



Version: 1.2, Updated 18.11.2022

Applicable products

This Factory's Warranty only applies to the following products, which are installed in European countries.

PRODUCT	STANDARD WARRANTY PERIOD (MONTHS)	SERVICE MODES
INVERTERS		
GRID-TIED(1.1KW~255KW)	120	Remote Technical Support Service or/ and Onsite Service
ENERGY STORAGE(ME, HYD, ESI SERIES)	60	
ACCESSORIES		
SOFARSOLAR ANTI-REVERSE POWER CONTROL(ARPC)	24	Remote Technical Support Service or/ and Onsite Service
SOFARSOLAR INTELLIGENT ANTI-REFLUX BOX(SAR-100)	24	
CT CLAMP	24	
SMART METER	24	
WIFI DONGLE	24	

*This factory warranty is a promise from SOFARSOLAR to its end users on the applicable products listed above. Subject to the trading countries/states, end users may receive an additional warranty promise (should be at least equivalent to the Factory's warranty) which is provided by SOFARSOLAR's local distributor; should any claims arise in this respect, please direct the claims to the local distributor.

Please refer to the latest version of the SOFARSOLAR limited warranty by visiting our global website via <https://sofarsolar.com/>

Warranty Period

The standard warranty period for applicable SOFARSOLAR inverters is 60 months (5 years) for Energy storage Inverters and 120 months (10 years) for Grid-tied Inverters from the warranty start date.

The Standard Warranty Period shall commence from the earlier of the following:

- (1) the date of when the first installation of the warranted product is completed, or the date of purchase on a valid purchasing invoice that end user provide.
- (2) 6 months after the date of production from Shenzhen SOFARSOLAR Co.Ltd (defined in the Serial number of the product) for circumstances where end user fails to provide a valid purchasing invoice.

Warranty Conditions

In the case of a faulty inverter during the agreed SOFARSOLAR warranty period, please report the defective inverter with a brief error description to our service hotline for registering and send your warranty card to our service department by fax/email to process the warranty claim. You may also contact your dealer (SOFARSOLAR authorized dealer or distributor) or installer if your unit is defective or faulty.

To make a claim under the warranty periods of SOFARSOLAR, you need to provide us the following information and documentation of the faulty inverter:

- 1) Product Model and serial number
- 2) A copy of the valid purchasing invoice
- 3) Fault descriptions and error IDs (where applicable)
- 4) End user and/or claimant details
- 5) Detailed information about the entire system (module, PV system diagram, installation date, etc.)
- 6) Documentation of previous claims/exchanges (if applicable)

If an inverter is faulty while it is under SOFARSOLAR warranty period, it will be:

- Repaired by SOFARSOLAR, or
- Repaired on-site, or
- Exchanged with a refurbished inverter that includes all firmware updates

If the inverter needs to be exchanged, the remainder of the warranty period will be transferred to the replacement unit, i.e. the warranty period of the original device will continue. In this event, you will not receive a new warranty card, and this replacement will be registered by SOFARSOLAR. If the remaining warranty period is less than 6 months, you will automatically receive a 6-month warranty period for the replacement unit.

The warranty includes the cost of work and material necessary to regain a faultless functioning inverter. All other costs, particularly transports, travel and accommodation cost of SOFARSOLAR personnel as well as costs of your own staff are not included in the warranty. Furthermore, claims for compensation for direct or indirect damages arising from the defective inverter are not covered by the warranty.

Faulty inverters and components should be returned to SOFARSOLAR, they must be packed in their original or equivalent packaging for transportation.

SOFARSOLAR keeps the right to arrange the warranty service for end users and to use third parties for performing warranty services.

All warranty services are free of charge only if the action is agreed with SOFARSOLAR in advance.

Scope of the Manufacturer Warranty

To provide excellent Service to SOFARSOLAR's end users, all SOFARSOLAR authorized Dealers or Distributors are requested to respond to your warranty claim. SOFARSOLAR will replace any products or parts of the product during the Warranty Period proved to be defective in design or manufacture. Any defect caused by the following situations will not be covered by the manufacturer's warranty (the Dealers or Distributors are responsible and authorized by SOFARSOLAR for the following investigation):

- 1) "Warranty Card" not being sent back to Distributor/Dealer or SOFARSOLAR
- 2) The Product has been modified, its design has been changed or parts have

been replaced by parts not approved by SOFARSOLAR

- 3) Changes have been made, or repairs been attempted by technician, without authorization from SOFARSOLAR, or serial number or seals have been removed
- 4) The product has been installed or commissioned incorrectly
- 5) You or another user have failed to comply with the safety regulations (VDE standards or equivalent)
- 6) The product has been improperly stored and damaged while being stored by the dealer or the end user
- 7) The defect is damage during transportation (including painting scratch caused by movement inside packaging during shipping). A claim for such transport damage should be made directly to the shipping company/insurance company as soon as the container/packaging is unloaded and such damage is identified
- 8) You or another user have failed to follow any/all of the user manual, the installation guide, and the maintenance regulations
- 9) The device has been used improperly or misused
- 10) Insufficient ventilation of the device
- 11) The maintenance procedures relating to the product have not been followed to an acceptable standard
- 12) The defect has been caused by force majeure (violent or stormy weather, lightning, overvoltage, fire etc.)
- 13) The damage is only cosmetic and has no impact on the functioning of the device

This warranty is without prejudice to your rights under the statutory law, including but not limited to warranty rights in relation to the seller, i.e. if applicable rectification, reduction of the price, rescission of the sale and damages.

All demands from or in connection with this warranty are subject to Chinese law, Shenzhen is the exclusive place of jurisdiction and all disputes arising from or in connection with this warranty should be submitted for arbitration to the Shenzhen court of international arbitration. This warranty is provided in addition to other rights and remedies held by a consumer at law.

Extension of the Warranty Period

For SOFARSOLAR inverters you may apply for a warranty extension during 60 months from the date of production from SOFARSOLAR by providing the serial number and copy of the warranty card of the unit. SOFARSOLAR may reject any application received which does not meet the date requirement. Extended warranty period can be purchased to 10, 15, or 20 years.

Once the purchase of the warranty extension has been processed, SOFARSOLAR will send the warranty extension certificate to the

customer confirming the extended warranty period.

Latest information about the warranty terms and conditions and local service hotline can be obtained from our website: www.sofarsolar.com

Contact us

You can directly contact our professional after-sales team:

Sofarsolar GmbH, Krämerstrasse 20, 72764 Reutlingen

Tel: +49 7121 31 767 30

Shenzhen Sofarsolar Co., Ltd.

TEL: +86-0755 3689 9945

Email: service@sofarsolar.com

Web: www.sofarsolar.eu

Version: 1.2, Updated 18.11.2022

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Contact us

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Sofarsolar GmbH, Krämerstrasse 20, 72764 Reutlingen

Tel: +49 7121 31 767 30

Shenzhen Sofarsolar Co., Ltd.

TEL: +86-0755 3689 9945

Email: service@sofarsolar.com

Web: www.sofarsolar.eu

SOFAR 15-24KTLX-G3

15 / 17 / 20 / 22 / 24 kW

THREE-PHASE DUAL MPPT



Product advantages

- Max. efficiency up to 98.6%
- Low start-up voltage, wide MPPT voltage
- Maximum DC input voltage 1100 V
- Smart string level monitoring
- Type II SPD for both DC and AC side
- Remote firmware upgrade
- 110% long-time overload ability



Model	SOFAR 15KTLX-G3	SOFAR 17KTLX-G3	SOFAR 20KTLX-G3	SOFAR 22KTLX-G3	SOFAR 24KTLX-G3
Input (DC)					
Max. input voltage	1100V				
Rated input voltage	650V				
Start-up voltage	160V				
MPPT operating voltage range	140V-1000V				
Number of MPP trackers	2				
Number of DC inputs	2/2				
Max. input MPPT current	26A/26A				
Max. input short circuit current	36A/36A				
Output (AC)					
Rated output power	15000W	17000W	20000W	22000W	24000W
Max. apparent power	16500VA	18700VA	22000VA	24200VA	26400VA
Max. output current	23.9A	27.1A	31.9A	35.1A	38.3A
Rated output voltage	3/N/PE, 230V/400Vac				
Output voltage range	310Vac-480Vac				
Rated output frequency	50/60Hz				
Output frequency range	45Hz-55Hz/55Hz-65Hz				
Active power adjustable range	0-100%				
THDi	<3%				
Power factor	1 (adjustable +/-0.8)				
Efficiency					
Max. efficiency	98.6%				
European efficiency	98.2%				
Protection					
DC reverse polarity protection	Yes				
Anti-islanding protection	Yes				
Leakage current protection	Yes				
Ground fault monitoring	Yes				
PV-array string fault monitoring	Yes				
DC switch	Yes				
SPD	PV: type II, AC: type II				
General Data					
Ambient temperature range	-30℃~+60℃				
Self-consumption at night	<1W				
Topology	Transformerless				
Degree of protection	IP65				
Allowable relative humidity range	0-100%				
Max. operating altitude	4000m				
Cooling	Smart air cooling				
Dimension (W×H×D)	520×430×198mm				
Weight	20kg	22kg		23kg	
Display	LCD & Bluetooth +APP				
Communication	RS485/Wi-Fi				
Standard	IEC/EN 61000-6-1/3, IEC/EN 61000-3-11/12, IEC 62116, IEC 61727, IEC 61683, IEC 60068-1/2/14/30, IEC/EN 62109-1/2, G99, VDE-AR-N 4105, VDE V 0126-1-1, EN 50549-1, NRS 097-2-1				

*All specifications are subject to change without notice.



ATTESTATION of conformity with European Directives

Attestation Number: 2088AB0511N080002
Product: Solar Grid-tied Inverter
Brand Name: 
Model: SOFAR 24KTLX-G3, SOFAR 15KTLX-G3
Additional Model: SOFAR 17KTLX-G3, SOFAR 20KTLX-G3, SOFAR 22KTLX-G3
Applicant: Shenzhen SOFARSOLAR Co., Ltd.
Address: 401, Building 4, AnTongDa Industrial Park, District 68, XingDong Community, XinAn Street, BaoAn District, Shenzhen, China.
Technical Characteristics: Max. DC Input Voltage: DC 1100V
Operating MPPT Voltage Range: DC 140~1000V
Max. Input Current: 26A/26A
Nominal Grid Voltage: AC 380/400V
Nominal Grid Frequency: 50/60Hz

The submitted sample of the above equipment has been tested according to following standards:

Standards	Report Number	Report date
IEC 61000-6-3:2006 + A1:2010 IEC 61000-3-11:2017 IEC 61000-3-12:2011 IEC 61000-6-1:2016	C200511N080	Dec. 10, 2020

Assistant Manager
EMC Department



Name: Glyn He
Date: Dec. 10, 2020

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Bureau Veritas Shenzhen Co., Ltd.
Information given in this document is related to the tested specimen of the described electrical sample.



Certificate of Conformity

Certificate No.: 2088AP0511N080002
Product: Solar Grid-tied Inverter
Brand Name: 
Test Model No.: SOFAR 15KTLX-G3, SOFAR 17KTLX-G3, SOFAR 20KTLX-G3,
SOFAR 22KTLX-G3, SOFAR 24KTLX-G3,
Applicant: Shenzhen SOFARSOLAR Co., Ltd.
401, Building 4, AnTongDa Industrial Park, District 68, XingDong
Community, XinAn Street, BaoAn District, Shenzhen, China
Report No.: PV200511N080-R1, HY202011015(1)

Use in accordance with regulations:

The inverters are tested for functional safety, grid protection, specified environmental influences and efficiency. For detailed information, please watch the corresponding test reports.

Applied rules and standards

IEC 60068-2-1:2007	Environmental testing – Part 2-1: Tests – Test A: Cold
IEC 60068-2-2:2007	Environmental testing – Part 2-2: Tests – Test B: Dry heat
IEC 60068-2-14:2009	Environmental testing – Part 2-14: Tests – Test N: Change of temperature
IEC 60068-2-30:2005	Environmental testing – Part 2-30: Tests – Test Db and guidance: Damp heat, cyclic (12 + 12-hour cycle)
IEC 61683:1999	Photovoltaic systems – Power conditioners – Procedure for measuring efficiency



Name: James Huang
Technical Manager/ New Energy Team
Date: 2020-11-20

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Certificate of Conformity

Certificate No.: 2088AP200511N080006

Equipment: Solar Grid-tied Inverter

Brand Name:



Test Model No.: SOFAR 15KTLX-G3, SOFAR 17KTLX-G3, SOFAR 20KTLX-G3,
SOFAR 22KTLX-G3, SOFAR 24KTLX-G3

Applicant: Shenzhen SOFARSOLAR Co., Ltd.

401, Building 4, AnTongDa Industrial Park, District 68, XingDong Community,
XinAn Street, BaoAn District, Shenzhen, China

Report No.: LD200511N080

The submitted sample of the above equipment has been tested for CE marking according to following European Directive and standards:

- **Low Voltage Directive 2014/35/EU.**

The referred test report(s) show that the product complies with standard(s) recognized as giving presumption of compliance with the essential requirements in the specified European Directive.

This verification does not imply assessment of the production of the product. The CE marking may be affixed if all relevant and effective European Directives with CE are applicable.

Applied rules and standards

EN 62109-1:2010

Safety of power converters for use in photovoltaic power systems – Part 1: General requirements

EN 62109-2:2011

Safety of power converters for use in photovoltaic power systems –
Part 2: Particular requirements for inverters



Name: James Huang
Technical Manager/ New Energy Team
Date: 2020-12-17

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Certificate of compliance

Certificate No.: 2088AP0511N080050
Equipment: Solar Grid-tied Inverter

Brand Name:



Model: SOFAR 15KTLX-G3, SOFAR 17KTLX-G3, SOFAR 20KTLX-G3,
SOFAR 22KTLX-G3, SOFAR 24KTLX-G3

Applicant: Shenzhen SOFARSOLAR Co., Ltd.
401, Building 4, AnTongDa Industrial Park, District 68, XingDong Community,
XinAn Street, BaoAn District, Shenzhen, China

Report No.: PVSP200511N080-7

Applied rules and standards

UNE 217001 IN:2015

Requirements and testing of systems to avoid energy emissions to distribution networks
Royal Decree No. 244 / 2019 of 5 April sets out the administrative, technical and economic conditions for
self generation. Annex I: systems to prevent energy emissions to the network.



Name: James Huang
Technical Manager / New Energy Team
Date: 2021-03-25

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Annex to the UNE 217001 IN certificate of compliance No. 2088AP0511N080050

Ratings..... :	SOFAR 15KTLX-G3	SOFAR 17KTLX-G3	SOFAR 20KTLX-G3	SOFAR 22KTLX-G3	SOFAR 24KTLX-G3
Input DC voltage [V]	Max. 1100Vd.c.				
MPP DC voltage range [V]	140-1000Vd.c.				
Input DC current [A].....	26,0A / 26,0A				
Isc PV [A]	36,0A / 36,0A				
Output AC voltage [V].....	380/400Va.c., 3W+N+PE; 50/60Hz				
Rated Output AC current [A].....	21,7	24,6	29,0	31,9	34,8
Max. Output AC current [A]	23,9	27,1	31,9	35,1	38,3
Rated Output power [kW]	15,0	17,0	20,0	22,0	24,0
Max Output power [kVA].....	16,5	18,7	22,0	24,2	26,4

General information of external current transducer/ power meter	
Power meter	
Model	DTSU666
Electrical parameter	
Regulated working voltage range Phase to neutral [Vac]	0,9-1,1Un
Support network Single Phase / three Phase.....	Three Phase
self -consumption	Max.1,5W
communication	
Supported communication interfaces	RS485
Communication protocol.....	ModBus
Reaction time.....	1s



Annex to the UNE 217001 IN certificate of compliance No. 2088AP0511N080050

General information of external current transducer/ power meter	
Current transducer	
Model..... :	HY94C5-200
Rate Primary current,RMS,I _{pr} :	I _{pn} = 200 A
Rated secondary current,RMS,I _{sr} :	I _{out} = 5 A
Rate frequency	50/60Hz
Working humidity	≤90%RH
Max cable outer diameter(mm)	Φ24
Weight	90g
R.m.s.voltage for AC isolation test :	2kV(@50Hz,1min)
Altitude	≤1000m
Accuracy class@RL≤20 Ω	0,5%
Rate Overload..... :	1,2 x I _{pr}
Highest voltage for equipment..... :	720V
Connecting wires of secondary winding	RVB 2*1.5mm ² Red & Black (UL2468-16A)
Working temperature..... :	-30°C ...+75°C
Storage temperature	-40°C ...+85°C
Model..... :	AKH-0.66-K-Φ24
Rated operation Voltage	AC 0.66kV
Rate frequency	50-60Hz
Working temperature..... :	-30°C ...+70°C
Height above sea level..... :	≤3000m
Power frequency withstand voltage:	3000v/1min 50Hz
Max cable outer diameter(mm)	Φ24
Precision degree..... :	1

Description of the vector system to depict test results:

The regarded system of the voltage and current vectors is the generator reference system:

- If the inverter feeds to the grid the active power is measured with positive sign.
- If the load consumes from grid the active power is measured with negative sign.

