

# Certificate of Conformity

Certificate Number: CN-PV-220110R1

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.

<b>Applicant:</b>	Shenzhen SOFARSOLAR Co., Ltd. 11/F., Gaoxinqi Technology Building, No.67 Area, Xingdong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, China
<b>Product:</b>	Inverter Module
<b>Ratings &amp; Principle Characteristics:</b>	See appendix of Certificate of Conformity
<b>Model:</b>	ESI 3K-S1, ESI 3.68K-S1, ESI 4K-S1, ESI 4.6K-S1, ESI 5K-S1, ESI 5K-S1-A, ESI 6K-S1
<b>Brand Name(s):</b>	
<b>Product Complies with:</b>	EN 50549-1: 2019, Requirements for generating plants to be connected in parallel with distribution networks Part 1: Connection to a LV distribution network - Generating plants up to and including type B Type approval for type B
<b>Certificate Issuing Office Name &amp; Address:</b>	Intertek Testing Services Ltd. Shanghai West Area, 2 <sup>nd</sup> 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
<b>Test Report No.&lt;s&gt;:</b>	220725014GZU-001
According to Annex H of the standard EN 50549-1:2019, 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.	
<b>Replaces certificate CN-PV-220110 dated 1 June 2022</b>	
Additional information in Appendix.	



Signature

**Certification Manager: Grady Ye**

**Date: 29 July 2022**



PRD N° 306B

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-PV-220110R1.

MODEL	ESI 3K-S1	ESI 3.68K-S1	ESI 4K-S1	ESI 4.6K-S1
Max.DC input voltage		550Vdc		
MPPT voltage range		85~520Vdc		
Max.PV Isc		2*22.5A		
Rated battery voltage		400V		
Max.charging/discharging current		20A		
Max.charging/discharging power	3000W	3680W	4000W	4600W
Rated grid voltage		230V,50Hz		
Rated output voltage		230V,50/60Hz		
Max.output current	15A	16A	20A	20.9A
Power Factor		1 default (adjustable+/-0.8)		
Rated output power	3000W	3680W	4000W	4600W
Backup Rated Current	13A	16A	17.4A	20A
Backup Rated Apparent Power	3000VA	3680VA	4000VA	4600VA
Ambient Temperature		-10~ +50 °C		
Protection Degree		IP65		
Protection Class		Class I		
Inverter topology		Non-Isolated		
Overvoltage Category		AC III, DC II		
safety firmware version:		V000001		

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-PV-220110R1.

MODEL	ESI 5K-S1	ESI 5K-S1-A	ESI 6K-S1
Max.DC input voltage		550Vdc	
MPPT voltage range		85~520Vdc	
Max.PV Isc		2*22.5A	
Rated battery voltage		400V	
Max.charging/discharging current		20A	
Max.charging/discharging power	5000W	5000W	6000W
Rated grid voltage		230V,50Hz	
Rated output voltage		230V,50/60Hz	
Max.output current	25A	22.7A	30A
Power Factor	1 default (adjustable+/-0.8)		
Rated output power	5000W	5000W	6000W
Backup Rated Current	21.7A	22.7A	26A
Backup Rated Apparent Power	5000VA	5000VA	6000VA
Ambient Temperature	-10~ +50 °C		
Protection Degree	IP65		
Protection Class	Class I		
Inverter topology	Non-Isolated		
Overvoltage Category	AC III, DC II		
safety firmware version:	V000001		

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.

# Test Verification of Conformity

Verification Number: 220321044GZU-VOC001

On the basis of the referenced test report(s), sample(s) tested of the below product have been found to comply with the standards harmonized with the directives listed on this verification at the time the tests were carried out. Other standards and Directives may be relevant to the product. This verification is part of the full test report(s) and should be read in conjunction with it <them>.

Once compliance with all product relevant  mark directives are verified, including any relevant e.g. risk assessment and production control, the manufacturer may indicate compliance by signing a Declaration of Conformity themselves and applying the mark to products identical to the tested sample(s).

Applicant Name & Address:	Shenzhen SOFARSOLAR Co., Ltd. 11/F., Gaoxinqi Technology Building, No.67 Area, Xingdong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, China
Product Description:	Intelligent Residential System
Models/Type References:	For Inverter Module: ESI 3K-S1, ESI 3.68K-S1, ESI 4K-S1, ESI 4.6K-S1, ESI 5K-S1, ESI 5K-S1-A, ESI 6K-S1 For Energy Storage Battery: BTS 5K
Ratings & Principle Characteristics:	See Appendix
Brand Name:	
Relevant Standards/Directives:	EN IEC 61000-6-3:2021 EN IEC 61000-6-1:2019  EMC Directive 2014/30/EU Intertek Testing Services Shenzhen Ltd. Guangzhou Branch Room 02, & 101/E201/E301/E401/E501/E601/E701/E801 of Room 01 1-8/F., No. 7-2, Caipin Road, Science City, GETDD, Guangzhou, Guangdong, China
Verification Issuing Office Name & Address:	23 September 2022 to 27 September 2022
Date of Tests:	220321044GZU-001
Test Report Number(s):	Additional information in Appendix.



