

Certificate of Conformity

Certificate Number: CN-PVES-260243

On the basis of the tests undertaken, the sample<s> of the below product have been found to comply with the requirements of the referenced specification<s>/standard<s> at the time the tests were carried out. It does not imply that Intertek has performed any surveillance or control of the manufacture(s). The manufacturer(s) shall ensure that the manufacturing process assures compliance of the production units with the examined products mentioned in this certificate.

Applicant:	Shanghai Sunplus New Energy Technology Co.,Ltd. Room 706, Building 4, NO.260 Maoyuan Road, Fengxian District, Shanghai, China
Product:	Hybrid Inverter
Ratings & Principle Characteristics:	See appendix of Certificate of Conformity
Model:	SP1S-3P3K-H, SP1S-3P4K-H, SP1S-3P5K-H, SP1S-3P6K-H, SP1S-3P8K-H SP1S-3P9.99K-H, SP1S-3P10K-H, SP1S-3P12K-H, SP1S-3P14.99K-H, SP1S-3P15K-H SP1S-3P3K-H-0, SP1S-3P4K-H-0, SP1S-3P5K-H-0, SP1S-3P6K-H-0 SP1S-3P8K-H-0, SP1S-3P9.99K-H-0, SP1S-3P10K-H-0, SP1S-3P12K-H-0 SP1S-3P14.99K-H-0, SP1S-3P15K-H-0
Brand Name<s>:	
Product Complies with:	EN 50549-1:2019+A1:2023 EN 50549-10:2022
Certificate Issuing Office Name & Address:	Intertek Testing Services Ltd. Shanghai West Area, 2 nd Floor, No. 707, Zhangyang Road China (Shanghai) Pilot Free Trade Zone, Shanghai, P. R. China Accredited by ACCREDIA in accordance with ISO/IEC 17065:2012
Test Report No.<s>:	260325071GZU-001, 25 June 2026

Additional information in Appendix.

Mira Xiao

Signature

Certification Manager: Mira Xiao

Date: 26 June 2026



01886

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PVES-260243

Model	SP1S-3P3K-H	SP1S-3P4K-H	SP1S-3P5K-H	SP1S-3P6K-H	SP1S-3P8K-H	SP1S-3P9.99K-H	SP1S-3P10K-H	SP1S-3P12K-H	SP1S-3P14.9K-H	SP1S-3P15K-H
Battery										
Battery Type	Lithium-ion battery									
Battery Voltage Range[d.c. V]	80 ~ 800									
Max Continuous Charge/Discharge Current[d.c. A]	30/30				60/60					
Max Charge/Discharge Power[kW]	3	4	5	6	8	9.99	10	12	14.99	15
PV Input										
Max. PV Input Voltage[d.c. V]	1100									
MPPT Voltage Range[d.c. V]	70 ~ 1000									
Max PV Input Current Per MPPT[d.c. A]	36 (18/18)				54 (18+18/18)					
Max Short-Circuit Current Per MPPT[d.c. A]	54 (27/27)				81 (54/27)					
On-Grid										
Rated AC Output Power[kW]	3	4	5	6	8	9.99	10	12	14.99	15

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PVES-260243

Max Apparent Output power[kVA]	3.3	4.4	5.5	6.6	8.8	9.99	11	13.2	14.99	16.5
Nominal AC Output Voltage[a.c. V]	220/380, 230/400, 240/415 (3W/N+PE)									
Grid Frequency[Hz]	50/60									
Max/Rated Output Current[a.c. A]	5.0/4.6	6.7/6.1	8.4/7.6	10.0/9.1	13.4/12.2	16.7/15.2	16.7/15.2	20.1/18.2	25.1/22.8	25.1/22.8
Power Factor	0.8Leading ~ 0.8Lagging									
Off-Grid										
Nominal AC Output Voltage[a.c. V]	220/380, 230/400, 240/415 (3W/N+PE)									
Grid Frequency[Hz]	50/60									
Max/Rated Output Current[a.c. A]	5.0/4.6	6.7/6.1	8.4/7.6	10.0/9.1	13.4/12.2	16.7/15.2	16.7/15.2	20.1/18.2	25.1/22.8	25.1/22.8
Power Factor	0.8Leading ~ 0.8Lagging									
Others										
Ingress Protection	IP66									
Protection Class	Class I									
Operating Temperature [°C]	-35 ~ +60									