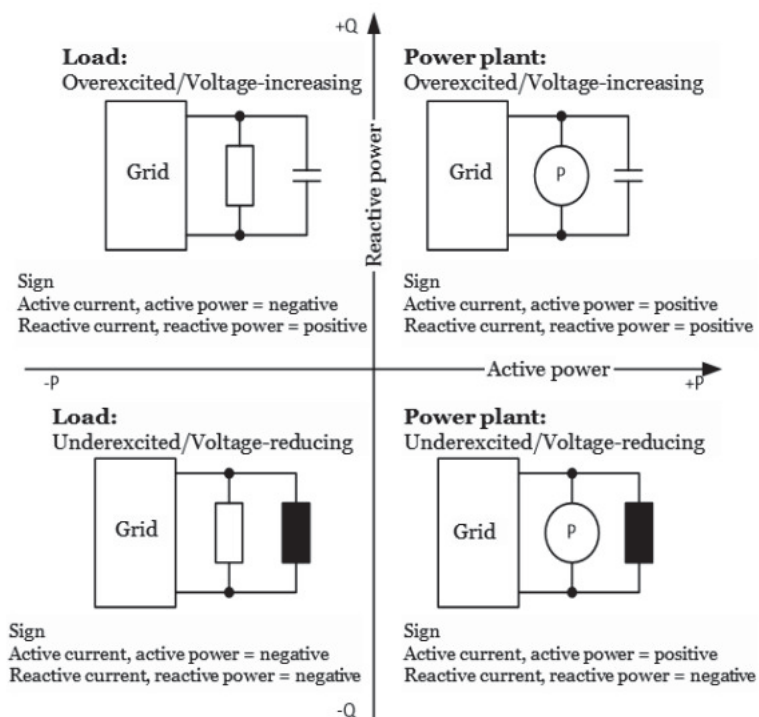


Figure 1 – Generator reference arrow system



Annex to the UNE 217001 IN certificate of compliance No. 2088AP0511N080050

General product information:

The Solar Grid-tied Inverter converts DC voltage into AC voltage.

The DC input of Solar Grid-tied Inverter can be supplied from PV array.

The Solar Grid-tied Inverter is a three-phase type.

The unit is providing EMC filtering at the output toward mains. The unit does not provide galvanic separation from input to output (transformerless). The output is switched off redundant by the high power switching bridge and a two relays. This assures that the opening of the output circuit will also operate in case of one error.

Description of the electrical circuit

The internal control is redundant built. It consists of Microcontroller DSP (U30) and DSP (U23).

The Main DSP(U30) control the relays by switching signals; measures the PV voltage, PV current, Bus voltage, grid voltage, frequency, AC current with injected DC and the array insulation resistance to ground. In addition it tests the Current Transformers and the RCMU circuit before each start up.

The slave DSP (U23) is measures the grid voltage, grid frequency, DCI and residual current, also can switch off the relays independently, and communicate with the Main DSP (U30) each other.

The current is measured by a Current Transformer. The AC current signal and the injected DC current signal are sent to the Main DPU (U30). The Main DSP (U30) tests and calibrates before each start up all Current Transformers.

The unit provides two relays in series in all output conductors. When single fault applied to one relay, alarm an error code in display panel, another redundant relay provides basic insulation maintained between the PV array and the mains. All the relays are tested before each start up.

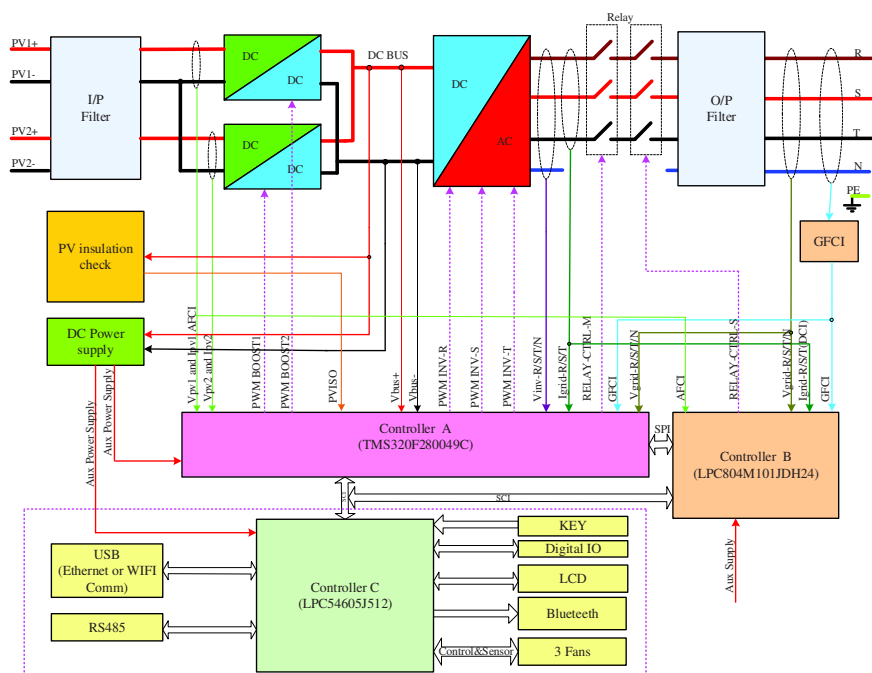


Figure 2 – Block diagram



Annex to the UNE 217001 IN certificate of compliance No. 2088AP0511N080050

Application Scenarios:

Scheme of Single machine photovoltaic power generation system: Solar inverter + Energy Meter + Current Transformer.

The smart Energy Meter is used to realize power restriction for household energy management. It adopts RS485 communication, which can realize the electrical quantity measurement, energy metering function and in respond to the upper host for the real-time data query.

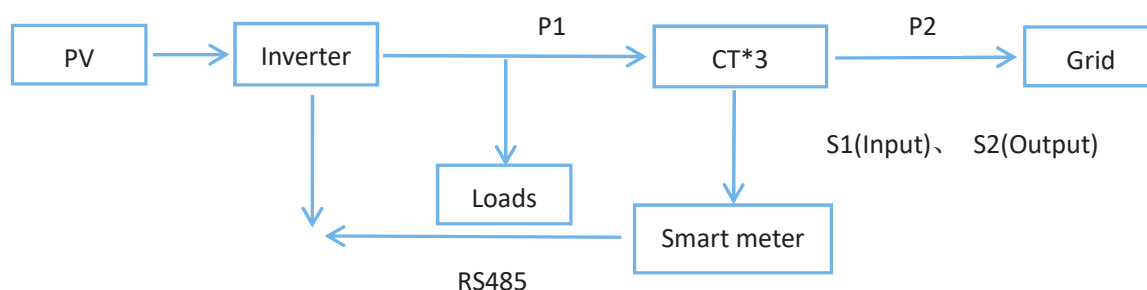


Figure 3 (Use CT)

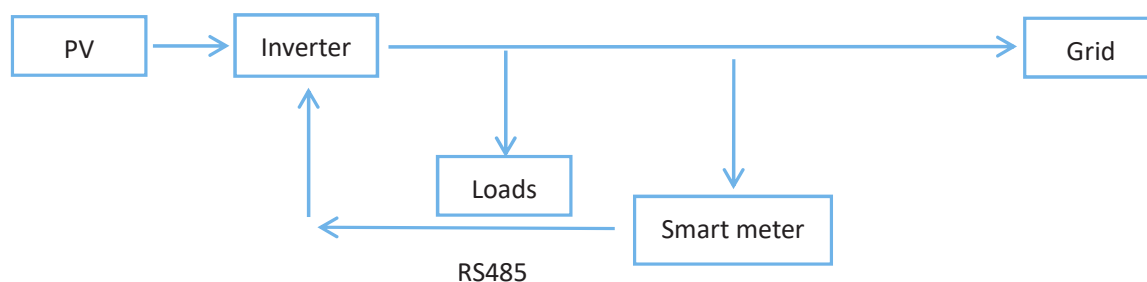


Figure 4 (Direct connection)



Certificate of Conformity

Certificate No.: 2088AP0511N080001
Equipment: Solar Grid-tied Inverter
Brand Name: 
Test Model No.: SOFAR 15KTLX-G3, SOFAR 17KTLX-G3, SOFAR 20KTLX-G3,
SOFAR 22KTLX-G3, SOFAR 24KTLX-G3,
Applicant: Shenzhen SOFARSOLAR Co., Ltd.
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Community, XinAn Street, BaoAn District, Shenzhen, China
Report No.: PV200511N080-1-R1, PV200511N080-2-R1

Use in accordance with regulations:

Automatic disconnection device with three-phases mains surveillance in accordance with IEC 61727:2004 for photovoltaic systems with a three-phases parallel coupling via an inverter in the public mains supply. The automatic disconnection device is an integral part of the aforementioned inverters.

At the time of issue of this certificate the safety concept of an aforementioned representative product corresponds to the valid safety specifications for the specified use in accordance with regulations.

Applied rules and standards

IEC 61727:2004	Characteristics of the utility interface
IEC 62116:2014	Islanding prevention measures for utility-interconnected photovoltaic inverters



Name: James Huang
Technical Manager/ New Energy Team
Date: 2020-11-20

This document shall not be reproduced, except in full, without the written approval of
Bureau Veritas Shenzhen Co., Ltd. Dongguan Branch.
Information given in this document is related to the tested specimen of the described electrical sample.

VERIFICATION OF RED COMPLIANCE

Verification No.: GZCR2109021000PVV
 Applicant: Shenzhen SOFARSOLAR Co., Ltd.
 Address of Applicant: 401, Building 4, Antongda Industrial Park, District 68, Xingdong Community, Xinan Street, Baoan District, Shenzhen, China
 Manufacturer: Shenzhen SOFARSOLAR Co., Ltd.
 Address of Manufacturer: 401, Building 4, Antongda Industrial Park, District 68, Xingdong Community, Xinan Street, Baoan District, Shenzhen, China
 Factory: Dongguan SOFAR SOLAR Co., Ltd.
 Address of Factory: 1F - 6F, Building E, No. 1 JinQi Road, Bihu Industrial Park, Wulian, Village, Fenggang Town, Dongguan City
 Product Description: PV inverter
 Model No.: SOFAR 24KTLX-G3, SOFAR 15KTLX-G3, SOFAR 17KTLX-G3, SOFAR 20KTLX-G3, SOFAR 22KTLX-G3, SOFAR 15KTLX-G3-A, SOFAR 20KTLX-G3-A, SOFAR 24KTLX-G3-A

Trade Mark:



Sufficient samples of the product have been tested and found to be in conformity with

Test Standards: EN 61000-6-3: 2007+A1:2011, EN IEC 61000-6-1: 2019
 EN 301 489-1 V2.2.3, EN 301 489-17 V3.2.4
 EN 300 328 V2.2.2, EN 62479: 2010

As shown in the

Test Report Number(s): GZCR210902100001, GZCR210902100002
 GZCR210902100003, GZCR210902100004

Based on a review of the test report(s) detailed above, this apparatus meets the requirements of above standards. The product is in conformity with the essential requirements of Article 3.1 (a) the protection of the health, 3.1 (b) an adequate level of electromagnetic compatibility and 3.2 effective use of the spectrum of 2014/53/EU. The CE mark as shown below can be used, under the responsibility of the manufacturer, after completion of an EU Declaration of Conformity and compliance with all relevant EU Directives.



Kobe Jian
EMC Laboratory Manager



Date: 2021-10-26

Zertifikat

Certificate



Zertifikat Nr. *Certificate No.*
R 50531680

Blatt *Sheet*
0001

Ihr Zeichen <i>Client Reference</i>	Unser Zeichen <i>Our Reference</i>	Ausstellungsdatum <i>Date of Issue</i>
168339913	02-Kese-CN21EUBL 001	21.02.2022 (day/mo/yr)

Genehmigungsinhaber *License Holder*

Shenzhen SOFARSOLAR Co., Ltd.
11/F., Gaoxing 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 (Grid-connected PV Inverter)

Type Designation: SOFAR 15KTLX-G3, SOFAR 15KTLX-G3-A,
SOFAR 17KTLX-G3, SOFAR 20KTLX-G3,
SOFAR 20KTLX-G3-A, SOFAR 22KTLX-G3,
SOFAR 24KTLX-G3, SOFAR24KTLX-G3-A

17

Vmax PV [Vd.c.] : 1100
Isc PV [Ad.c.] : 36/36
MPPT Full Power Voltage Range[Vd.c.] : 420-850, 420-850,
450-850, 480-850, 480-850,
510-850, 540-850, 540-580

Max. Input Current [Ad.c.] : 26/26
Overvoltage Category (OVC) : II for PV Side
Rated Output Volt. [Va.c.] : 3/N/PE, 220/230
Rated Output Freq. [Hz] : 50/60
Rated Output Power. [kW] : 15, 15, 17, 20, 20,
22, 24, 24

Max. Output Current. [Aa.c.] : 23.9, 23.9, 27.1, 31.9,
31.9, 35.1, 38.3, 38.3

Power Factor : 1 default(+/- 0.8 adjustable)
Overvoltage Category (OVC) : III for AC mains

continued on page 0002

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.

TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg

http://www.tuv.com/safety E-mail: markcheck@tuv.com
Fax: +49 221 806-3935



A. Chen

Zertifikat

Certificate



Zertifikat Nr. *Certificate No.*
R 50531680

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0002

Ihr Zeichen <i>Client Reference</i>	Unser Zeichen <i>Our Reference</i>	Ausstellungsdatum <i>Date of Issue</i>
168339913	02-Kese-CN21EUBL 001	21.02.2022 (day/mo/yr)

Genehmigungsinhaber *License Holder*

Shenzhen SOFARSOLAR Co., Ltd.
11/F., Gaoxing 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 (Grid-connected PV Inverter)

as page 0001 continuation

Protective Class : Class I
Ingress Protection (IP) : IP65
Pollution Degree (PD) : PD3
Altitude [m] : 2000
Operating Temperature [°C] : -30 to 60 (>45 derating)
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.

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.

TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg

<http://www.tuv.com/safety> E-mail: markcheck@tuv.com
Fax: +49 221 806-3935

A. Chen

Anlage Fertigungsstättenliste
/Attachment List of Factories



R 50531680 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

TÜVRheinland



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

Zertifizierungsstelle
/ Certification Body

Datum / Date 21.02.2022

A handwritten signature in blue ink, appearing to read 'A. Chen', written over a horizontal line.

A. Chen

Shenzhen SOFARSOLAR Co., Ltd.

Date : 21.02.2022

Our ref. : Kese 02

Your ref.: 168339913

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

Ref : R TÜV-Mark Approval

Type of Equipment : Grid-connected PV Inverter

Model Designation : See Certificate

Certificate No. : R 50531680 0001

Report No. : CN21EUBL 001

Dear Ladies and Gentlemen,

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

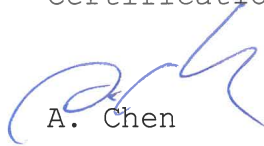
Please find enclosed your certificate as specified above.

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查阅,或拨打我司客服热线800 999 3668 / 400 883 1300咨询



Shenzhen BALUN Technology Co., Ltd.

Room 104, 204, 205, Building 1, No. 6, Industrial South Road, Songshan Lake District, Dongguan, Guangdong, China

VERIFICATION OF CONFORMITY

Certificate No.: BL-DG20A0099D01

Applicant: Shenzhen SOFARSOLAR Co., Ltd.

Address: 401, Building 4, AnTongDa Industrial Park, District 68, XingDong Community, XinAn Street, BaoAn District, Shenzhen, China.

Manufacture: Shenzhen SOFARSOLAR Co., Ltd.

Address: 401, Building 4, AnTongDa Industrial Park, District 68, XingDong Community, XinAn Street, BaoAn District, Shenzhen, China.

