output
- Chandes the World ☐ Time—Sharing Charging/Discharging Settings & Energy-Saving Mode
- ☐ Independent generator interface

ABOUT SRNE

- $\hfill \square$ SRNE 16 years in PV industry, committed to independent R&D and production.
- ☐ Holds over 200 patents in energy storage, with unique industry-leading technologies.
- ☐ Chooses top-quality international components to deliver high-value products to customers.
- ☐ Upholds values of customer priority, proactivity, responsibility, and innovative breakthroughs.



AC OUTPUT Rated AC Output Power 16000W 18000W 20000W Max. AC Output Power 17600VA 19800VA 22000VA Rated AC Output Current 23.2A 26.0A 29.0A Rated Output Frequency 50/60Hz Rated Output Voltage 230/400Vac (Three-Phase) Output Voltage Range 230/400Vac ± 5% BATTERY Battery Ype Lead-Acid Battery / Lithium-Ion Battery / User Defined Rated Battery Voltage 48V Battery Voltage Range 40∼60V Max. PV Charging Current 300A 360A 360A Max. Graiging/Discharging Current 300A 360A 360A Max. Charging/Discharging Current 300A 360A 360A Max. Charging/Discharging Current 300A 360A 360A Charging Strategy for LI-Ion Battery PV INPUT No. of MPPT Trackers 2 Max. PV Input Power 15kW+15kW 15kW+15kW 15kW+15kW Input Current 36A+36A 36A+36A 36A+36A Min. PV Input Voltage Range 160-800V/160V MAX. PV Input Voltage Range 160-800V/160-800V GRID/GENERATOR INPUT Rated Input Voltage Ange Phase Voltage 170-280Vac; Line Voltage 305-485Vac Bypass Overload Current 60A EFFICIENCY MPPT Tracking Efficiency 99.6%	MODEL	ASP48160SH3	ASP48180SH3	ASP48200SH3
Max. AC Output Power 17600VA 19800VA 22000VA Rated AC Output Current 23.2A 26.0A 29.0A Rated Output Frequency 50/60Hz Rated Output Voltage 230/400Vac ± 5% Battery Voltage Range 230/400Vac ± 5% BATTERY Battery Type Lead-Acid Battery / Lithium-Ion Battery / User Defined Rated Battery Voltage 48V Battery Voltage Range 40~60V Max. PV Charging Current 300A 360A 360A Max. PV Charging Current 300A 360A 360A Max. Charging/Discharging Current 300A 360A 360A Max. Charging/Discharging Current 300A 360A 360A Charging Strategy for Li-Ion Battery Self-adaption to BMS PV INPUT Self-adaption to BMS PV INPUT Self-adaption to BMS PV Input Power 15kW+15kW 15kW+15kW Input Current 36A+36A 36A+36A 36A+36A Min. PV Input Voltage 160V/160V Max. PV Input Voltage 16	AC OUTPUT			
Rated AC Output Current 23.2A 26.0A 29.0A Rated Output Frequency 50/60Hz Rated Output Voltage 230/400Vac (Three-Phase) Output Voltage Range 230/400Vac ± 5% Battery Range Battery Type Lead-Acid Battery / Lithium-Ion Battery / User Defined Rated Battery Voltage 48V Battery Voltage Range 40~60V Max. PV Charging Current 300A 360A 360A Max. PV Charging Current 300A 360A 360A Max. Grid/Generator Charging Current 300A 360A 360A Max. Grid/Generator Charging Current 300A 360A 360A Charging Curve 3 Stages / Equalization Charging Strategy for Li-lon Battery Self-adaption to BMS PV INPUT 2 Max. PV Input Power 15kW+15kW 15kW+15kW 15kW+15kW Input Current 36A+36A 36A+36A 36A+36A Max. PV Input Voltage 160V/160V 40V Max. PV Input Voltage Range 160-800V/160-800V <td< td=""><td>Rated AC Output Power</td><td>16000W</td><td>18000W</td><td>20000W</td></td<>	Rated AC Output Power	16000W	18000W	20000W