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PVES-260243

Model	SP1S-3P3K-H-0	SP1S-3P4K-H-0	SP1S-3P5K-H-0	SP1S-3P6K-H-0	SP1S-3P8K-H-0	SP1S-3P9.99K-H-0	SP1S-3P10K-H-0	SP1S-3P12K-H-0	SP1S-3P14.99K-H-0	SP1S-3P15K-H-0
Battery										
Battery Type	Lithium-ion battery									
Battery Voltage Range[d.c. V]	80 ~ 800									
Max Continuous Charge/Discharge Current[d.c. A]	30/30			60/60						
Max Charge/Discharge Power[kW]	3	4	5	6	8	9.99	10	12	14.99	15
On-Grid										
Rated AC Output Power[kW]	3	4	5	6	8	9.99	10	12	14.99	15
Max Apparent Output power[kVA]	3.3	4.4	5.5	6.6	8.8	9.99	11	13.2	14.99	16.5
Nominal AC Output Voltage[a.c. V]	220/380, 230/400, 240/415 (3W/N+PE)									
Grid Frequency[Hz]	50/60									
Max/Rated Output Current[a.c. A]	5.0/4.6	6.7/6.1	8.4/7.6	10.0/9.1	13.4/12.2	16.7/15.2	16.7/15.2	20.1/18.2	25.1/22.8	25.1/22.8

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PVES-260243

Power Factor	0.8Leading ~ 0.8Lagging									
Off-Grid										
Nominal AC Output Voltage[a.c. V]	220/380, 230/400, 240/415 (3W/N+PE)									
Grid Frequency[H z]	50/60									
Max/Rated Output Current[a.c. A]	5.0/4.6	6.7/6.1	8.4/7.6	10.0/9.1	13.4/12.2	16.7/15.2	16.7/15.2	20.1/18.2	25.1/22.8	25.1/22.8
Power Factor	0.8Leading ~ 0.8Lagging									
Others										
Ingress Protection	IP66									
Protection Class	Class I									
Operating Temperature [°C]	-35 ~ +60									

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PVES-260243

Interface protection settings according to EN 50549-1			
Parameter	Max. disconnection time	Min. operate time	Trip value
Undervoltage threshold stage 1 [27 <]	100s	0.1s (0.1 s steps)	Trip value Config. from 0.2 to 1 Un (0.01 Un steps)
Undervoltage threshold stage 2 [27 <<]	5s	0.1s (0.05 s steps)	Trip value Config. from 0.2 to 1 Un (0.01 Un steps)
Overvoltage threshold stage 1 [59 >]	100s	0.1s (0.1 s steps)	Trip value Config. from 1.0 to 1.2 Un (0.01 Un steps)
Overvoltage threshold stage 2 [59 >>]	5s	0.1s (0.05 s steps)	Trip value Config. from 1.0 to 1.3 Un (0.01 Un steps)
Overvoltage 10 min mean protection	Trip time Config ≤ 3s not adjustable Time delay setting = 0 ms		Trip value Config. from 1.0 to 1.15Un (0.01 Un steps)
Underfrequency threshold stage 1 [81 <]	100s	0.1s (0.1s steps)	Trip value Config. from 47.0 to 50.0Hz (0.1Hz steps)
Underfrequency threshold stage 2 [81 <<]	5s	0.1s (0.05 s steps)	Trip value Config. from 47.0 to 50.0Hz (0.1Hz steps)
Overfrequency threshold stage 1 [81 >]	100s	0.1s (0.1s steps)	Trip value Config. from 50.0 to 52.0Hz (0.1Hz steps)
Overfrequency threshold stage 2 [81 >>]	5s	0.1s (0.05 s steps)	Trip value Config. from 50.0 to 52.0Hz (0.1Hz steps)
Starting to and reconnection settings for voltage	50%-120% adjustable, 85%Un ≤ U ≤ 1.10Un default		
Starting to generate electrical power	47Hz – 52Hz adjustable, 49.5Hz ≤ U ≤ 50.1Hz default		
Reconnection settings for frequency	47Hz – 52Hz adjustable, 49.5Hz ≤ U ≤ 50.2Hz default		
Observation time	10s-60s adjustable, 60s default		
Active power increase gradient	6%-3000%/min adjustable, 10%/min default		
Permanent DC injection	0.5% of rated inverter output		
Loss of mains according to EN 62116	Within 2s		

According to Annex H of the standard EN 50549-1, generating plants compliant with the clauses of this European Standard are considered to be compliant with the relevant Article of COMMISSION REGULATION (EU) 2016/631, provided that all settings as provided by the DSO and the responsible party are complied with.

Type approval for type A and B