Product: Solar Grid-tied Inverter

Brand name: 

Model name: SOFAR 15KTLX-G3, SOFAR 17KTLX-G3, SOFAR 20KTLX-G3, SOFAR 22KTLX-G3, SOFAR 24KTLX-G3

The submitted sample of the above product has been tested according with below Standard(s) :

Applied Standards:	Report No.:
IEC 60255-27:2013	BL-DG20A0099-B01



SOFAR 25-50KTLX-G3

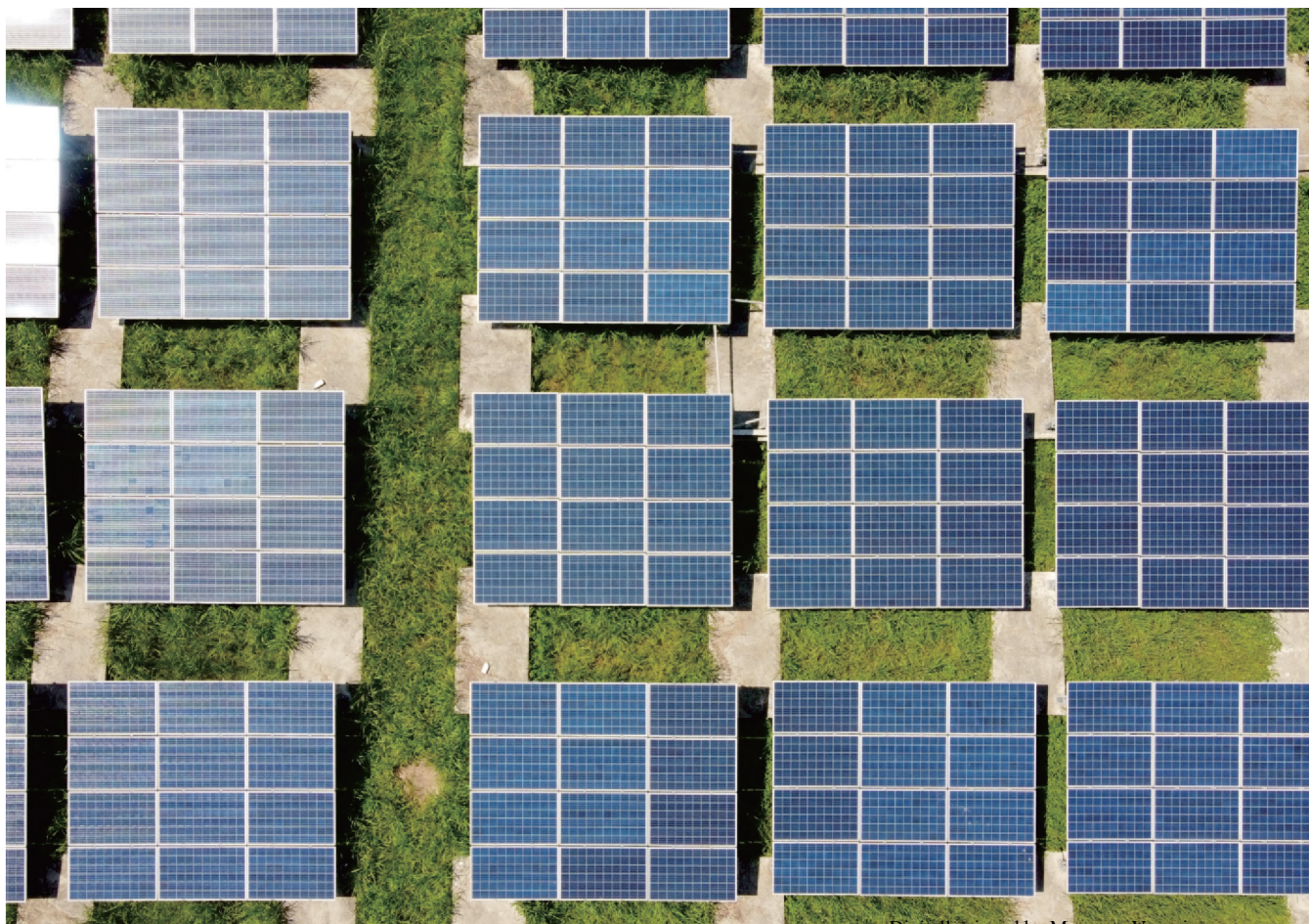
25 / 30 / 33 / 36 / 40 / 45 / 50 kW

THREE-PHASE THREE TO FOUR MPPTS



Product advantages

- Max. efficiency up to 98.80%
- Up to 4 MPPTs with DC overload capability (up to 150%)
- Type II SPD for both DC and AC side
- Prolonged AC overload capability (110%)
- Low start-up voltage, wide MPPT voltage range
- Compatible with 500 W+ modules
- I-V curve scanning function



OV2024051606

Digitally signed by Maracuița Veronica
Date: 2024.10.14 16:14:59 EEST
Reason: MoldSign Signature
Location: Moldova

MOLDOVA EUROPEANĂ



Model	SOFAR 25KTLX-G3	SOFAR 30KTLX-G3	SOFAR 33KTLX-G3	SOFAR 36KTLX-G3	SOFAR 40KTLX-G3	SOFAR 45KTLX-G3	SOFAR 50KTLX-G3
Input (DC)							
Max. input voltage	1100V						
Rated input voltage	620V						
Start-up voltage	200V						
MPPT operating voltage range	180V-1000V						
Number of MPP trackers	3				4		
Number of DC inputs	2 for each MPPT						
Max. input MPPT current	3*40A				4*40A		
Max. input short circuit current	3*50A				4*50A		
Output (AC)							
Rated output power	25000W	30000W	33000W	36000W	40000W	45000W	50000W
Max. apparent power	28000VA	34000VA	37000VA	40000VA	44000VA	50000VA	55000VA
Max. output current	42.4A	51.5A	56A	60.6A	66.7A	75.8A	83.3A
Rated output voltage	3/N/PE, 230/400Vac						
Output voltage range	310Vac-480Vac						
Rated output frequency	50/60Hz						
Output frequency range	45Hz-55Hz/55Hz-65Hz						
Active power adjustable range	0-100%						
THDi	<3%						
Power factor	1 (adjustable +/-0.8)						
Efficiency							
Max. efficiency	98.6%				98.8%		
European efficiency	98.2%				98.2%		
Protection							
DC reverse polarity protection	Yes						
Anti-islanding protection	Yes						
Leakage current protection	Yes						
Ground fault monitoring	Yes						
PV-array string fault monitoring	Yes						
DC switch	Yes						
SPD	PV: type II, AC: type II						
General Data							
Ambient temperature range	-30℃~+60℃						
Self-consumption at night	<3W						
Topology	Transformerless						
Degree of protection	IP65						
Allowable relative humidity range	0-100%						
Max. operating altitude	4000m						
Cooling	Smart air cooling						
Dimension (W×H×D)	585×480×220mm						
Weight	36kg				37kg		
Display	LCD & Bluetooth +APP						
Communication	RS485/Wi-Fi						
Standard	IEC/EN 61000-6-1/2/3/4, IEC 62116, IEC 61727, IEC 61683, IEC 60068-1/2/14/30, IEC/EN 62109-1/2, G99, VDE-AR-N 4105, VDE V 0126-1-1, EN 50549-1, NRS 097-2-1, UNE 217002-2020						

*All specifications are subject to change without notice.

CERTIFICATE

Management system as per ISO 9001 : 2015

(idt GB/T 19001-2016)

The Certification Body TÜV NORD CERT GmbH hereby confirms as a result of the audit, assessment and certification decision according to ISO/IEC 17021-1: 2015, that the organization

Shenzhen SOFARSOLAR Co., Ltd.

**11/F, Gaoxingqi Science and Technology Building, District 67, Xingdong
Community, Xin'an Street, Bao'an District, Shenzhen City, Guangdong
Province, P. R. China**

Unified Social Credit Code: 9144030007111227X8

operates a management system in accordance with the requirements of ISO9001: 2015 and will be assessed for conformity within the 3 year term of validity of the certificate.

scope

**R & D and Sales of Solar Inverter, Energy Storage Battery
(without Lead-Acid Battery) and Energy Storage Inverter;
Sales of Power Supply Systems for Communication Data
Centers and Related Management Activities**

Certificate Registration No. 44 100 2384 0049

Audit Report No. 2.5-CN7441/2023

Valid from 2023-11-13

Valid until 2026-11-12

Initial Certification 2023-11-13



Certification Body
at TÜV NORD CERT GmbH

Printing Address:
TÜV NORD (Hangzhou) Co., Ltd. Shanghai Branch
Registered Address: Room 1537, No.1256, 1258,
WanRong Road, Jing'an District, Shanghai, China, 200436
Office Address: Building 5, No.1, Lane 288, Kangning Road,
Jing'an District, Shanghai 200443 China
Tel: (+8621) 33196200

Issue Date: 2023-11-13

Validity can be verified at the official Website of Certification and Accreditation Administration of the People's Republic of China:
www.cnca.gov.cn

TÜV NORD CERT GmbH

Am TÜV 1

45307 Essen

www.tuev-nord-cert.com



CERTIFICATE

Management system as per ISO 14001: 2015

(idt GB/T 24001-2016)

The Certification Body TÜV NORD CERT GmbH hereby confirms as a result of the audit, assessment and certification decision according to ISO/IEC 17021-1: 2015, that the organization

Guangdong Sofar Smart Solar Technology Co., Ltd.

No.1 Shiquanling West Road, Chenjiang Street, Zhongkai High-Tech Zone,
Huizhou City, Guangdong Province, P. R. China

operates a management system in accordance with the requirements of ISO14001: 2015 and will be assessed for conformity within the 3 year term of validity of the certificate.

scope

Manufacture of Solar Inverter, Energy Storage Inverter; Manufacture and Sales of Energy Storage Converter

Certificate Registration No. 44 104 2384 0051

Audit Report No. 2.5-CN7447/2023

Valid from 2023-12-05

Valid until 2026-12-04

Initial Certification 2023-12-05



Certification Body
at TÜV NORD CERT GmbH

Printing Address:
TÜV NORD (Hangzhou) Co., Ltd. Shanghai Branch
Registered Address: Room 1537, No.1256, 1258,
WanRong Road, Jing'an District, Shanghai, China, 200436
Office Address: Building 5, No.1, Lane 288, Kangning Road,
Jing'an District, Shanghai 200443 China
Tel: (+8621) 33196200

Issue Date: 2023-12-05

Validity can be verified at the official Website of Certification and Accreditation Administration of the People's Republic of China:
www.cnca.gov.cn

TÜV NORD CERT GmbH

Am TÜV 1

45307 Essen

www.tuev-nord-cert.com



CERTIFICATE

Management system as per ISO 45001 : 2018

(idt GB/T 45001-2020)

The Certification Body TÜV NORD CERT GmbH hereby confirms as a result of the audit, assessment and certification decision according to ISO/IEC 17021-1: 2015, that the organization

Shenzhen SOFARSOLAR Co., Ltd.

**11/F, Gaoxingqi Science and Technology Building, District 67,
Xingdong Community, Xin'an Street, Bao'an District, Shenzhen City,
Guangdong Province, P. R. China**

operates a management system in accordance with the requirements of ISO45001: 2018 and will be assessed for conformity within the 3 year term of validity of the certificate.

scope

**R & D and Sales of Solar Inverter, Energy Storage Battery
(without Lead-Acid Battery) and Energy Storage Inverter;
Sales of Power Supply Systems for Communication Data
Centers and Related Management Activities**

Certificate Registration No. 44 126 2384 0049

Audit Report No. 2.5-CN7441/2023

Valid from 2023-11-13

Valid until 2026-11-12

Initial Certification 2023-11-13



Certification Body
at TÜV NORD CERT GmbH

Printing Address:
TÜV NORD (Hangzhou) Co., Ltd. Shanghai Branch
Registered Address: Room 1537, No.1256, 1258,
WanRong Road, Jing'an District, Shanghai, China, 200436
Office Address: Building 5, No.1, Lane 288, Kangning Road,
Jing'an District, Shanghai 200443 China
Tel: (+8621) 33196200

Issue Date: 2023-11-13

Validity can be verified at the official Website of Certification and Accreditation Administration of the People's Republic of China:
www.cnca.gov.cn

TÜV NORD CERT GmbH

Am TÜV 1

45307 Essen

www.tuev-nord-cert.com



CERTIFICATE

of conformity with the following European Directives

Low Voltage Directive 2014/35/EU

This certifies that below described products of the applicant:

Shenzhen SOFARSOLAR Co., Ltd.

401, Building 4, AnTongDa Industrial Park, District 68, XingDong Community, XinAn Street, BaoAn District, Shenzhen, China.

comply to the essential requirements of the above mentioned European Directive and the following standards, taking into account the German national deviations:

Product(s): Solar Grid-tied Inverter

Model type(s): SOFAR 25KTLX-G3, SOFAR 30KTLX-G3, SOFAR 30KTLX-G3-A, SOFAR 33KTLX-G3, SOFAR 36KTLX-G3, SOFAR 40KTLX-G3, SOFAR 45KTLX-G3, SOFAR 50KTLX-G3, SOFAR 40KTLX-G3-HV, SOFAR 50KTLX-G3-HV

Standard(s): EN 62109-1:2010, EN 62109-2:2011

This certificate of conformity is based on the evaluation of samples of the product. It does not imply an assessment of the production and it does not permit the use of a mark of conformity or of a safety mark of the TÜV NORD CERT GmbH. The holder of this certificate may use this Certificate together with his EC-Declaration of Conformity.

Registered no.: 44 799 21 406749 - 124R1

Report no.: 492011831.002

File no.: PVP07047/21B-01



TÜV NORD CERT GmbH
Certification Body
Balance of System (BOS) for Photovoltaics

Essen, 2021-11-08

TÜV NORD CERT GmbH

Langemarckstraße 20 45141 Essen

www.tuev-nord-cert.de

prodcert@tuev-nord.de

Please also pay attention to the information stated overleaf.



The CE marking may be affixed on the product if all relevant and effective Directives are complied with.





Dongguan BALUN Testing Technology Co., Ltd.

Room 104, 204, 205, Building 1, No. 6, Industrial South Road, Songshan Lake District, Dongguan, Guangdong, China

VERIFICATION OF CONFORMITY

Certificate No.: BL-DG2480068D02

Applicant: Shenzhen SOFARSOLAR Co., Ltd.

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

Manufacture: Shenzhen SOFARSOLAR Co., Ltd.

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

Product: Solar Grid-tied Inverter

Brand name: **SOFAR**

Model name: SOFAR 20KTLX-G3, SOFAR 25KTLX-G3, SOFAR 30KTLX-G3, SOFAR 30KTLX-G3-A, SOFAR 33KTLX-G3, SOFAR 36KTLX-G3, SOFAR 40KTLX-G3, SOFAR 45KTLX-G3, SOFAR 50KTLX-G3, SOFAR 40KTLX-G3-HV, SOFAR 50KTLX-G3-HV

The submitted sample of the above product has been tested according with below Standard(s) used for showing compliance with the essential requirements in the **EMC directive (2014/30/EU)** :

Applied Standards:	Report No.:
EN IEC 61000-6-1:2019, EN IEC 61000-6-2:2019, EN 61000-6-3:2007+A1:2011+AC:2012, EN IEC 61000-6-4:2019	BL-DG2480068-402



Tel: +86 769 22212330

Email: qc@baluntek.com

Certificate of Conformity

By the product certificate number

No. 2621/0362-3-E1-C-CER

Issued to:

License 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 Province, P.R. China

Trademark:



Manufacturer:

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



It is certified that the product:

Type of generator: Solar Grid-tied Inverter

Models: SOFAR 25KTLX-G3 / SOFAR 30KTLX-G3 / SOFAR 30KTLX-G3-A / SOFAR 33KTLX-G3 / SOFAR 36KTLX-G3 /
SOFAR 40KTLX-G3 / SOFAR 45KTLX-G3 / SOFAR 50KTLX-G3 / SOFAR 40KTLX-G3-HV / SOFAR 50KTLX-G3-HV

Technical Data: Rated Active Power

See page 2

Rated Voltage

See page 2

Rated Frequency

50 Hz

Firmware version

V000001

Number of phases

See page 2

Isolation transformer

NO

Is in compliance with standard:

- 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.

This certificate just covers PV inverters models certified below above-mentioned references to be installed in PV generating of type plants **B** to be connected to a LV distribution network.

The above-mentioned product is certified according to the standard EN 50549-1:2019 and is valid to be installed in PV generating of type plants B to be connected to a LV distribution network. The relation between this European Standard with the relevant Article of COMMISSION REGULATION (EU) 2016/631 (NC RfG) is considered as it is indicated in the annex H of the standard EN 50549-1:2019.

Requirements for interface protection according to the clause 4.9.3 of the above-mentioned standard have been checked verifying upper and lower thresholds of the voltage and frequency configuration ranges which are required in the certified standard. This ensures the compliance with interface protection settings which adjusted inside of these configuration ranges, as for example, interface protection settings needed in **Greece**.