Rated Output Frequency 50/60Hz Rated Output Voltage 230/400Vac (Three-Phase) Output Voltage Range 230/400Vac ± 5% BATTERY Battery Type Lead-Acid Battery / Lithium-Ion Battery / User Defined Rated Battery Voltage 48V Battery Voltage Range 40~60V Max. PV Charging Current 300A 360A 360A Max. Grid/Generator Charging Current 300A 360A 360A Max. Charging/Discharging Current 300A 360A 360A Max. Charging/Discharging Current 300A 360A 360A Charging Strategy for Li-Ion Battery Self-adaption to BMS 9V PV INPUT VINPUT Self-adaption to BMS 9V PV INPUT No. of MPPT Trackers 2 Max. PV Input Power 15kW+15kW 15kW+15kW 15kW+15kW 15kW+15kW 15kW+15kW 16kW+15kW 16kW+15kW<	Max. AC Output Power	17600VA	19800VA	22000VA
Rated Output Voltage 230/400Vac (Three-Phase) Output Voltage Range 230/400Vac ± 5% BATTERY Battery Type Lead-Acid Battery / Lithium-Ion Battery / User Defined Rated Battery Voltage 48V Battery Voltage Range 40~60V Max. PV Charging Current 300A 360A 360A Max. Grid/Generator Charging Current 300A 360A 360A Max. Charging/Discharging Current 300A 360A 360A Charging Curve 3 Stages / Equalization Charging Strategy for Li-Ion Battery Self-adaption to BMS PV INPUT No. of MPPT Trackers 2 Max. PV Input Power 15kW+15kW 15kW+15kW 15kW+15kW Max. PV Input Power 36A+36A 36A+36A 36A+36A Min. PV Input Voltage / Start-up Voltage 160V/160V Max. PV Input Voltage Ange 160-800V/160-800V MPPT Toperating Voltage Range 160-800V/160-800V GRID/GENERATOR INPUT 8 230/400Vac (Three-Phase) AC Voltage Range Phase Voltage 170-280Vaz; Line Voltage 305-485Vac Bypass Over	Rated AC Output Current	23.2A	26.0A	29.0A
Output Voltage Range 230/400Vac ± 5% BATTERY Battery Type Lead-Acid Battery / Lithium-Ion Battery / User Defined Rated Battery Voltage 48V Battery Voltage Range 40~60V Max. PV Charging Current 300A 360A 360A Max. Grid/Generator Charging Current 300A 360A 360A Max. Charging/Discharging Current 300A 360A 360A Charging Curve 3 Stages / Equalization Charging Strategy for Li-Ion Battery Self-adaption to BMS PV INPUT Self-adaption to BMS PV INPUT 2 Max. PV Input Power 15kW+15kW 15kW+15kW 15kW+15kW Input Current 36A+36A 36A+36A 36A+36A Min. PV Input Voltage / Start-up Voltage 160V/160V Max. PV Input Voltage Range 160×80V/160-800V MPPT Operating Voltage Range 160~800V/160-800V GRID/GENERATOR INPUT 820/400Vac (Three-Phase) AC Voltage Range Phase Voltage 170-280Vac; Line Voltage 305-485Vac Bypass Overload Current 60A	Rated Output Frequency	50/60Hz		
BATTERY Battery Type Lead-Acid Battery / Lithium-Ion Battery / User Defined Rated Battery Voltage 48V Battery Voltage Range 40~60V Max. PV Charging Current 300A 360A 360A Max. Grid/Generator Charging Current 300A 360A 360A Max. Charging/Discharging Current 300A 360A 360A Charging Curve 3 Stages / Equalization Charging Strategy for Li-Ion Battery Self-adaption to BMS PV INPUT No. of MPPT Trackers 2 Max. PV Input Power 15kW+15kW 15kW+15kW 15kW+15kW Input Current 36A+36A 36A+36A 36A+36A Min. PV Input Voltage / Start-up Voltage 160V/160V Max. PV Input Voltage / Start-up Voltage 160V/160V MPPT Operating Voltage Range 160~800V/160~800V MPPT Operating Voltage Range 230/400Vac (Three-Phase) AC Voltage Range Phase Voltage 170~280Vac; Line Voltage 305~485Vac Bypass Overload Current 60A EFFICIENCY MPPT Tracking Efficiency	Rated Output Voltage	230/400Vac (Three-Phase)		