**Signature**

**Name: Sky Zhu**

**Position: Team Leader**

**Date: 05 December 2022**

This Verification 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 Verification. Only the Client is authorized to permit copying or distribution of this Verification. 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. The observations and test/inspection results referenced in this Verification are relevant only to the sample tested/inspected. This Verification by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

## APPENDIX: Test Verification of Conformity

This is an Appendix to Test Verification of Conformity Number: 220321044GZU-VOC001

Ratings & Principle  
Characteristics for Inverter  
Module

MODEL	ESI 3K-S1	ESI 3.68K-S1	ESI 4K-S1	ESI 4.6K-S1
Max.DC input voltage	550Vdc			
MPPT voltage range	85~520Vdc			
Max.PV Isc	2*22.5A			
Rated battery voltage	400V			
Max.charging/discharging current	20A			
Max.charging/discharging power	3000W	3680W	4000W	4600W
Rated grid voltage	230V,50Hz			
Rated output voltage	230V,50/60Hz			
Max.output current	15A	16A	20A	20.9A
Power Factor	1 default (adjustable+/-0.8)			
Rated output power	3000W	3680W	4000W	4600W
Backup Rated Current	13A	16A	17.4A	20A
Backup Rated Apparent Power	3000VA	3680VA	4000VA	4600VA
Ambient Temperature	-10~ +50 °C			
Protection Degree	IP65			
Protection Class	Class I			
Inverter topology	Non-Isolated			
Overvoltage Category	AC III, DC II			
Firmware version:	V000001			

This Verification 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 Verification. Only the Client is authorized to permit copying or distribution of this Verification. 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. The observations and test/inspection results referenced in this Verification are relevant only to the sample tested/inspected. This Verification by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

MODEL	ESI 5K-S1	ESI 5K-S1-A	ESI 6K-S1
Max.DC input voltage	550Vdc		
MPPT voltage range	85~520Vdc		
Max.PV Isc	2*22.5A		
Rated battery voltage	400V		
Max.charging/discharging current	20A		
Max.charging/discharging power	5000W	5000W	6000W
Rated grid voltage	230V,50Hz		
Rated output voltage	230V,50/60Hz		
Max.output current	25A	22.7A	30A
Power Factor	1 default (adjustable+/-0.8)		
Rated output power	5000W	5000W	6000W
Backup Rated Current	21.7A	22.7A	26A
Backup Rated Apparent Power	5000VA	5000VA	6000VA
Ambient Temperature	-10~ +50°C		
Protection Degree	IP65		
Protection Class	Class I		
Inverter topology	Non-Isolated		
Overvoltage Category	AC III, DC II		
Firmware version:	V000001		

Ratings & Principle  
 Characteristics for Energy  
 Storage Battery

MODEL	BTS 5K
Battey Type	LFP
Battery Interface	Isolated
Total Energy	5120Wh
Max Output Current	7.5A
Weight	50Kg
Input/Output	300-435Vdc, 7.5A, 2.5kW
Operating Temperature Range	-10 ~ +50°C

Signature



Name: Sky Zhu

Position: Team Leader

Date: 05 December 2022

This Verification 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 Verification. Only the Client is authorized to permit copying or distribution of this Verification. 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. The observations and test/inspection results referenced in this Verification are relevant only to the sample tested/inspected. This Verification by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

# Zertifikat

# Certificate



Zertifikat Nr. *Certificate No.*  
R 50573654

Blatt *Sheet*  
0001

Ihr Zeichen *Client Reference*  
168370795

Unser Zeichen *Our Reference*  
02-XGJ-CN22QDUP 001

Ausstellungsdatum *Date of Issue*  
14.02.2023 (day/mo/yr)

**Genehmigungsinhaber License Holder**

Shenzhen SOFARSOLAR Co., Ltd.  
11/F., Gaoxingqi Technology Building  
No.67 Area, Xingdong Community,  
Xin'an Sub-district, Bao'an District  
Shenzhen City,  
Guangdong  
P.R. China

**Fertigungsstätte Manufacturing Plant**

Refer to latest revision  
of the annex list of factories

**Prüfzeichen Test Mark****Geprüft nach Tested acc. to**

IEC 62109-1:2010  
IEC 62109-2:2011  
EN 62109-1:2010  
EN 62109-2:2011

**Zertifiziertes Produkt (Geräteidentifikation)**  
**Certified Product (Product Identification)**

**Lizenzentgelte - Einheit**  
**License Fee - Unit**

PV-Inverter (Hybrid Inverter)

Type Designation

: 1) ESI 6K-S1, 2) ESI 5K-S1-A,  
3) ESI 5K-S1, 4) ESI 4.6K-S1,  
5) ESI 4K-S1, 6) ESI 3.68K-S1,  
7) ESI 3K-S1

16

Vmax PV [Vd.c.]