The above-mentioned generating unit is certified according to the SGS internal procedure PE.T-ECPE-53 based on the requirements of the UNE-EN ISO / IEC 17065..

First issued on: 17th of January 2022.

This certificate is valid until: 17th of January 2027.

Madrid, 23rd of March 2022

Daniel Arranz Muñoz
Certification Manager



Full list of product references and nominal characteristics:

Model	SOFAR 25KTLX-G3	SOFAR 30KTLX-G3	SOFAR 30KTLX-G3-A	SOFAR 33KTLX-G3	SOFAR 36KTLX-G3
DC Input					
Max. DC voltage	1100 V				
Rated input voltage	620 V				
MPPT voltage range	180 V-1000 V				
AC Output					
Rated AC Output power	25 kW	30 kW	29.9 kW	33 kW	36 kW
Max. AC Output power	28 kVA	34 kVA	29.9 kVA	37 kVA	40 kVA
Nominal grid voltage	3/N/PE, 230V/400V				
Nominal output frequency	50Hz				

Model	SOFAR 40KTLX-G3	SOFAR 45KTLX-G3	SOFAR 50KTLX-G3	SOFAR 40KTLX-G3-HV	SOFAR 50KTLX-G3-HV
DC Input					
Max. DC voltage	1100 V				
Rated input voltage	620 V			725 V	
MPPT voltage range	180 V~1000 V				
AC Output					
Rated AC Output power	40 kW	45 kW	50 kW	40 kW	50 kW
Max. AC Output power	44 kVA	50 kVA	55 kVA	44 kVA	55 kVA
Nominal grid voltage	3/N/PE, 230 V/400 V			3P/PE, 277 V/480 V	
Nominal output frequency	50 Hz				



Certificate of Conformity

By the product certificate number / Par le numéro du certificat du produit

No. 2621/0362-3-CER/E1

Issued to / Délivré à:

License holder /
Titulaire de la licence:

Shenzhen SOFARSOLAR Co., Ltd.

401, Building 4, AnTongDa Industrial Park, District 68, XingDong Community, XinAn Street, BaoAn District. Shenzhen City, Guangdong Province, P.R. China.

Trademark / Marque
déposée:

SOFAR

Manufacturer /
Fabricant:

Dongguan SOFAR SOLAR Co., Ltd.

1F – 6F, Building E, No.1 JinQi Road, Bihu Industrial Park. Wulian Village, Fenggang Town, Dongguan City, Guangdong Province, P.R. China.

It is certified that the product / Il est certifié que le produit:

Type of generator / Type de génératrice **PV Inverter**

Models / Modèles: **SOFAR 25KTLX-G3 / SOFAR 30KTLX-G3 / SOFAR 30KTLX-G3-A / SOFAR 33KTLX-G3 / SOFAR 36KTLX-G3 / SOFAR 40KTLX-G3 / SOFAR 45KTLX-G3 / SOFAR 50KTLX-G3 / SOFAR 40KTLX-G3-HV / SOFAR 50KTLX-G3-HV**

Technical Data /
Données techniques:

Rated Active Power / Puissance active nominale

See page 2 / Voir page 2

Rated Voltage / Tension nominale

See page 2 / Voir page 2

Rated Frequency / Fréquence nominale

50 Hz

Firmware version / Version du firmware

V000001

Number of phases / Nombre de phases

See page 2 / Voir page 2

Isolation transformer / Transformateur d'isolement

NO / Non

Is in compliance with standard / Est conforme à la norme:

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. / "Exigences relatives aux centrales de production à raccorder en parallèle aux réseaux de distribution" - Partie 1: Raccordement à un réseau de distribution BT - Centrales jusqu'au type B inclus.

This certificate just covers PV inverters models certified below above-mentioned references to be installed in PV generating of type plants B to be connected to a LV distribution network. / Ce certificat couvre uniquement les modèles d'onduleurs PV certifiés selon les références mentionnées ci-dessus, à installer dans des centrales PV de type B à connecter à un réseau de distribution BT.

The above-mentioned product is certified according to the standard EN 50549-1:2019 and is valid to be installed in PV generating of type plants B to be connected to a LV distribution network. The relation between this European Standard with the relevant Article of COMMISSION REGULATION (EU) 2016/631 (NC RfG) is considered as it is indicated in the annex H of the standard EN 50549-1:2019. / Le produit susmentionné est certifié conformément à la norme EN 50549-1 : 2019 et est valable pour être installé dans des centrales PV de type B à raccorder à un réseau de distribution MT. La relation entre cette norme européenne et l'article pertinent du RÈGLEMENT (UE) 2016/631 DE LA COMMISSION (NC RfG) est considérée comme indiquée dans l'annexe H de la norme EN 50549-1:2019.

The above-mentioned generating unit is certified according to the SGS internal procedure PE.T-ECPE-53 based on the requirements of the UNE-EN ISO / IEC 17065. / L'unité de production susmentionnée est certifiée conformément à la procédure interne de SGS PE.T-ECPE-53 basée sur les exigences de la norme UNE-EN ISO / IEC 17065.

First issued on: 17th January 2022. / Première émission le: 17 janvier 2022.

This certificate is valid until: 17th January 2027. / Ce certificat est valable jusqu'au: 17 janvier 2027..

Madrid, 20th June 2023

Daniel Arranz Muñoz
Certification Manager



Model	SOFAR 25KTLX-G3	SOFAR 30KTLX-G3	SOFAR 30KTLX-G3-A	SOFAR 33KTLX-G3	SOFAR 36KTLX-G3
DC Input					
Max. DC voltage	1100 V				
Rated input voltage	620 V				
MPPT voltage range	180 V-1000 V				
AC Output					
Rated AC Output power	25 kW	30 kW	29.9 kW	33 kW	36 kW
Max. AC Output power	28 kVA	34 kVA	29.9 kVA	37 kVA	40 kVA
Nominal grid voltage	3/N/PE, 230V/400V				
Nominal output frequency	50Hz				
Model	SOFAR 40KTLX-G3	SOFAR 45KTLX-G3	SOFAR 50KTLX-G3	SOFAR 40KTLX-G3-HV	SOFAR 50KTLX-G3-HV
DC Input					
Max. DC voltage	1100 V				
Rated input voltage	620 V			725 V	
MPPT voltage range	180 V~1000 V				
AC Output					
Rated AC Output power	40 kW	45 kW	50 kW	40 kW	50 kW
Max. AC Output power	44 kVA	50 kVA	55 kVA	44 kVA	55 kVA
Nominal grid voltage	3/N/PE, 230 V/400 V			3P/PE, 277 V/480 V	
Nominal output frequency	50 Hz				



Certificado de Conformidad

Por medio del certificado de producto número / By the product certificate number

N° 2621/0362-4-E1-A-CER/E1

Emitido a / Issued to:

Titular del certificado /
License holder:

Shenzhen SOFARSOLAR Co., Ltd.
401, Building 4, AnTongDa Industrial Park, District 68, XingDong
Community, XinAn Street, BaoAn District. Shenzhen City, Guangdong
Province, P.R. China



Marca / Trademark



Fábrica / Manufacturer

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

Se certifica que el producto: / It is certified that the product:

Tipo de aparato / Type of product: **Solar Grid-tied Inverter**

Modelos / Models:

**SOFAR 25KTLX-G3 / SOFAR 30KTLX-G3 / SOFAR 30KTLX-G3-A / SOFAR 33KTLX-G3 /
SOFAR 36KTLX-G3 / SOFAR 40KTLX-G3 / SOFAR 45KTLX-G3 /
SOFAR 50KTLX-G3 / SOFAR 40KTLX-G3-HV / SOFAR 50KTLX-G3-HV**

Datos técnicos /

Rated characteristics:

Potencia nominal / Rated Power

Ver página 2 / See page 2

Tensión nominal / Rated Voltage

Ver página 2 / See page 2

Frecuencia nominal / Rated Frequency

50 Hz

Versión Firmware / Firmware version

V000001

Número de fases / Number of phases

Ver página 2 / See page 2

Transformador de aislamiento / Isolation transformer

NO

Está en cumplimiento con la norma / Is in compliance with the standard:

- **UNE 217002: 2020** Inversores para conexión a la red de distribución. Ensayos de los requisitos de inyección de corriente continua a la red, generación de sobretensiones y sistema de detección de funcionamiento en isla

Está en cumplimiento con los requisitos de la norma y regulación / Is in compliance with the requirements of standard and regulation:

- **IEC 62116:2014** "Inversores fotovoltaicos conectados a la red de las compañías eléctricas. Procedimiento de ensayo para las medidas de prevención de formación de islas en la red"
- **Anexo I, apartado 2.3.6 y 5.3 de la Orden Ministerial TED/749/2020**, de 16 de julio, por la que se establecen los requisitos técnicos para la conexión a la red necesarios para la implementación de los códigos de red de conexión.

El equipo antes mencionado está certificado conforme con el procedimiento interno de SGS PE.T-ECPE-23 de acuerdo con los requisitos de la norma UNE-EN ISO/IEC 17065. / The above-mentioned generating unit is certified according to the SGS internal procedure PE.T-ECPE-23 based on the requirements of the UNE-EN ISO / IEC 17065.

Este certificado cancela y sustituye el certificado n° 2621/0362-4-E1-A-CER. / This certificate cancels and supersedes the certificate n° 2621/0362-4-E1-A-CER.

Este certificado se emite por vez primera: 16 de diciembre de 2021. / This certificate is first issued on 16th of December 2021.

Este certificado es válido hasta: 16 de diciembre de 2026. / This certificate is valid until the 16th of December 2026.

Madrid, 07 de abril de 2022


Daniel Arranz Muñiz
Certification Manager



Lista completa de referencias con las características nominales de los productos certificados /
Full list of product references and nominal characteristics:

Model	SOFAR 25KTLX-G3	SOFAR 30KTLX-G3	SOFAR 30KTLX-G3-A	SOFAR 33KTLX-G3	SOFAR 36KTLX-G3
DC Input					
Max. DC voltage	1100 V				
Rated input voltage	620 V				
MPPT voltage range	180 V-1000 V				
AC Output					
Rated AC Output power	25 kW	30 kW	29.9 kW	33 kW	36 kW
Max. AC Output power	28 kVA	34 kVA	29.9 kVA	37 kVA	40 kVA
Nominal grid voltage	3/N/PE, 230V/400V				
Nominal output frequency	50Hz				

Model	SOFAR 40KTLX-G3	SOFAR 45KTLX-G3	SOFAR 50KTLX-G3	SOFAR 40KTLX-G3-HV	SOFAR 50KTLX-G3-HV
DC Input					
Max. DC voltage	1100 V				
Rated input voltage	620 V			725 V	
MPPT voltage range	180 V~1000 V				
AC Output					
Rated AC Output power	40 kW	45 kW	50 kW	40 kW	50 kW
Max. AC Output power	44 kVA	50 kVA	55 kVA	44 kVA	55 kVA
Nominal grid voltage	3/N/PE, 230 V/400 V			3P/PE, 277 V/480 V	
Nominal output frequency	50 Hz				





CERTIFICATE OF PRODUCT CERTIFICATION

SOLAR PRODUCT CERTIFICATE

CERTIFICATE NO.: CQC23024395932

Valid from: Jul.13,2023

Valid until:long-term

NAME AND REGISTERED ADDRESS OF THE APPLICANT	Shenzhen SOFARSOLAR Co., Ltd. 11/F., Gaoxinqi Technology Building, No.67 Area, Xingdong Community, Xin' an Sub-district, Bao' an District, Shenzhen City,China
NAME AND REGISTERED ADDRESS OF THE MANUFACTURER	Shenzhen SOFARSOLAR Co., Ltd. 11/F., Gaoxinqi Technology Building, No.67 Area, Xingdong Community, Xin' an Sub-district, Bao' an District, Shenzhen City,China
NAME AND LOCATION OF THE FACTORY	Dongguan SOFAR SOLAR Co., Ltd. 1F - 6F, Building E, No. 1 JinQi Road, Bihu Industrial Park, Wulian Village, Fenggang Town, Dongguan City.
PRODUCT NAME, MODEL AND SPECIFICATION	Solar Grid-tied Inverter See Appendix
THE STANDARDS AND TECHNICAL REQUIREMENTS FOR THE PRODUCTS	NB/T32004-2018
TYPE OF CERTIFICATION SCHEMES	Type Testing of Product + Initial Factory Inspection + Follow up Factory Inspection

This is to certify that the above mentioned product(s) complies with the requirements of certification rules of CQC33-461239-2018.
The validity of the certificate is subject to positive result of the regular follow up inspection by issuing certification body.

The certificate information is available through the QR code below or CNCA's website: www.cnca.gov.cn



SIGNATURE:

谢肇煦

CHINA QUALITY CERTIFICATION CENTRE





CERTIFICATE OF PRODUCT CERTIFICATION

SOLAR PRODUCT CERTIFICATE

APPENDIX

Page 1 of 2

CERTIFICATE NO.: CQC23024395932

PAPER:

SOFAR 50KTLC-G3-HV

直流输入:MPPT 电压范围 180V-1000Vdc, 最大直流输入电压 1100Vdc, 最大输入电流 40A*4; 交流输出:3/N/PE~, 480V, 50Hz, Max. 66. 2A*3, 额定交流输出功率 50kW;

SOFAR 50KTLC-G3

直流输入:MPPT 电压范围 180V-1000Vdc, 最大直流输入电压 1100Vdc, 最大输入电流 40A*4; 交流输出:3/N/PE~, 400V, 50Hz, Max. 83. 3A*3, 额定交流输出功率 50kW;

SOFAR 45KTLC-G3

直流输入:MPPT 电压范围 180V-1000Vdc, 最大直流输入电压 1100Vdc, 最大输入电流 40A*4; 交流输出:3/N/PE~, 400V, 50Hz, Max. 75. 8A*3, 额定交流输出功率 45kW;

SOFAR 40KTLC-G3-HV

直流输入:MPPT 电压范围 180V-1000Vdc, 最大直流输入电压 1100Vdc, 最大输入电流 40A*3; 交流输出:3/N/PE~, 480V, 50Hz, Max. 53A*3, 额定交流输出功率 40kW;

SOFAR 40KTLC-G3

直流输入:MPPT 电压范围 180V-1000Vdc, 最大直流输入电压 1100Vdc, 最大输入电流 40A*4; 交流输出:3/N/PE~, 400V, 50Hz, Max. 66. 7A*3, 额定交流输出功率 40kW;

NOTE: This appendix is valid when used with the certificate.



CHINA QUALITY CERTIFICATION CENTRE



CERTIFICATE OF PRODUCT CERTIFICATION

SOLAR PRODUCT CERTIFICATE

APPENDIX

Page 2 of 2

CERTIFICATE NO.: CQC23024395932

PAPER:

SOFAR 36KTLC-G3

直流输入:MPPT 电压范围 180V-1000Vdc, 最大直流输入电压 1100Vdc, 最大输入电流 40A*3; 交流输出:3/N/PE~, 400V, 50Hz, Max. 60. 6A*3, 额定交流输出功率 36kW;

SOFAR 33KTLC-G3

直流输入:MPPT 电压范围 180V-1000Vdc, 最大直流输入电压 1100Vdc, 最大输入电流 40A*3; 交流输出:3/N/PE~, 400V, 50Hz, Max. 56A*3, 额定交流输出功率 33kW;

SOFAR 30KTLC-G3

直流输入:MPPT 电压范围 180V-1000Vdc, 最大直流输入电压 1100Vdc, 最大输入电流 40A*3; 交流输出:3/N/PE~, 400V, 50Hz, Max. 51. 5A*3, 额定交流输出功率 30kW;

SOFAR 25KTLC-G3

直流输入:MPPT 电压范围 180V-1000Vdc, 最大直流输入电压 1100Vdc, 最大输入电流 40A*3; 交流输出:3/N/PE~, 400V, 50Hz, Max. 42. 4A*3, 额定交流输出功率 25kW;

NOTE: This appendix is valid when used with the certificate.



CHINA QUALITY CERTIFICATION CENTRE

Certificate of The Network and System Protection Zertifikat für den Netz- und Anlagenschutz

Certificate No. (Zertifikats-Nr.): CN-PV-230178

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.

Anhand der durchgeführten Tests wurde festgestellt, dass die Probe (n) des nachstehenden Produkts zum Zeitpunkt der Durchführung der Tests den Anforderungen der angegebenen Spezifikation (n) / Norm (en) entsprachen. Dies bedeutet nicht, dass Intertek die Herstellung (en) überwacht oder kontrolliert hat. Der Hersteller stellt sicher, dass der Herstellungsprozess die Übereinstimmung der Produktionseinheiten mit den in diesem Zertifikat genannten geprüften Produkten sicherstellt.