Battery Type Lead-Acid Battery / Lithium-lon Battery / User Defined Rated Battery Voltage 48V Battery Voltage Range 40~60V Max. PV Charging Current 300A 360A 360A Max. Grid/Generator Charging Current 300A 360A 360A Max. Charging/Discharging Current 300A 360A 360A Charging Curve 3 Stages / Equalization Charging Strategy for Li-lon Battery Self-adaption to BMS PV INPUT VINPUT No. of MPPT Trackers 2 Max. PV Input Power 15kW+15kW 15kW+15kW 15kW+15kW Input Current 36A+36A 36A+36A 36A+36A Min. PV Input Voltage / Start-up Voltage 160V/160V 160V/160V Max. PV Input Voltage Range 160-800V/160P 160-800V/160P MPPT Operating Voltage Range 160-800V/160-800V 160-800V/160-800V Rated Input Frequency 50/60Hz 160-800V/160-800V Rated Input Voltage 230/400Vac (Three-Phase) 240-400Vac (Three-Phase) AC Voltage Range Phase Voltage 170-280Vac; Line Voltage 305-4	Output Voltage Range	230/400Vac ± 5%		
Rated Battery Voltage Range 48V Battery Voltage Range 40~60V Max. PV Charging Current 300A 360A 360A Max. Grid/Generator Charging Current 300A 360A 360A Max. Charging/Discharging Current 300A 360A 360A Charging Curve 3 Stages / Equalization 360A Charging Strategy for Li–lon Battery Self-adaption to BMS 8 PV INPUT No. of MPPT Trackers 2 4 Max. PV Input Power 15kW+15kW 15kW+15kW 15kW+15kW Input Current 36A+36A 36A+36A 36A+36A Min. PV Input Voltage / Start-up Voltage 160V/160V Max. PV Input Voltage 160V/160V MPPT Operating Voltage Range 160~800V/160~800V GRID/GENERATOR INPUT Rated Input Voltage 230/400Vac (Three-Phase) AC Voltage Range Phase Voltage 170~280Vac; Line Voltage 305~485Vac Bypass Overload Current 60A EFFICIENCY NPPT Tracking Efficiency >99%	BATTERY			
Battery Voltage Range 40~60V Max. PV Charging Current 300A 360A 360A Max. Grid/Generator Charging Current 300A 360A 360A Max. Charging/Discharging Current 300A 360A 360A Charging Curve 3 Stages / Equalization Charging Strategy for Li-lon Battery Self-adaption to BMS PV INPUT No. of MPPT Trackers 2 Max. PV Input Power 15kW+15kW 15kW+15kW 15kW+15kW Input Current 36A+36A 36A+36A 36A+36A Min. PV Input Voltage / Start-up Voltage / Start-up Voltage 160V/160V Max. PV Input Voltage Range 160-800V/160-800V MPPT Operating Voltage Range 160-800V/160-800V GRID/GENERATOR INPUT Rated Input Voltage 230/400Vac (Three-Phase) AC Voltage Range Phase Voltage 170-280Vac; Line Voltage 305-485Vac Bypass Overload Current 60A EFFICIENCY NPPT Tracking Efficiency >99%	Battery Type	Lead-Acid Battery / Lithium-Ion Battery / User Defined		
Max. PV Charging Current 300A 360A 360A Max. Grid/Generator Charging Current 300A 360A 360A Max. Charging/Discharging Current 300A 360A 360A Charging Curve 3 Stages / Equalization Charging Strategy for Li-lon Battery PV INPUT No. of MPPT Trackers 2 Max. PV Input Power 15kW+15kW 15kW+15kW 15kW+15kW Input Current 36A+36A 36A+36A 36A+36A Min. PV Input Voltage / Start-up Voltage 160V/160V 160V/160V Max. PV Input Voltage Range 160~800V/160~800V 160~800V/160~800V GRID/GENERATOR INPUT Rated Input Frequency 50/60Hz 230/400Vac (Three-Phase) AC Voltage Range Phase Voltage 170~280Vac; Line Voltage 305~485Vac 8ypass Overload Current 60A EFFICIENCY MPPT Tracking Efficiency >99%	Rated Battery Voltage	48V		