: 550

Isc PV [Ad.c.]

: 22.5/22.5

MPP Voltage Range [Vd.c.]

: 85-520

Max. Input Current [Ad.c.]

: 16/16

Overvoltage Category (OVC)

: II for PV

Rated Output Volt. [Va.c.]

: L+N+PE, 230

Rated Output Freq. [Hz]

: 50 / 60

Rated Output Power. [kW]

: 1) 6.0, 2) 3) 5.0, 4) 4.6,  
5) 4.0, 6) 3.68, 7) 3.0

Max. Output Current. [Aa.c.]

: 1) 30, 2) 25, 3) 22.7, 4) 20.9,  
5) 20, 6) 16, 7) 15

Power Factor

: [-0.80, 0.80]

Overvoltage Category (OVC)

: III for AC mains

continued on page 0002

16

**ANLAGE (Appendix) : 1.0**

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde und es bestätigt die Konformität des Produktes mit den oben genannten Standards und Prüfgrundlagen. Zusätzliche Anforderungen in Ländern, in denen das Produkt in Verkehr gebracht werden soll, müssen zusätzlich betrachtet werden. Die Herstellung des zertifizierten Produktes wird überwacht.  
This certificate is based on our Testing and Certification Regulation and states the conformity of the product with the standards and testing requirements as indicated above. Any additional requirements in countries where the product is going to be marketed have to be considered additionally. The manufacturing of the certified product is subject to surveillance.



**Zertifizierungsstelle**

  
A. Chen

**TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg**

http://www.tuv.com/safety E-mail: markcheck@tuv.com  
Fax: +49 911 806-3935

# Zertifikat

# Certificate



Zertifikat Nr. *Certificate No.*  
R 50573654

Blatt *Sheet*  
0002

Ihr Zeichen *Client Reference*  
168370795

Unser Zeichen *Our Reference*  
02-XGJ-CN22QDUP 001

Ausstellungsdatum *Date of Issue*  
14.02.2023 (day/mo/yr)

**Genehmigungsgeber License Holder**

Shenzhen SOFARSOLAR Co., Ltd.  
11/F., Gaoxingqi Technology Building  
No.67 Area, Xingdong Community,  
Xin'an Sub-district, Bao'an District  
Shenzhen City,  
Guangdong  
P.R. China

**Fertigungsstätte Manufacturing Plant**

Refer to latest revision  
of the annex list of factories

**Prüfzeichen Test Mark**



**Geprüft nach Tested acc. to**

IEC 62109-1:2010  
IEC 62109-2:2011  
EN 62109-1:2010  
EN 62109-2:2011

**Zertifiziertes Produkt (Geräteidentifikation)**  
**Certified Product (Product Identification)**

**Lizenzentgelte - Einheit**  
**License Fee - Unit**

PV-Inverter (Hybrid Inverter)

as page 0001 continuation

Protective Class : Class I  
Ingress Protection (IP) : IP65  
Pollution Degree (PD) : PD3  
Altitude [m] : ≤4000  
Operating Temperature [°C] : -10 to 50  
Type of Inverter : Non-isolated

**Remark(s) :**

The installation has to be carried out according to the  
attached installation instruction.

Any additional requirements in countries where the product  
is going to be marketed have to be considered additionally.

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde und es bestätigt die Konformität  
des Produktes mit den oben genannten Standards und Prüfgrundlagen. Zusätzliche Anforderungen <sup>®</sup>  
in Ländern, in denen das Produkt in Verkehr gebracht werden soll, müssen zusätzlich  
betrachtet werden. Die Herstellung des zertifizierten Produktes wird überwacht.  
This certificate is based on our Testing and Certification Regulation and states the conformity  
of the product with the standards and testing requirements as indicated above. Any additional  
requirements in countries where the product is going to be marketed have to be considered  
additionally. The manufacturing of the certified product is subject to surveillance.