Applicant:
(Antragsteller)

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

Type of NS protection:
(Typ NA-Schutz)

Integrierter NA-Schutz (Integrated NS protection)

**Assigned to power
generation unit of type:**
(Zugeordnet zu
Erzeugungseinheit Typ)

SOFAR 25KTLX-G3
Bemessungsspannung (Rated voltage) 3/N/PE, 380V/400V
Bemessungsfrequenz (Nominal frequency) 50/60 Hz

Firmware version:
(Firmwareversion)

V000001

Brandname:
(Markenname)



Network connection rule:
(Netzanschlussregel)

VDE-AR-N 4105:2018-11

Erzeugungsanlagen am Niederspannungsnetz - Technische Mindestanforderungen für Anschluss und Parallelbetrieb von Erzeugungsanlagen am Niederspannungsnetz
(Generators connected to the low-voltage distribution network - Technical minimum requirements for connection and parallel operation of power generation systems connected to the low-voltage network)

DIN VDE V 0124-100 (VDE V 0124-100):2020-06

Netzintegration von Erzeugungsanlagen – Niederspannung -Prüfanforderungen an Erzeugungseinheiten vorgesehen zum Anschluss und Parallelbetrieb am Niederspannungsnetz
(Network integration of power generation systems – Low voltage - Test requirements for power generation units intended for connection to and parallel operation on the low-voltage network)

Test Report No.:
(Prüfbericht-Nr.)

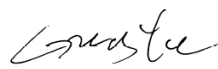
230302181GZU-001 Revision 1

Certificate Issuing Office:
(Stelle des ausgestellten
Zertifikats)

Intertek Testing Services Ltd. Shanghai
West Area, 2nd 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

The network and system protection designated above meets the requirements of VDE-AR-N 4105: 2018.
Der oben bezeichnete Netz- und Anlagenschutz erfüllt die Anforderungen der VDE-AR-N 4105: 2018.

Signature: (Unterschrift)



Certification Manager: Grady Ye

Date (Datum): 18 April 2023



PRD N° 306B

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APPENDIX (ANHANG)

Annex to Certificate No. (Anhang zur Zertifikatsnummer): CN-PV-230178

E.7 of (von) VDE-AR-N 4105:2018-11

Requirements for the test report for the NS protection (Anforderungen an den Prüfbericht zum NA-Schutz)

Extract of the test report for NS protection (Auszug aus dem Prüfbericht für den NA-Schutz) “Determination of electrical properties” („Bestimmung der elektrischen Eigenschaften“)					No. (Nr.): 230302181GZU-001 Revision 1 (consecutive no. (laufende Nr.))	
Test report NS protection (Prüfbericht NA-Schutz)						
Type of NS Protection: (Typ NA-Schutz)	Integrierter NA-Schutz (Integrated NS protection)			Further manufacturer indications (weitere Herstellerangaben)		
Software Version:	V000001					
Manufacturer: (Hersteller)	Shenzhen SOFARSOLAR Co., Ltd. 11/F., Gaoxinqi Technology Building, No.67 Area, Xingdong Community, Xin’an Sub-district, Bao’an District, Shenzhen City, China					
Measurement Period: (Messzeitraum)	2023-3-2~2023-3-7					
	Stirling generators, fuel cells (Stirlinggeneratoren, Brennstoffzellen)			Inverter(s) (Umrichter)		
	Synchronous and asynchronous generators with Pn ≤ 50 kW coupled directly or via inverters (direkt oder über Umrichter gekoppelte Synchron- und Asynchrongeneratoren mit Pn ≤ 50 kW)			Directly coupled synchronous and asynchronous generators with Pn > 50 kW (direkt gekoppelte Synchron- und Asynchrongeneratoren mit Pn > 50 kW)		
Protective function (Schutzfunktion)	Set value (Einstellwert)	Tripping value (Auslösewert)	Tripping time NS protection * (Auslösezeit NA-Schutz*)	Set value (Einstellwert)	Tripping value (Auslösewert)	Tripping time NS protection * (Auslösezeit NA-Schutz*)
Rise-in-voltage protection (Spannungssteigerungsschutz) <i>U >></i>	1,15* Un	--- Un	---ms	1,15* Un	1,257 · Un	87,8 ms
Rise-in-voltage protection (Spannungssteigerungsschutz) <i>U ></i>	1,10* Un	--- Un	---ms	1,10* Un	1,10 · Un	500,6 s
Voltage drop protection (Spannungsrückgangsschutz) <i>U <</i>	0,8* Un	--- Un	---ms	0,8* Un	0,807 · Un	3060 ms
Voltage drop protection (Spannungsrückgangsschutz) <i>U <<</i>	Not applicable (entfällt)			0,45* Un	0,451 · Un	348 ms
Frequency decrease protection (Frequenzrückgangsschutz) <i>f <</i>	47,5 Hz	---Hz	---ms	47,5 Hz	47,5 Hz	87,4 ms
Frequency increase protection (Frequenzsteigerungsschutz) <i>f ></i>	51,5 Hz	---Hz	---ms	51,5 Hz	51,51 Hz	86,8 ms

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APPENDIX (ANHANG)

Annex to Certificate No. (Anhang zur Zertifikatsnummer): CN-PV-230178

- * The tripping time includes the period from the limit value violation U/f until the tripping signal to the interface switch.
- * Die Auslösezeit umfasst den Zeitraum von der Grenzwertverletzung U/f bis zum Auslösesignal an den Kuppelschalter.

When planning the power generation system, the response time of the interface switch shall be added to the maximum time value obtained as indicated above.

The disconnection time (sum of tripping time of the NS protection plus response time of the interface switch) shall not exceed 200 ms.

Bei der Planung der Erzeugungsanlage ist die Eigenzeit des Kuppelschalters zum höchsten oben ermittelten Zeitwert zu addieren.

Die Abschaltzeit (Summe der Auslösezeit NA-Schutz zzgl. Eigenzeit des Kuppelschalters) darf 200 ms nicht überschreiten.

☐ **For integrated NS protection (Bei integriertem NA-Schutz)**

Assigned to power generation unit of type zugeordnet zu Erzeugungseinheit Typ	SOFAR 25KTLX-G3
Type integrated interface switch Typ integrierter Kuppelschalter	(Hongfa) HF167F/12-HF ⁴⁾ (ZETTLER) AZSR190-1AE-12D ⁴⁾ (CHUROD) AZSR190-1AE-12D ⁴⁾
Response time of interface switch for integrated NS protection Eigenzeit des Kuppelschalters bei integriertem NA-Schutz	Max.20ms
Verification of the entire functional chain "integrated NS protection – interface switch" has resulted in successful disconnection. Die Überprüfung der Gesamtwirkungskette „integrierter NA-Schutz – Kuppelschalter“ führte zu einer erfolgreichen Abschaltung.	

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.

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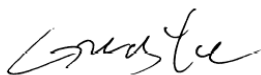
Certificate of Conformity

Certificate Number: CN-PV-210246

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

Applicant Name & Address:	Shenzhen SOFARSOLAR Co., Ltd. 401, Building 4, AnTongDa Industrial Park, District 68, XingDong Community, XinAn Street, BaoAn District, Shenzhen, China
Product Description: Ratings & Principle Characteristics:	Solar Grid-tied Inverter See Annex to Certificate of Conformity
Models/Type References:	SOFAR 25KTLX-G3, SOFAR 30KTLX-G3, SOFAR 30KTLX-G3-A SOFAR 33KTLX-G3, SOFAR 36KTLX-G3, SOFAR 40KTLX-G3, SOFAR 45KTLX-G3, SOFAR 50KTLX-G3, SOFAR 40KTLX-G3-HV SOFAR 50KTLX-G3-HV
Brand Name:	
Specification/Standard:	France_UTE_C_15_712-1: July 2013 DIN V VDE V 0126-1-1:2013.08 Automatic disconnecting device Compliant with VFR 2019
Certificate Issuing Office Name & Address:	Intertek Testing Services Ltd. Shanghai West Area, 2nd Floor, No. 707, Zhangyang Road China (Shanghai) Pilot Free Trade Zone, Shanghai, P. R. China Accredited by China National Accreditation Service for Conformity Assessment (CNAS C058-P) in accordance with ISO/IEC 17065:2012
Test Report Number:	210819145GZU-001, 210819145GZU-002

Certification procedure: SMS-PV-OP-19
Product certification scheme type: Type test
Additional information in Appendix.



Signature

Certification Manager: Grady Ye
Date: 25 October 2021



中国认可
国际互认
产品
PRODUCT
CNAS C058-P

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APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-210246

Model	SOFAR 25KTLX-G3	SOFAR 30KTLX-G3	SOFAR 30KTLX-G3-A
Max. DC input Voltage	1100Vdc		
Operating MPPT voltage range	180Vdc – 1000Vdc		
Max. Input current	40A*3		
PV Isc	50A*3		
Nominal AC output voltage	3/N/PE 230Vac/400Vac		
Nominal AC output Frequency	50Hz		
Max. AC output current	42.4A	51.5A	45.3A
Nominal Output power	25000W	30000W	29900W
Max.Output Power	28000VA	34000VA	29900VA
Power factor	1(adjustable +/-0.8)		
Safety level	Class I		
Ingress Protection	IP 65		
Operation Ambient Temperature	-30°C - 60°C		
Software version	V000001		

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APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-210246

Model	SOFAR 33KTLX-G3	SOFAR 36KTLX-G3	SOFAR 40KTLX-G3
Max. DC input Voltage	1100Vdc		
Operating MPPT voltage range	180Vdc – 1000Vdc		
Max. Input current	40A*3		40A*4
PV Isc	50A*3		50A*4
Nominal AC output voltage	3/N/PE 230Vac/400Vac		
Nominal AC output Frequency	50Hz		
Max. AC output current	56A	60.6A	66.7A
Nominal Output power	33000W	36000W	40000W
Max.Output Power	37000VA	40000VA	44000VA
Power factor	1(adjustable +/-0.8)		
Safety level	Class I		
Ingress Protection	IP 65		
Operation Ambient Temperature	-30°C - 60°C		
Software version	V000001		

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APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-210246

Model	SOFAR 45KTLX-G3	SOFAR 50KTLX-G3	SOFAR 40KTLX-G3-HV	SOFAR 50KTLX-G3-HV
Max. DC input Voltage	1100Vdc			
Operating MPPT voltage range	180Vdc – 1000Vdc			
Max. Input current	40A*4		40A*3	40A*4
PV Isc	50A*4		50A*3	50A*4
Nominal AC output voltage	3/N/PE 230Vac/400Vac		3/N/PE 277Vac/480Vac	
Nominal AC output Frequency	50Hz			
Max. AC output current	75.8A	83.3A	53.0A	66.2A
Nominal Output power	45000W	50000W	40000W	50000W
Max.Output Power	50000VA	55000VA	44000VA	55000VA
Power factor	1(adjustable +/-0.8)			
Safety level	Class I			
Ingress Protection	IP 65			
Operation Ambient Temperature	-30℃ - 60℃			
Software version	V000001			

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SOFAR 100-125KTLX-G4

100 / 110 / 125 kW

THREE-PHASE TEN MPPTS



Product advantages

- Max. efficiency up to 98.6%
- IP66 design for outdoor
- Maximum 10 MPPTs with 150%+ DC overload
- Type II SPD for both DC and AC side
- I-V curve scanning function
- Supports Modbus Communication, external Wi-Fi



Model	SOFAR 100KTLX-G4	SOFAR 110KTLX-G4	SOFAR 125KTLX-G4	SOFAR 125KTLX-G4-A
Input (DC)				
Max. input voltage	1100V			
Rated input voltage	625V			
Start-up voltage	200V			
MPPT operating voltage range	180V-1000V			
Number of MPP trackers	10			
Number of DC inputs	20			
Max. input MPPT current	10×40A			
Max. input short circuit current	10×50A			
Output (AC)				
Rated output power	100kW	100kW	110kW	125kW
Max. apparent power	100kVA@45°C / 90kVA@50°C	110kVA@45°C / 100kVA@50°C	125kVA@45°C / 110kVA@50°C	125kVA@45°C / 110kVA@50°C
Max. output current	152A@380V / 145A@400V / 139.2A@415V	167.2A@380V / 159.5A@400V / 153.1A@415V	190A@380V / 181.2A@400V / 174A@415V	190A@380V / 181.2A@400V / 174A@415V
Rated output voltage	3/N/PE, 380V / 400V / 415V			
Output voltage range	310-480Vac			
Rated output frequency	50/60Hz			
Output frequency range	45Hz-55Hz/55Hz-65Hz			
Active power adjustable range	0-100%			
THDi	<1%(@100%P)			
Power factor	1 (adjustable +/-0.8)			
Efficiency				
Max. efficiency	98.6%			
European efficiency	98.3%			
Protection				
DC reverse polarity protection	Yes			
Anti-islanding protection	Yes			
Leakage current protection	Yes			
Ground fault monitoring	Yes			
PV-array string fault monitoring	Yes			
DC switch	Yes			
AFCI	Yes			
SPD	PV: type II, AC: type II			
General Data				
Ambient temperature range	-30°C to +60°C			
Topology	Transformerless			
Degree of protection	IP66			
Allowable relative humidity range	0-100%			
Max. operating altitude	4000m (>3000m derating)			
Cooling	Smart air cooling			
Dimension (W×H×D)	970×695×325mm			
Weight	75kg			
Display	LCD & Bluetooth +APP			
Communication	RS485/Wi-Fi			
Standard	EN/IEC 62109-1/2, EN/IEC 61000-6-2/-4, IEC 61000-3-4/-5, EN 50530, EN 50549, IEC62116, IEC 61727, IEC 61683, IEC 60068-2-1/2/14/30, VDE V 0126-1-1, UTE C15-712-1, VDE-AR-N 4105/4110, NTS 631, UNE 217001, UNE 217002, G99, C10/11			

*All specifications are subject to change without notice.



Certificate of Conformity

Certificate No. : CCI230100165ENCER

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

Sample Name : Solar Grid-tied Inverter
Model/Item No. : SOFAR 125KTLX-G4-A, SOFAR 100KTLX-G4, SOFAR 110KTLX-G4, SOFAR 125KTLX-G4

Test Standards : IEC 62321-2:2013 IEC 62321-6:2015
IEC 62321-3-1:2013 IEC 62321-7-2:2017
IEC 62321-4: 2013+A1:2017 IEC 62321-8:2017
IEC 62321-5: 2013

The submitted sample(s) stated as above has(have) been tested by us with the listed standards and found in conformity with the requirements stated in Directive 2011/65/EU of the European Parliament and of the Council with regard to the restriction of the use of certain hazardous substances in electrical and electronic equipment and its subsequent amendments as well as Commission Delegated Directive (EU) 2015/863. It is possible to use CE marking on the product to demonstrate the conformity with this Directive.

This certification is part of the full test report(s) and should be read in conjunction with it. The certificate is based on a single evaluation of one sample of above-mentioned products. It does not imply an assessment of the whole production. Other CE marking directives may be applied, they have not been considered during this RoHS conformity assessment.



Technical director
Feb. 17, 2023

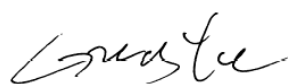
Certificate of Conformity

Certificate Number: CN-PV-230069

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:	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:	Solar Grid-tied Inverter
Ratings & Principle Characteristics:	See appendix of Certificate of Conformity
Model:	SOFAR 100KTLX-G4, SOFAR 110KTLX-G4 SOFAR 125KTLX-G4, SOFAR 125KTLX-G4-A
Brand Name<s>:	
Product Complies with:	Ordinul ANRE Nr. 208/14.12.2018 For the approval of the Technical Regulation concerning the technical requirements for connection to electricity networks of public interest for generating modules, power plants consisting of generating modules and power plants consisting of offshore generating modules (offshore) Type approval for type B
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
Test Report No.<s>:	221201104GZU-001

Additional information in Appendix.