Max. Grid/Generator Charging Current 300A 360A 360A Max. Charging/Discharging Current 300A 360A 360A Charging Curve 3 Stages / Equalization Charging Strategy for Li-lon Battery Self-adaption to BMS PV INPUT No. of MPPT Trackers 2 Max. PV Input Power 15kW+15kW 15kW+15kW 15kW+15kW Input Current 36A+36A 36A+36A 36A+36A Min. PV Input Voltage / Start-up Voltage 160V/160V Max. PV Input Voltage Range 160~800V/160~800V MPPT Operating Voltage Range 160~800V/160~800V GRID/GENERATOR INPUT Rated Input Voltage 230/400Vac (Three-Phase) AC Voltage Range Phase Voltage 170~280Vac; Line Voltage 305~485Vac Bypass Overload Current 60A EFFICIENCY >99%	Battery Voltage Range	40~60V		
Max. Charging/Discharging Current 300A 360A 360A Charging Curve 3 Stages / Equalization Charging Strategy for Li-lon Battery Self-adaption to BMS PV INPUT No. of MPPT Trackers 2 Max. PV Input Power 15kW+15kW 15kW+15kW 15kW+15kW Input Current 36A+36A 36A+36A 36A+36A Min. PV Input Voltage / Start-up Voltage 160V/160V Max. PV Input Voltage 1000V/1000V MPPT Operating Voltage Range 160~800V/160~800V GRID/GENERATOR INPUT 50/60Hz Rated Input Frequency 50/60Hz Rated Input Voltage 230/400Vac (Three-Phase) AC Voltage Range Phase Voltage 170~280Vac; Line Voltage 305~485Vac Bypass Overload Current 60A EFFICIENCY >99%	Max. PV Charging Current	300A	360A	360A
Charging Curve 3 Stages / Equalization Charging Strategy for Li-lon Battery PV INPUT No. of MPPT Trackers Max. PV Input Power 15kW+15kW 16kW+15kW 16	Max. Grid/Generator Charging Current	300A	360A	360A
Charging Strategy for Li-lon Battery PV INPUT No. of MPPT Trackers 2 Max. PV Input Power 15kW+15kW 16kW+15kW 15kW+15kW 16oV/16oV 16oV/	Max. Charging/Discharging Current	300A	360A	360A
PV INPUT No. of MPPT Trackers 2 Max. PV Input Power 15kW+15kW 15kW+15kW 15kW+15kW Input Current 36A+36A 36A+36A 36A+36A Min. PV Input Voltage / Start-up Voltage 160V/160V Max. PV Input Voltage 1000V/1000V MPPT Operating Voltage Range 160~800V/160~800V GRID/GENERATOR INPUT 8 Rated Input Frequency 50/60Hz Rated Input Voltage 230/400Vac (Three-Phase) AC Voltage Range Phase Voltage 170~280Vac; Line Voltage 305~485Vac Bypass Overload Current 60A EFFICIENCY MPPT Tracking Efficiency >99%	Charging Curve	3 Stages / Equalization		
No. of MPPT Trackers Max. PV Input Power 15kW+15kW 160V/160V 1	Charging Strategy for Li-lon Battery	Self-adaption to BMS		
Max. PV Input Power 15kW+15kW 15kW+15kW 15kW+15kW Input Current 36A+36A 36A+36A 36A+36A 36A+36A Min. PV Input Voltage / Start-up Voltage Max. PV Input Voltage 1600V/160V Max. PV Input Voltage Range 1000V/1000V MPPT Operating Voltage Range 160~800V/160~800V GRID/GENERATOR INPUT Rated Input Frequency 50/60Hz Rated Input Voltage 230/400Vac (Three-Phase) AC Voltage Range Phase Voltage 170~280Vac; Line Voltage 305~485Vac Bypass Overload Current 60A EFFICIENCY MPPT Tracking Efficiency >99%	PV INPUT			
Input Current 36A+36A 36A+3A 36A+3A 36A+3A 36A+3A 36A+3A 36A+3A 36A+3A 36A+3A 36A+3A 36A+3A	No. of MPPT Trackers		2	