**Zertifizierungsstelle**



  
A. Chen

**TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg**

http://www.tuv.com/safety E-mail: markcheck@tuv.com  
Fax: +49 911 806-3935

Anlage Fertigungsstättenliste  
/Attachment List of Factories



R 50573654 0001

1 Dongguan SOFAR SOLAR Co., Ltd.  
1F - 6F, Building E,  
No. 1 JinQi Road,  
Bihu Industrial Park, Wulian Village,  
Fenggang Town, Dongguan City  
Guangdong  
P.R. China

TÜV Rheinland®

Dieser Anhang ersetzt den Vorgänger vom/  
This annex replaces the previous annex dated

Datum / Date 14.02.2023



Zertifizierungsstelle  
/ Certification Body

Shenzhen SOFARSOLAR Co., Ltd.  
Hui Wang Certification Testing  
Engineer

Date : 14.02.2023  
Our ref. : XGJ 02  
Your ref.: 168370795

11/F., Gaoxinqi Technology  
Building,  
No.67 Area, Xingdong Community,  
Xin'an Sub-district, Bao'an  
District,

**Ref : R TÜV-Mark Approval**

Type of Equipment : Hybrid Inverter  
Model Designation : See Certificate  
Certificate No. : R 50573654 0001  
Report No. : CN22QDUP 001

Dear Hui Wang,

The above specified equipment has been tested and found to be in accordance with the relevant requirements.

Please find enclosed your certificate as specified above.

If cancellation of the certificate is submitted by 15 November in a given year, no fee will be charged for the following year.

The certificate is issued with the reservation that the license holder applies all information required in § 6 of the ProdSG related to name and address of the manufacturer or his authorized representative / importer, including their respective contact addresses on the product prior to marketing of the product in the European Economic Area. In case you have a change regarding your involved local representative for the certificate, please inform us in due time.

With kind regards,

Certification Body

  
A. Chen

Enclosure

证书的详细资料请登陆[www.certipedia.com](http://www.certipedia.com)查阅,或拨打我司客服热线800 999 3668 / 400 883 1300咨询



# CERTIFICATE

## of Conformity Low Voltage Directive 2014/35/EU

Registration No.: AN 50573667 0001

Report No.: CN22QDUP 001

**Holder:** Shenzhen SOFARSOLAR Co., Ltd.  
11/F., Gaoxinqi Technology Building,  
No.67 Area, Xingdong Community,  
Xin'an Sub-district, Bao'an District,  
Shenzhen City,  
Guangdong  
P.R. China

**Product:** PV-Inverter  
(Hybrid Inverter)

**Identification:**

Type Designation	:	ESI 6K-S1, ESI 5K-S1-A, ESI 5K-S1, ESI 4.6K-S1, ESI 4K-S1, ESI 3.68K-S1, ESI 3K-S1
Serial Number	:	SQ1025005KE229140130
Remark(s)	:	Issued in conjunction with TÜV Rheinland license R 50573654 pages 0001-0002.

This certificate of conformity is based on an evaluation of a sample of the above mentioned product. Technical Report and documentation are at the Licence Holder's disposal. This is to certify that the tested sample is in conformity with Annex I of Council Directive 2014/35/EU, referred to as the Low Voltage Directive. This certificate does not imply assessment of the series-production of the product and does not permit the use of a TÜV Rheinland mark of conformity. The holder of the certificate is authorized to use this certificate in connection with the EC declaration of conformity according to Annex IV of the Directive.

Certification Body

Date 14.02.2023



A. Chen

**TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg**

Shenzhen SOFARSOLAR Co., Ltd.  
Hui Wang, Certification Testing  
Engineer

Date : 14.02.2023  
Our ref. : XGJ 02  
Your ref. : 168370795

11/F., Gaoxinqi Technology  
Building,  
No.67 Area, Xingdong Community,  
Xin'an Sub-district, Bao'an  
District,  
Shenzhen City,  
Guangdong

**Ref : AN Certificate of Conf. Low Voltage D.**

Type of Equipment : Hybrid Inverter  
Model Designation : See Certificate  
Certificate No. : AN 50573667 0001  
Report No. : CN22QDUP 001

Dear Hui Wang,

The above specified equipment has been tested and found to be in accordance with the relevant requirements.

Please find enclosed your certificate as specified above.

If cancellation of the certificate is submitted by 15 November in a given year, no fee will be charged for the following year.

The certificate is issued with the reservation that the license holder applies all information required in § 6 of the ProdSG related to name and address of the manufacturer or his authorized representative / importer, including their respective contact addresses on the product prior to marketing of the product in the European Economic Area. In case you have a change regarding your involved local representative for the certificate, please inform us in due time.

With kind regards,

Certification Body

  
A. Chen

Enclosure

证书的详细资料请登陆[www.certipedia.com](http://www.certipedia.com)查阅,或拨打我司客服热线800 999 3668 / 400 883 1300咨询