Signature

Certification Manager: Grady Ye

Date: 28 February 2023

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APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-230069

Model	SOFAR 100KTLX-G4	SOFAR 110KTLX-G4	SOFAR 125KTLX-G4	SOFAR 125KTLX-G4-A
Max. DC input Voltage	1100Vdc			
Operating MPPT voltage range	180Vdc – 1000Vdc			
Max. Input current	10*40A			
PV Isc	10*50A			
Nominal AC output voltage	3/N/PE 230Vac/400Vac			
Nominal AC output Frequency	50/60Hz			
Max. AC output current	145A	159.5A	181.2A	181.2A
Rated Output power	100.0KW	100.0KW	110.0KW	125.0KW
Max.Output Power	100.0KVA	110.0KVA	125.0KVA	125.0KVA
Power factor	1(adjustable +/-0.8)			
Safety level	Class I			
Ingress Protection	IP 66			
Operation Ambient Temperature	-30°C - 60°C			
Software version	V000001			

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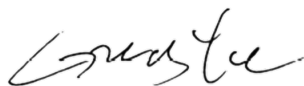
Certificate of Conformity

Certificate Number: CN-PV-230368

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:	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:	Solar Grid-tied Inverter
Ratings & Principle Characteristics:	See appendix of Certificate of Conformity
Model:	SOFAR 100KTLX-G4, SOFAR 110KTLX-G4, SOFAR 125KTLX-G4
Brand Name<s>:	
Product Complies with:	PHILIPPINE DISTRIBUTION CODE (PDC) 2017 EDITION RESOLUTION NO.02, Series of 2018 Establishing the connection and Operational Requirements for Variable Renewable Energy (VRE) Generating Facilities Type test for Medium Embedded Generating Plants 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
Certificate Issuing Office Name & Address:	
Test Report No.<s>:	221215056GZU-009

Additional information in Appendix.



Signature

Certification Manager: Grady Ye

Date: 25 June 2023



PRD N° 306B

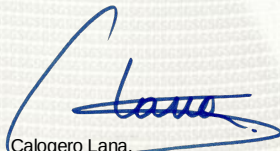
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APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-230368

Model	SOFAR 100KTLX-G4	SOFAR 110KTLX-G4	SOFAR 125KTLX-G4
Max. DC input Voltage	1100Vdc		
Operating MPPT voltage range	180Vdc – 1000Vdc		
Max. Input current	10*40A		
PV Isc	10*50A		
Nominal AC output voltage	3/N/PE 220Vac/380Vac		
Nominal AC output Frequency	60Hz		
Max. AC output current	152A	167.2A	190A
Rated Output power	100.0kW	100.0kW	110.0kW
Max.Output Power	100.0kVA	110.0kVA	125.0kVA
Power factor	1(adjustable +/-0.8)		
Safety level	Class I		
Ingress Protection	IP 66		
Operation Ambient Temperature	-30°C - 60°C		
Software version	V000001		

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Unit Certificate / Einheitenzertifikat		No: 230039RECO06-E1-CER Signed Copy No.1 / Unterzeichnete Kopie No.1			
License holder / Lizenzinhaber	Shenzhen SOFARSOLAR Co., Ltd. 11/F., Gaoxinqi Technology Building, No.67 Area, Xingdong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, Guangdong Province, P.R. China				
Manufacturers / Herstellers	Dongguan SOFAR SOLAR Co., Ltd.. 1F - 6F, Building E, No. 1 JinQi Road, Bihu Industrial Park, Wulian Village, Fenggang Town, Dongguan City, Guangdong Province, P.R. China.				
Power generating unit type / Typ Erzeugungseinheit	PV Inverter				
	Trademark / Series	SofarSolar / SOFAR 100-125KTLX-G4 series			
	Model	SOFAR 100KTLX-G4	SOFAR 110KTLX-G4	SOFAR 125KTLX-G4	SOFAR 125KTLX-G4-A
Technical Data / Technische Daten	Maximum Output Power / Maximale Ausgangsleistung	100 kVA	110 kVA	125 kVA	125 kVA
	Rated active power/ Bemessungswirkleistung:	100 kW	100 kW	110 kW	125 kW
	Rated Voltage/ Bemessungsspannung	230/400 V 3/N/PE	230/400 V 3/N/PE	230/400 V 3/N/PE	230/400 V 3/N/PE
	Nominal Frequency / Nennfrequenz	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz
	Software version / Softwareversion	V000001	V000001	V000001	V000001
Validated Simulation Model / Validiertes Simulationsmodell	Reference name: PGU_125kW.slx MD5 Checksum: 8389DD438CCD500CC55013D4FCC9ABBB Simulation platform: Matlab Simulink R2021b				
VDE application guide / VDE-Anwendungsregel	VDE-AR-N 4110: 2018-11. Technical requirements for the connection and operation of customer installations to the medium voltage network (TAR medium voltage) / VDE-AR-N 4110: 2018-11. Technische Voraussetzungen für den Anschluss und Betrieb von Kundenanlagen an das Mittelspannungsnetz (TAR-Mittelspannung).				
Certification programme / Zertifizierungsprogramm	FGW- Richtlinie TR 8 Rev. 9				
Other applicable standards/guidelines / Mitgeltende Normen/Richtlinien	FGW- Richtlinie TR 3 Rev. 25 (including supplement 1, dated on 22/01/2019) and FGW- Richtlinie TR 4 Rev. 9.				
The power generating unit mentioned above meets the requirements of the application guide listed above / Die oben bezeichnete Erzeugungseinheit erfüllt die Anforderungen der oben aufgeführten Anwendungsregel The following restrictions and deviations apply / Es gelten folgende Einschränkungen und Abweichungen: - The certified product does not provide test terminal. A connecting terminal plate has to be installed separately, if necessary. Das zertifizierte Produkt bietet kein Prüfklemmleiste. Eine Prüfklemmleiste ist bei Bedarf separat nachzurüsten. This certification according to ISO/IEC 17065 has been issued on basis of the certification procedure of SGS / Diese Zertifizierung nach ISO / IEC 17065 wurde auf Basis des Zertifizierungsverfahrens von SGS erteilt. The manufacturer has provided proof of certification of the quality management system of his production facility in accordance with ISO 9001 or is subject to production monitoring / Der Hersteller hat die Zertifizierung seines Qualitätsmanagementsystems seiner Fertigungsstätte nach ISO 9001 nachgewiesen bzw. unterliegt einer Fertigungsüberwachung. The certificate comprises the following information / Das Zertifikat beinhaltet folgende Angaben: • Technical data of the power generating unit, the auxiliary equipment used and the software version used / Technische Daten der Erzeugungseinheit, der eingesetzten Hilfseinrichtungen und der verwendeten Softwareversion. • Schematic structure of the power generating unit / Den schematischen Aufbau der Erzeugungseinheit. • Summarized information on the properties of the power generating unit / Zusammengefasste Angaben zu den Eigenschaften der Erzeugungseinheit. The certificate is comprised of 1 page and an Annex of 136 pages. Current revision of this annex is Revision 1 (dated on 02-08-2023). / Das Zertifikat besteht aus 1 Seite und einem Anhang mit 136 Seiten. Die aktuelle Revision dieses Anhangs ist Revision 1 (vom 02.08.2023). This certificate cancels and supersedes certificate n° 230039RECO06-CER. / Diese bescheinigung annulliert und setzt die bescheinigung nummer 230039RECO06-CER. The certificate is valid until / Dieses Zertifikat ist gültig bis: 14-06-2028 Place, Date/ Ort, Datum: Brussels, 11-08-2023					
 Calogero Lana, Certification Manager					





Einheitenzertifikat <i>Unit certificate</i>		Nr / No.: 23-197-00
Hersteller / Antragsteller <i>Manufacturer / Applicant</i>	Shenzhen SOFARSOLAR Co., Ltd. 11/F., Gaoxingqi Technology Building, No.67 Area, Xingdong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, China	
Typ Erzeugungseinheit <i>Power generation unit type</i>	SOFAR 100KTLX-G4, SOFAR 110KTLX-G4 SOFAR 125KTLX-G4, SOFAR 125KTLX-G4-A	
☒ Umrichter / <i>Inverter</i>	☐ Asynchrongenerator / <i>Asynchronous generator</i>	☐ Synchrongenerator / <i>Synchronous generator</i>
☐ Stirlinggenerator / <i>Stirling generator</i>	☐ Brennstoffzelle / <i>Fuel Cell</i>	☐ andere / <i>other</i>
Bemessungswerte <i>Assessment values</i>	max. Wirkleistung $P_{E_{max}}$ <i>max. active power $P_{E_{max}}$</i> Max. Scheinleistung $S_{E_{max}}$ <i>max apparent power $S_{E_{max}}$</i> Bemessungsspannung <i>Rated voltage</i> Bemessungsstrom (AC) I_r <i>Rated current (AC) I_r</i> Anfangs-Kurzschlusswechselstrom $I_{k''}$ <i>Initial short-circuit current $I_{k''}$</i> Siehe Anhang 1 <i>See annex 1</i>	
Netzanschlussregel <i>Network connection rule</i>	SOP-9-1_15 GCC Certification Program, 09/21 Auf Basis von / <i>Based on</i> : VDE-AR-N 4105:2018-11 Erzeugungsanlagen am Niederspannungsnetz – Technische Mindestanforderungen für Anschluss und Parallelbetrieb von Erzeugungsanlagen am Niederspannungsnetz. <i>Generators connected to the low-voltage distribution network– Technical minimum requirements for connection and parallel operation of power generation systems connected to the low-voltage network</i>	
Prüfanforderung <i>Test requirement</i>	DIN VDE V 0124-100 (VDE V 0124-100):(2020-06) Netzintegration von Erzeugungsanlagen- Niederspannung- Prüfanforderungen an Erzeugungseinheiten vorgesehen zum Anschluss und Parallelbetrieb am Niederspannungsnetz <i>Network integration of power generation systems – Low voltage" Test requirements for power generation units intended for connection to and parallel operation on the low-voltage network</i>	
Prüfbericht <i>Test Report</i>	221129BWA146-EG-DE-001 vom / from 2023-04-26	
Die oben bezeichnete Erzeugungseinheiten erfüllen die Anforderungen der VDE-AR-N 4105:2018-11. <i>The above designated power generation units meets the requirements of VDE-AR-N 4105:2018-11.</i>		

Kiwa Primara GmbH
Gewerbestraße 28
87600 Kaufbeuren
Germany
Tel. +49 8341 99726-0
primara@kiwa.com
www.kiwa.de

Kaufbeuren, 2023-05-10

Raphael Rader

- Digitally signed | see <http://ca.kiwa-deutschland.de> for more details -

Raphael Rader

Certification Engineer

kiwa



GRID CODE
COMPLIANCE
VDE-AR-N 4105:2018-11



Anhang / Annex 1 Beschreibung der Erzeugungseinheit

Description of the Unit

Hersteller / Antragsteller <i>Manufacturer / Applicant</i>	Shenzhen SOFARSOLAR Co., Ltd. 11/F., Gaoxinqi Technology Building, No.67 Area, Xingdong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, China			
Typ Erzeugungseinheit <i>Power generation unit type</i>	SOFAR 100KTLX-G4	SOFAR 110KTLX-G4	SOFAR 125KTLX-G4	SOFAR 125KTLX-G4-A
max. Wirkleistung* $P_{E_{max}}$ <i>max. active power* $P_{E_{max}}$</i>	100 kW	100 kW	110 kW	125 kW (124815 W)
Max. Scheinleistung* $S_{E_{max}}$ <i>max apparent power* $S_{E_{max}}$</i>	100 kVA	110 kVA	125 kVA	125 kVA (125111 VA)
Bemessungsspannung <i>Rated voltage</i>	3/N/PE, 220/380Vac, 230/400Vac, 240/415Vac 50/60Hz " * * "			
Bemessungsstrom (AC) I_r <i>Rated current (AC) I_r</i>	145,0 A	145,0 A	159,4 A	181,2 A
Anfangs-Kurzschlusswechselstrom $I_{k''}$ <i>Initial short-circuit current $I_{k''}$</i>	145,0 A	159,5 A	181,2 A	181,2 A

* Herstellerangabe, Wert in Klammern ist messtechnisch ermittelter Wert

*manufacturer information, value in bracket indicate measured value

** Geprüft mit 230Vac, 50Hz (P-N) / **tested with 230Vac, 50Hz (P-N)

Die Familie SOFAR 100KTLX-G4, SOFAR 110KTLX-G4, SOFAR 125KTLX-G4, SOFAR 125KTLX-G4-A sind transformatorlose, netzgekoppelter PV-Wechselrichter, die den Gleichstrom der PV-Module in netzkonformen Drehstrom umwandelt und in das öffentliche Stromnetz einspeist.

Die Familie wurde mit dem Modell SOFAR 125KTLX-G4-A geprüft. Die Ergebnisse sind auf andere Modelle zu übertragen

- Hardware-Version: V001

- Software-Version: V000001

The family SOFAR 100KTLX-G4, SOFAR 110KTLX-G4, SOFAR 125KTLX-G4,

SOFAR 125KTLX-G4-A are transformer-less on grid PV inverter, that converts the direct current of the PV panels to the grid-compliant, three-phase current and feeds into the utility grid

The product was tested on the SOFAR 125KTLX-G4-A. The results are to be transferred to other models.

• Hardware version: V001

• Software version: V000001

Die Messungen wurden zwischen 2022-12-01 und 2023-03-30 durchgeführt.

Prüflabor: Guangdong HuaChuang Technology Service Co, Ltd, A2LA-Akkreditierung Nr. 5200.02 gemäß. DIN EN ISO/IEC 17025

The measurements were carried out between 2022-12-01 and 2023-03-30. Test laboratory: Guangdong HuaChuang Technology Service Co., Ltd., A2LA Accreditation no. 5200.02 acc. DIN EN ISO/IEC 17025



Anhang / Annex 2				
E.5 Auszug aus dem Prüfbericht für Erzeugungseinheiten „Bestimmung der elektrischen Eigenschaften“ <i>Extract of the test report for power generation units “Determination of electrical properties”</i>			Nr. /No.: 221129BWA146-EG-DE-001	
Anlagenhersteller: System manufacturer:	Shenzhen SOFARSOLAR Co., Ltd. 11/F., Gaoxingqi Technology Building, No.67 Area, Xingdong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, China			
Herstellerangaben: Manufacturer indications:	Anlagenart (BHKW, PV-WR...) <i>System Type (BHKW, PV-WR...)</i>	Netzgeführter PV-Wechselrichter <i>Solar Grid-tied Inverter</i>		
	Wirkleistung P _n <i>Active power P_n</i>	Siehe Anhang 1 P _{E_{max}} <i>See annex 1 P_{E_{max}}</i>		
	Scheinleistung S _n <i>Apparent power S_n</i>	Siehe Anhang 1 S _{E_{max}} <i>See annex 1 S_{E_{max}}</i>		
	Bemessungsspannung <i>Rated voltage</i>	3/N/PE,220/380Vac, 230/400Vac ,240/415Vac 50/60Hz		
Messzeitraum	Vom / from 2022-12-01 bis / to 2023-03-30			
Schnelle Spannungsänderungen / Rapid voltage changes:				
Einschalten ohne Vorgabe (zum Primärenergieträger) <i>Connection without provisions (regarding the primary energy carrier)</i>			k _i = 0,056	
Ungünstigster Fall beim Umschalten der Generatorstufen <i>Most adverse case when switching between generator levels</i>			k _i = ---	
Einschalten bei Nennbedingungen (des Primärenergieträgers) <i>Connection at nominal conditions (of the primary energy carrier)</i>			k _i = 0,070	
Ausschalten bei Bemessungsleistung <i>Disconnection at rated power</i>			k _i = 0,104	
Schlechtester Wert aller Schaltvorgänge <i>Worst value of all switching operations</i>			k _{imax} = 0,104	
Flicker				
Netzimpedanzwinkel ψ _k : <i>Network impedance angle ψ_k:</i>	30°	50°	70°	85°
Anlagenflickerbeiwert c _ψ : <i>Initial flicker factor c_ψ:</i>	0,46	0,43	0,39	0,35
S _{kflid} /S _n =20				