Min. PV Input Voltage Max. PV Input Voltage MPPT Operating Voltage Range MPPT Operating Voltage Range GRID/GENERATOR INPUT Rated Input Frequency Rated Input Voltage AC Voltage Range Phase Voltage 170~280Vac; Line Voltage 305~485Vac Bypass Overload Current MPPT Tracking Efficiency 160V/160V 1600V 1600V 1600~800V 16	Max. PV Input Power	15kW+15kW	15kW+15kW	15kW+15kW
Start-up Voltage Max. PV Input Voltage MPPT Operating Voltage Range GRID/GENERATOR INPUT Rated Input Frequency Rated Input Voltage AC Voltage Range Phase Voltage 170~280Vac; Line Voltage 305~485Vac Bypass Overload Current EFFICIENCY MPPT Tracking Efficiency >99%	Input Current	36A+36A	36A+36A	36A+36A
MPPT Operating Voltage Range GRID/GENERATOR INPUT Rated Input Frequency Rated Input Voltage AC Voltage Range Bypass Overload Current EFFICIENCY MPPT Tracking Efficiency 160~800V/160~800V 50/60Hz 230/400Vac (Three–Phase) Phase Voltage 170~280Vac; Line Voltage 305~485Vac 80A EFFICIENCY MPPT Tracking Efficiency >99%	Min. PV Input Voltage / Start-up Voltage	160V/160V		
GRID/GENERATOR INPUT Rated Input Frequency 50/60Hz Rated Input Voltage 230/400Vac (Three-Phase) AC Voltage Range Phase Voltage 170~280Vac; Line Voltage 305~485Vac Bypass Overload Current 60A EFFICIENCY MPPT Tracking Efficiency >99%	Max. PV Input Voltage	1000V/1000V		
Rated Input Frequency Rated Input Voltage AC Voltage Range AC Voltage Range Phase Voltage 170~280Vac; Line Voltage 305~485Vac Bypass Overload Current 60A EFFICIENCY MPPT Tracking Efficiency >99%	MPPT Operating Voltage Range	160~800V/160~800V		
Rated Input Voltage 230/400Vac (Three-Phase) AC Voltage Range Phase Voltage 170~280Vac; Line Voltage 305~485Vac Bypass Overload Current 60A EFFICIENCY MPPT Tracking Efficiency >99%	GRID/GENERATOR INPUT			
AC Voltage Range Phase Voltage 170~280Vac; Line Voltage 305~485Vac Bypass Overload Current 60A EFFICIENCY MPPT Tracking Efficiency >99%	Rated Input Frequency	50/60Hz		
Bypass Overload Current 60A EFFICIENCY MPPT Tracking Efficiency >99%	Rated Input Voltage	230/400Vac (Three-Phase)		
EFFICIENCY MPPT Tracking Efficiency >99%	AC Voltage Range	Phase Voltage 170~280Vac; Line Voltage 305~485Vac		
MPPT Tracking Efficiency >99%	Bypass Overload Current		60A	
	EFFICIENCY			
Max. Efficiency 97.6%	MPPT Tracking Efficiency	>99%		
	Max. Efficiency	97.6%		

BASIC DATA				
Parallel Capacity	1~6 units			
Dimensions (W \times H \times D)	593.4x803.4x215mm	Cooling Method	Air Cooling	
Weight	50kg	Operating Temperature	–10~55°C, >45°C Derate	
Protection Degree	IP20	Communication Interface	RS485/CAN/WI-FI	
External Modules (Optional)	Wi-Fi/4G Stick			
Certification	IEC62109-1, IEC62109-2, EN61000-6-1, EN61000-6-3, RoHS			

Protection Functions

With PV input current / power limiting protection, PV input over-voltage, Anti-reverse charge protection at night, AC input over-voltage protection, AC input under-voltage protection, Battery over-voltage protection, Battery over-current protection, AC output short-circuit protection, Heat sink over- temperature protection, nverter over-load protection, AC output reverse, Bypass over-current protection, Bypass phase inconsistency protection.