Oberschwingungen / Harmonics (Max. Value of all lines)										
Wirkleistung P/P _n [%] Active Power P/P _n [%]	10	20	30	40	50	60	70	80	90	100
Ordnungszahl Ordinal number	I[%]	I[%]	I[%]	I[%]	I[%]	I[%]	I[%]	I[%]	I[%]	I[%]
2	0,008	0,01	0,009	0,011	0,011	0,069	0,072	0,066	0,086	0,078
3	0,046	0,045	0,034	0,03	0,031	0,095	0,088	0,135	0,084	0,089
4	0,007	0,009	0,009	0,014	0,009	0,032	0,033	0,028	0,037	0,035
5	0,261	0,189	0,052	0,056	0,058	0,308	0,309	0,395	0,279	0,26
6	0,007	0,009	0,01	0,011	0,011	0,024	0,035	0,032	0,027	0,028
7	0,174	0,119	0,121	0,09	0,081	0,273	0,28	0,293	0,313	0,313
8	0,008	0,009	0,01	0,01	0,01	0,024	0,037	0,026	0,027	0,025
9	0,013	0,017	0,017	0,015	0,015	0,085	0,085	0,077	0,062	0,054
10	0,008	0,008	0,01	0,01	0,015	0,025	0,036	0,022	0,019	0,021
11	0,095	0,053	0,036	0,04	0,044	0,112	0,117	0,164	0,116	0,119
12	0,008	0,008	0,009	0,011	0,009	0,021	0,035	0,023	0,018	0,018
13	0,042	0,059	0,03	0,035	0,029	0,086	0,09	0,138	0,096	0,096
14	0,008	0,008	0,021	0,009	0,008	0,019	0,033	0,018	0,015	0,015
15	0,013	0,012	0,014	0,016	0,016	0,039	0,044	0,039	0,036	0,033
16	0,008	0,008	0,008	0,008	0,007	0,017	0,03	0,017	0,013	0,015
17	0,026	0,079	0,019	0,027	0,036	0,049	0,046	0,082	0,045	0,043
18	0,007	0,014	0,007	0,007	0,007	0,016	0,029	0,017	0,012	0,013
19	0,077	0,051	0,019	0,022	0,035	0,047	0,044	0,067	0,044	0,042
20	0,006	0,007	0,006	0,007	0,007	0,021	0,029	0,02	0,015	0,013
21	0,013	0,018	0,013	0,016	0,016	0,02	0,028	0,024	0,02	0,02
22	0,005	0,006	0,006	0,006	0,006	0,012	0,023	0,014	0,01	0,011
23	0,046	0,063	0,017	0,028	0,035	0,051	0,045	0,052	0,037	0,033
24	0,005	0,006	0,006	0,007	0,006	0,012	0,023	0,012	0,011	0,011
25	0,048	0,063	0,019	0,019	0,033	0,048	0,043	0,043	0,038	0,033
26	0,005	0,006	0,006	0,006	0,007	0,011	0,019	0,012	0,009	0,01
27	0,014	0,013	0,016	0,016	0,016	0,018	0,023	0,017	0,018	0,019
28	0,004	0,004	0,006	0,006	0,006	0,011	0,02	0,012	0,008	0,009
29	0,103	0,047	0,019	0,026	0,034	0,048	0,045	0,046	0,043	0,042
30	0,004	0,007	0,005	0,007	0,005	0,01	0,02	0,011	0,011	0,013
31	0,096	0,024	0,026	0,021	0,03	0,043	0,041	0,038	0,038	0,035
32	0,004	0,007	0,005	0,007	0,007	0,009	0,017	0,011	0,008	0,008
33	0,015	0,011	0,018	0,016	0,017	0,019	0,022	0,018	0,017	0,017
34	0,006	0,005	0,005	0,006	0,006	0,008	0,017	0,011	0,008	0,009
35	0,082	0,041	0,043	0,022	0,034	0,043	0,043	0,055	0,04	0,039
36	0,003	0,007	0,004	0,006	0,006	0,008	0,017	0,011	0,009	0,009
37	0,07	0,065	0,041	0,02	0,031	0,038	0,037	0,055	0,035	0,033
38	0,003	0,008	0,005	0,007	0,007	0,012	0,016	0,017	0,007	0,007
39	0,015	0,021	0,017	0,015	0,016	0,017	0,019	0,016	0,016	0,016
40	0,004	0,006	0,004	0,005	0,007	0,008	0,017	0,012	0,008	0,008



Zwischenharmonische / Interharmonics (max Values of all lines)										
Wirkleistung P/P _n [%] Active power P/P _n [%]	10	20	30	40	50	60	70	80	90	100
Frequenz [Hz] Frequenzy [Hz]	I[%]	I[%]	I[%]	I[%]	I[%]	I[%]	I[%]	I[%]	I[%]	I[%]
75	0,012	0,016	0,017	0,017	0,018	0,241	0,27	0,304	0,348	0,385
125	0,011	0,013	0,013	0,014	0,015	0,077	0,086	0,092	0,106	0,118
175	0,012	0,015	0,014	0,015	0,013	0,058	0,064	0,068	0,077	0,09
225	0,013	0,016	0,017	0,016	0,015	0,054	0,072	0,07	0,079	0,09
275	0,014	0,017	0,019	0,017	0,018	0,041	0,073	0,045	0,049	0,055
325	0,015	0,017	0,019	0,018	0,018	0,042	0,066	0,045	0,052	0,078
375	0,016	0,019	0,019	0,018	0,019	0,043	0,081	0,036	0,041	0,047
425	0,015	0,018	0,02	0,017	0,018	0,033	0,059	0,033	0,039	0,061
475	0,015	0,016	0,019	0,017	0,023	0,031	0,072	0,032	0,034	0,041
525	0,014	0,016	0,019	0,017	0,037	0,034	0,073	0,032	0,032	0,037
575	0,015	0,016	0,017	0,017	0,025	0,037	0,073	0,035	0,033	0,036
625	0,014	0,015	0,017	0,05	0,016	0,034	0,068	0,031	0,029	0,032
675	0,014	0,015	0,031	0,015	0,014	0,038	0,073	0,035	0,034	0,038
725	0,013	0,015	0,016	0,013	0,014	0,026	0,06	0,025	0,024	0,03
775	0,012	0,015	0,013	0,012	0,013	0,023	0,061	0,025	0,024	0,029
825	0,013	0,015	0,012	0,012	0,012	0,028	0,056	0,027	0,026	0,031
875	0,011	0,023	0,011	0,011	0,011	0,028	0,057	0,027	0,026	0,028
925	0,011	0,017	0,011	0,01	0,01	0,028	0,05	0,024	0,023	0,025
975	0,01	0,013	0,01	0,009	0,012	0,028	0,053	0,026	0,027	0,029
1025	0,009	0,012	0,01	0,009	0,011	0,019	0,044	0,018	0,019	0,021
1075	0,009	0,011	0,009	0,008	0,012	0,017	0,043	0,018	0,018	0,02
1125	0,009	0,01	0,009	0,008	0,011	0,023	0,041	0,021	0,021	0,024
1175	0,009	0,01	0,008	0,008	0,008	0,023	0,043	0,02	0,019	0,022
1225	0,009	0,009	0,009	0,012	0,009	0,023	0,035	0,02	0,019	0,019
1275	0,008	0,008	0,008	0,01	0,007	0,022	0,042	0,019	0,019	0,021
1325	0,008	0,007	0,007	0,007	0,007	0,015	0,032	0,014	0,014	0,017
1375	0,007	0,007	0,011	0,006	0,007	0,013	0,032	0,014	0,013	0,016
1425	0,007	0,006	0,007	0,006	0,006	0,021	0,032	0,019	0,018	0,019
1475	0,007	0,006	0,006	0,006	0,006	0,019	0,033	0,017	0,017	0,018
1525	0,007	0,006	0,006	0,006	0,006	0,02	0,028	0,017	0,017	0,025
1575	0,007	0,006	0,006	0,006	0,006	0,018	0,034	0,016	0,016	0,022
1625	0,006	0,006	0,006	0,005	0,006	0,012	0,025	0,011	0,011	0,013
1675	0,007	0,006	0,006	0,005	0,006	0,01	0,026	0,011	0,011	0,013
1725	0,006	0,007	0,005	0,005	0,005	0,017	0,027	0,016	0,016	0,017
1775	0,006	0,007	0,005	0,005	0,005	0,016	0,027	0,015	0,015	0,017
1825	0,006	0,007	0,005	0,005	0,005	0,018	0,024	0,015	0,021	0,015
1875	0,006	0,006	0,005	0,005	0,005	0,017	0,028	0,016	0,014	0,015
1925	0,006	0,008	0,005	0,005	0,005	0,011	0,027	0,011	0,009	0,011
1975	0,005	0,006	0,005	0,005	0,005	0,011	0,024	0,012	0,01	0,011



Höhere Frequenzen / Higher frequencies (max Values of all lines)										
Wirkleistung P/P _n [%] Active power P/P _n [%]	10	20	30	40	50	60	70	80	90	100
Frequenz [kHz] Frequenz [kHz]	I[%]	I[%]	I[%]	I[%]	I[%]	I[%]	I[%]	I[%]	I[%]	I[%]
2,1	0,102	0,113	0,063	0,024	0,043	0,054	0,07	0,056	0,055	0,053
2,3	0,05	0,06	0,039	0,026	0,03	0,041	0,059	0,043	0,04	0,042
2,5	0,045	0,054	0,036	0,031	0,029	0,037	0,055	0,039	0,038	0,037
2,7	0,04	0,075	0,045	0,041	0,033	0,045	0,059	0,048	0,044	0,043
2,9	0,033	0,039	0,066	0,062	0,058	0,049	0,059	0,069	0,065	0,07
3,1	0,021	0,023	0,047	0,035	0,024	0,039	0,05	0,039	0,037	0,039
3,3	0,034	0,023	0,048	0,032	0,019	0,046	0,062	0,052	0,047	0,044
3,5	0,029	0,026	0,021	0,015	0,013	0,033	0,059	0,044	0,04	0,038
3,7	0,03	0,025	0,02	0,015	0,012	0,02	0,045	0,034	0,053	0,049
3,9	0,047	0,033	0,029	0,016	0,015	0,021	0,043	0,027	0,047	0,049
4,1	0,035	0,03	0,027	0,016	0,013	0,019	0,049	0,019	0,015	0,024
4,3	0,032	0,029	0,026	0,016	0,012	0,019	0,053	0,02	0,013	0,013
4,5	0,045	0,029	0,027	0,021	0,015	0,024	0,038	0,019	0,016	0,016
4,7	0,032	0,038	0,031	0,03	0,028	0,076	0,103	0,037	0,033	0,037
4,9	0,026	0,025	0,02	0,015	0,012	0,019	0,051	0,018	0,014	0,014
5,1	0,033	0,02	0,027	0,015	0,012	0,019	0,034	0,017	0,015	0,014
5,3	0,021	0,015	0,018	0,012	0,009	0,016	0,037	0,015	0,012	0,014
5,5	0,02	0,014	0,016	0,011	0,009	0,017	0,035	0,015	0,013	0,012
5,7	0,018	0,012	0,018	0,013	0,01	0,018	0,031	0,015	0,013	0,013
5,9	0,017	0,013	0,018	0,016	0,014	0,024	0,024	0,013	0,012	0,013
6,1	0,022	0,02	0,023	0,02	0,026	0,078	0,032	0,023	0,024	0,024
6,3	0,009	0,007	0,014	0,011	0,009	0,016	0,023	0,013	0,011	0,013
6,5	0,009	0,006	0,009	0,008	0,008	0,012	0,018	0,011	0,01	0,011
6,7	0,007	0,005	0,008	0,008	0,008	0,01	0,017	0,011	0,009	0,011
6,9	0,008	0,006	0,008	0,007	0,007	0,01	0,015	0,011	0,01	0,011
7,1	0,007	0,004	0,006	0,006	0,006	0,008	0,013	0,009	0,008	0,009
7,3	0,007	0,004	0,005	0,005	0,005	0,007	0,011	0,009	0,008	0,008
7,5	0,008	0,004	0,005	0,005	0,005	0,007	0,011	0,009	0,008	0,009
7,7	0,007	0,004	0,005	0,005	0,006	0,007	0,01	0,009	0,007	0,008
7,9	0,006	0,004	0,004	0,005	0,005	0,007	0,01	0,009	0,007	0,008
8,1	0,006	0,004	0,005	0,005	0,005	0,006	0,009	0,008	0,007	0,008
8,3	0,005	0,004	0,004	0,005	0,005	0,006	0,009	0,008	0,007	0,007
8,5	0,005	0,004	0,004	0,005	0,005	0,006	0,008	0,008	0,007	0,007
8,7	0,005	0,004	0,005	0,008	0,008	0,007	0,009	0,008	0,007	0,01
8,9	0,005	0,004	0,007	0,006	0,006	0,009	0,01	0,01	0,009	0,007

CERTIFICATE of Conformity



Registration No.: AK 50599175 0001

Report No.: CN23PPQW 001

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

Product: PV-Inverter
(Solar Grid-tied Inverter)

Identification: Type Designation: SOFAR 100KTLX-G4, SOFAR 110KTLX-G4,
SOFAR 125KTLX-G4
Serial No. : Engineering samples
Remark(s): Compliance with the requirement of Central
Electricity Authority Notification 2007-02 and 2019-02.
Refer to test report CN23PPQW 001 for details.

Tested acc. to: IEC TS 62910:2015

The certificate of conformity refers to the above mentioned product. This is to certify that the specimen is in conformity with the assessment requirement mentioned above. This certificate does not imply assessment of the production of the product and does not permit the use of a TÜV Rheinland mark of conformity.

Certification Body

Date 28.08.2023



A handwritten signature in blue ink, appearing to read "A. Chen".
A. Chen

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg

Shenzhen SOFARSOLAR Co., Ltd.

Date : 28.08.2023
Our ref. : Lied 02
Your ref.: 168424326

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

Ref : AK Certificate of Conformity

Type of Equipment : Solar Grid-tied Inverter
Model Designation : See Certificate
Certificate No. : AK 50599175 0001
Report No. : CN23PPQW 001

Dear Ladies and Gentlemen,

We herewith confirm that a sample of the above mentioned technical equipment has been tested and was found to be in accordance with the relevant requirements.

Enclosed please find your Certificate of Conformity.

We appreciate your kind support and would like to offer our assistance and continuous services in the future.

With kind regards,

Certification Body



A. Chen

Enclosure

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

Hi-MO 7

LR8-66HGD 595~625M

- High-performance PV modules for utility power plants
- Advanced HPDC cell technology delivers superior module efficiency and power
- High bifaciality and excellent power temperature coefficient achieves high energy yield
- LONGi lifecycle quality ensures long-term performance

12

12-year Warranty for
Materials and Processing

30

30-year Warranty for Extra
Linear Power Output

Complete System and Product Certifications

IEC 61215, IEC 61730, UL 61730

ISO9001:2015: ISO Quality Management System

ISO14001: 2015: ISO Environment Management System

ISO45001: 2018: Occupational Health and Safety

IEC62941: Guideline for module design qualification and type approval

LONGi



23.1%
MAX MODULE
EFFICIENCY

0~3%
POWER
TOLERANCE

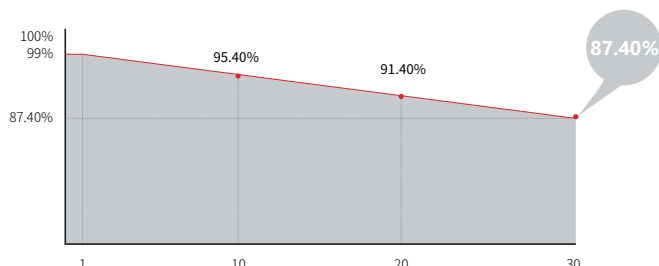
<1%
FIRST YEAR
POWER DEGRADATION

0.4%
YEAR 2-30
POWER DEGRADATION

HALF-CELL
Lower operating temperature

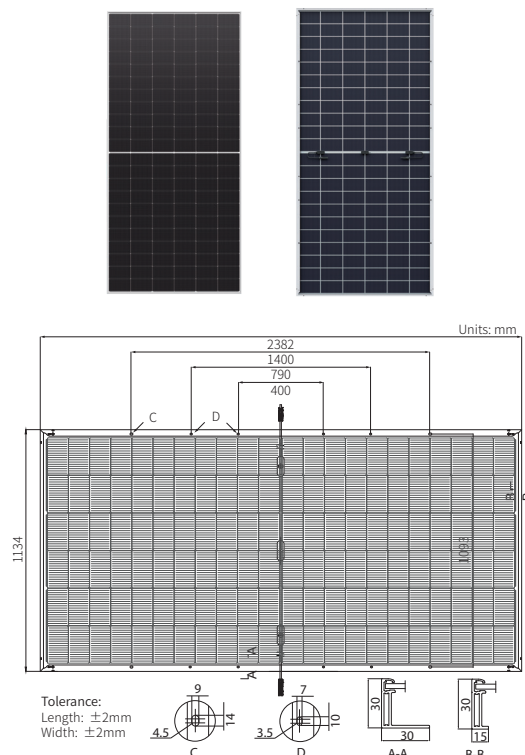
Additional Value

30-Year Power Warranty



Mechanical Parameters

Cell Orientation	132 (6×22)
Junction Box	IP68, three diodes
Output Cable	4mm ² , +400, -200mm/±1400mm length can be customized
Glass	Dual glass, 2.0+2.0mm heat strengthened glass
Frame	Anodized aluminum alloy frame
Weight	33.5kg
Dimension	2382×1134×30mm
Packaging	36pcs per pallet / 144pcs per 20' GP / 720pcs or 576pcs (only for USA) per 40' HC



Electrical Characteristics

STC : AM1.5 1000W/m² 25°C NOCT : AM1.5 800W/m² 20°C 1.0 m/s Test uncertainty for Pmax: ±3%

Module Type	LR8-66HGD-595M		LR8-66HGD-600M		LR8-66HGD-605M		LR8-66HGD-610M		LR8-66HGD-615M		LR8-66HGD-620M		LR8-66HGD-625M	
Testing Condition	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax/W)	595	452.9	600	456.7	605	460.5	610	464.3	615	468.1	620	471.9	625	475.8
Open Circuit Voltage (Voc/V)	47.78	45.41	47.98	45.60	48.18	45.79	48.38	45.98	48.58	46.17	48.78	46.36	48.98	46.55
Short Circuit Current (Isc/A)	15.80	12.69	15.85	12.73	15.90	12.77	15.95	12.81	16.00	12.85	16.05	12.89	16.10	12.93
Voltage at Maximum Power (Vmp/V)	39.91	37.93	40.11	38.12	40.31	38.31	40.51	38.50	40.71	38.69	40.91	38.88	41.11	39.07
Current at Maximum Power (Imp/A)	14.91	11.94	14.96	11.98	15.01	12.02	15.06	12.06	15.11	12.10	15.16	12.14	15.21	12.18
Module Efficiency(%)	22.0		22.2		22.4		22.6		22.8		23.0		23.1	

Electrical characteristics with different rear side power gain (reference to 610W front)

Pmax /W	Voc/V	Isc /A	Vmp/V	Imp /A	Pmax gain
641	48.38	16.75	40.51	15.81	5%
671	48.38	17.55	40.51	16.57	10%
703	48.48	18.34	40.61	17.32	15%
734	48.48	19.14	40.61	18.07	20%
764	48.48	19.94	40.61	18.82	25%

Operating Parameters

Operational Temperature	-40°C ~ +85°C
Power Output Tolerance	0 ~ 3%
Maximum System Voltage	DC1500V (IEC/UL)
Maximum Series Fuse Rating	35A
Nominal Operating Cell Temperature	45±2°C
Protection Class	Class II
Bifaciality	80±5%
Fire Rating	UL type 29 IEC Class C

Mechanical Loading

Front Side Maximum Static Loading	5400Pa
Rear Side Maximum Static Loading	2400Pa
Hailstone Test	25mm Hailstone at the speed of 23m/s

Temperature Ratings (STC)

Temperature Coefficient of Isc	+0.045%/°C
Temperature Coefficient of Voc	-0.230%/°C
Temperature Coefficient of Pmax	-0.280%/°C

SOFAR 15K~24KTLX-G3

15 / 17 / 20 / 22 / 24 kW

THREE-PHASE DUAL MPPT



Product advantages

- Maximum efficiency 98.6%
- Low start-up voltage, wide MPPT voltage
- Maximum DC input voltage 1100 V
- Smart string level monitoring
- Type II SPD for both DC and AC side
- Remote firmware upgrade
- 110% long-time overload ability



Datasheet	SOFAR 15KTLX-G3		SOFAR 17KTLX-G3		SOFAR 20KTLX-G3		SOFAR 22KTLX-G3		SOFAR 24KTLX-G3	
Input (DC)										
Max. input voltage	1100V									
Rated input voltage	650V									
Start-up voltage	160V									
MPPT operating voltage range	140V-1000V									
Number of MPP trackers	2									
Number of DC inputs	2/2									
Max. input MPPT current	26A/26A	26A/26A	26A/26A	26A/26A	26A/26A	26A/26A	26A/26A	26A/26A	26A/26A	26A/26A
Max. input short circuit current	36A/36A	36A/36A	36A/36A	36A/36A	36A/36A	36A/36A	36A/36A	36A/36A	36A/36A	36A/36A
Output (AC)										
Rated output power	15000W	17000W	20000W	20000W	22000W	22000W	24000W	24000W	24000W	24000W
Max. apparent power	16500VA	18700VA	22000VA	22000VA	24200VA	24200VA	26400VA	26400VA	26400VA	26400VA
Max. output current	23.9A	27.1A	31.9A	31.9A	35.1A	35.1A	38.3A	38.3A	38.3A	38.3A
Rated output voltage	3/N/PE, 230V/400Vac									
Output voltage range	310Vac-480Vac									
Rated output frequency	50/60Hz									
Output frequency range	45Hz-55Hz/55Hz-65Hz									
Active power adjustable range	0-100%									
THDi	<3%									
Power factor	1 (adjustable +/-0.8)									
Efficiency										
Max. efficiency	98.6%	98.6%	98.6%	98.6%	98.6%	98.6%	98.6%	98.6%	98.6%	98.6%
European efficiency	98.2%	98.2%	98.2%	98.2%	98.2%	98.2%	98.2%	98.2%	98.2%	98.2%
Protection										
DC reverse polarity protection	Yes									
Anti-islanding protection	Yes									
Leakage current protection	Yes									
Ground fault monitoring	Yes									
PV-array string fault monitoring	Yes									
DC switch	Yes									
SPD	PV: type II, AC: type II									
General Data										
Ambient temperature range	-30℃--+60℃									
Self-consumption at night	<1W									
Topology	Transformerless									
Degree of protection	IP65									
Allowable relative humidity range	0-100%									
Max. operating altitude	4000m									
Cooling	Smart air cooling									
Dimension (W×H×D)	520×430×189mm									
Weight	20kg	22kg	22kg	22kg	23kg	23kg	23kg	23kg	23kg	23kg
Display	LCD & Bluetooth +APP									
Communication	RS485/WiFi									
Standard	IEC/EN 61000-6-1/3, IEC/EN 61000-3-11/12, IEC 62116, IEC 61727, IEC 61683, IEC 60068-1/2/14/30, IEC/EN 62109-1/2 G99, VDE-AR-N 4105, VDE V 0126-1-1,CEI0-21, EN 50549-1, NRS 097-2-1									

*All specifications are subject to change without notice.

SOFAR 25K~50KTLX-G3

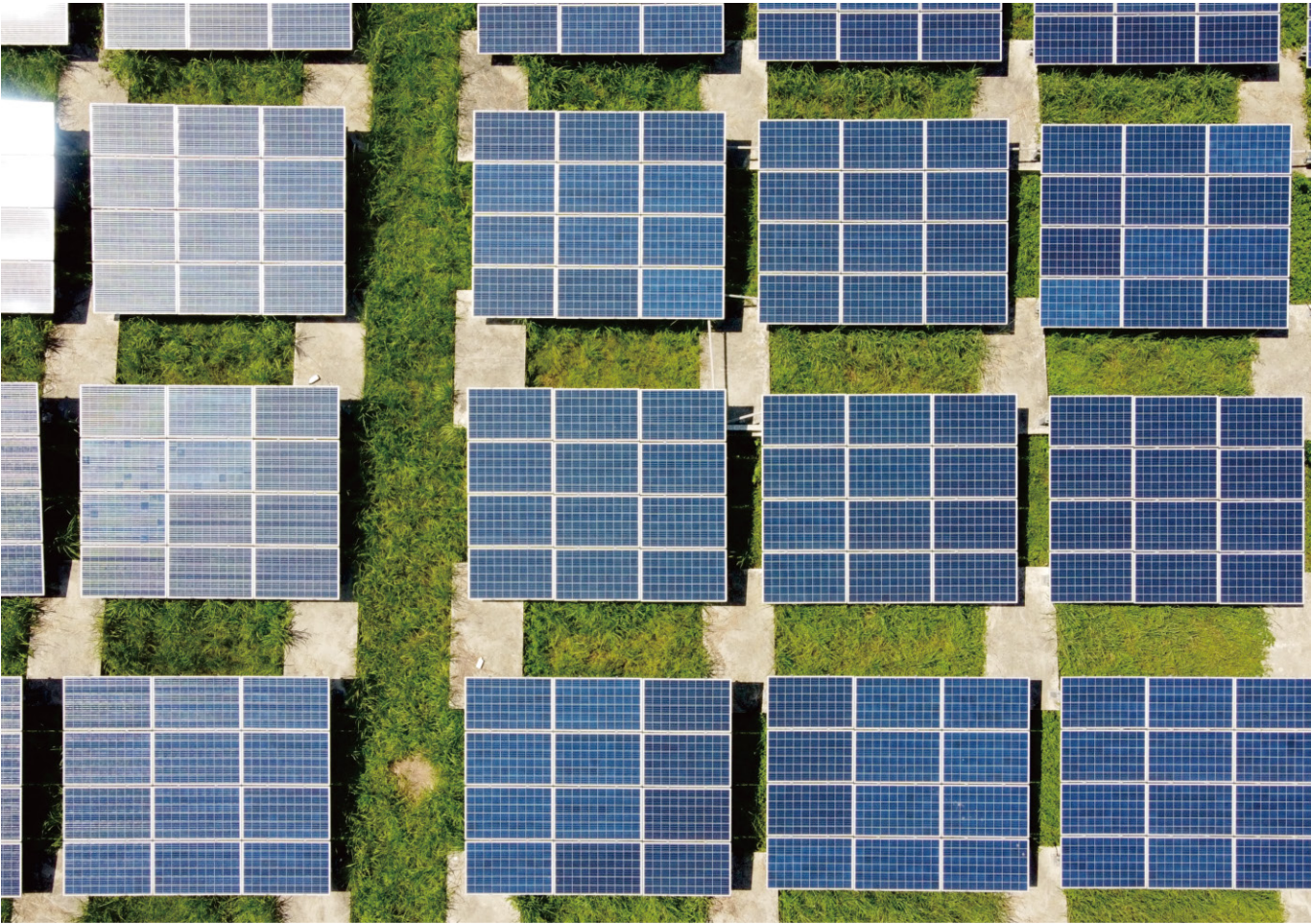
25 / 30 / 33 / 36 / 40 / 45 / 50 kW

THREE-PHASE THREE TO FOUR MPPTS



Product advantages

- Max. efficiency up to 98.80%
- Up to 4 MPPTs with DC overload capability (up to 150%)
- Type II SPD for both DC and AC side
- Prolonged AC overload capability (110%)
- Low start-up voltage, wide MPPT voltage range
- Compatible with 500 W+ modules
- I-V curve scanning function



Datasheet	SOFAR 25KTLX-G3	SOFAR 30KTLX-G3	SOFAR 33KTLX-G3	SOFAR 36KTLX-G3	SOFAR 40KTLX-G3	SOFAR 45KTLX-G3	SOFAR 50KTLX-G3
Input (DC)							
Max. input voltage	1100V						
Rated input voltage	620V						
Start-up voltage	200V						
MPPT operating voltage range	180V-1000V						
Number of MPPTs	3				4		
Number of DC inputs	2 for each MPPT						
Max. input MPPT current	3*40A	3*40A	3*40A	3*40A	4*40A	4*40A	4*40A
Max. input short circuit current	3*50A	3*50A	3*50A	3*50A	4*50A	4*50A	4*50A
Output (AC)							
Rated output power	25000W	30000W	33000W	36000W	40000W	45000W	50000W
Max. apparent power	28000VA	34000VA	37000VA	40000VA	44000VA	50000VA	55000VA
Max. output current	42.4A	51.5A	56A	60.6A	66.7A	75.8A	83.3A
Rated output voltage	3/N/PE, 230/400Vac						
Output voltage range	310Vac-480Vac						
Rated output frequency	50/60Hz						
Output frequency range	45Hz-55Hz/55Hz-65Hz						
Active power adjustable range	0-100%						
THDi	<3%						
Power factor	1 (adjustable +/-0.8)						
Efficiency							
Max. efficiency	98.6%	98.6%	98.6%	98.6%	98.8%	98.8%	98.8%
European efficiency	98.2%	98.2%	98.2%	98.2%	98.2%	98.2%	98.2%
Protection							
DC reverse polarity protection	Yes						
Anti-islanding protection	Yes						
Leakage current protection	Yes						
Ground fault monitoring	Yes						
PV-array string fault monitoring	Yes						
DC switch	Yes						
SPD	PV: type II, AC: type II						
General Data							
Ambient temperature range	-30 ℃--+60 ℃						
Self-consumption at night	<3W						
Topology	Transformerless						
Degree of protection	IP65						
Allowable relative humidity range	0-100%						
Max. operating altitude	4000m						
Cooling	Smart air cooling						
Dimension (W*H*D)	585*480*220mm						
Weight	36kg				37kg		
Display	LCD & Bluetooth +APP						
Communication	RS485/WiFi						
Standard	IEC/EN 61000-6-1/2/3/4, IEC 62116, IEC 61727, IEC 61683, IEC 60068-1/2/14/30, IEC/EN 62109-1/2 G99, VDE-AR-N 4105, VDE V 0126-1-1,CEI0-21, EN 50549-1, NRS 097-2-1,UNE 217002-2020						

*All specifications are subject to change without notice.

SOFAR 25K~50KTLX-G3

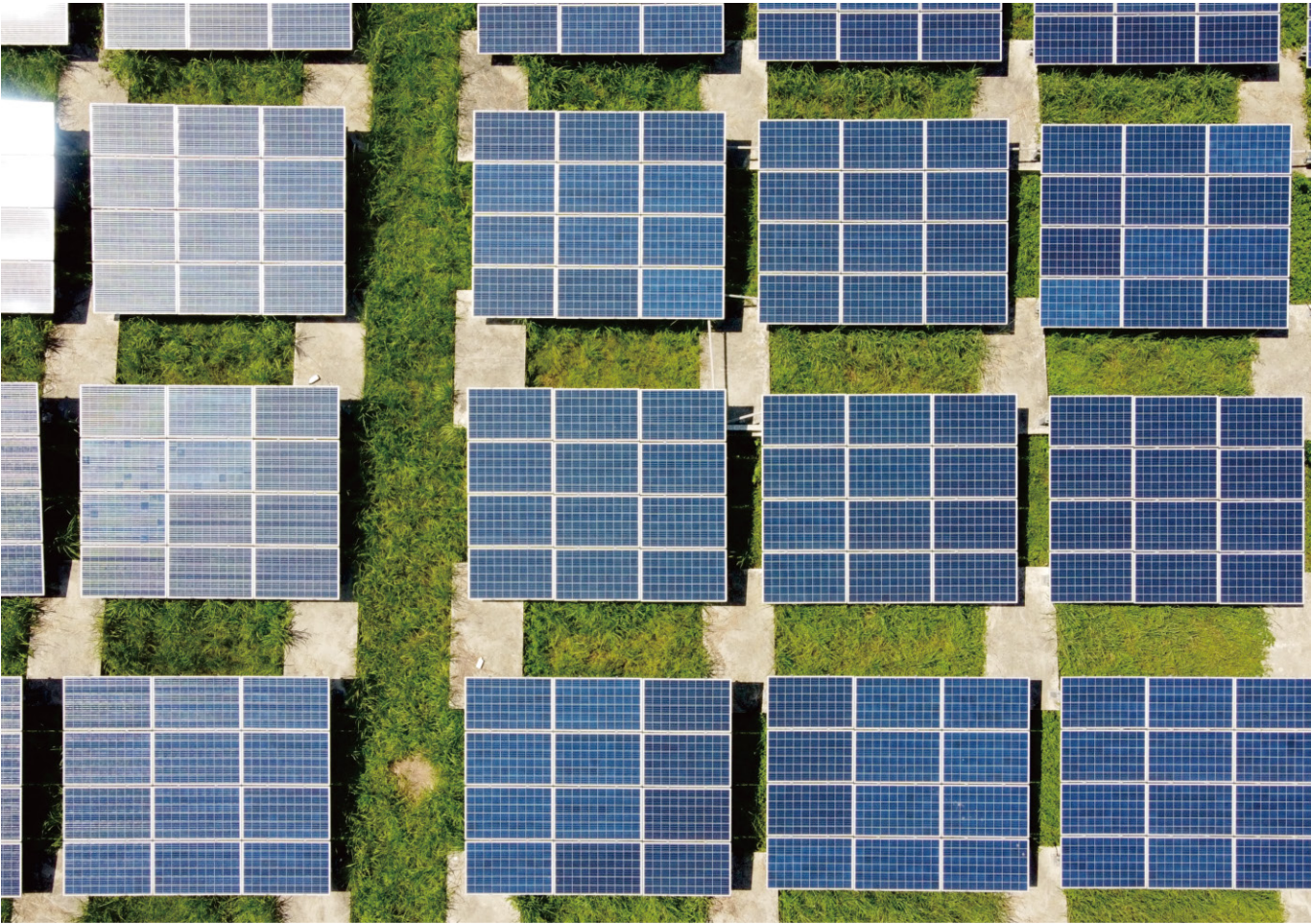
25 / 30 / 33 / 36 / 40 / 45 / 50 kW

THREE-PHASE THREE TO FOUR MPPTS



Product advantages

- Max. efficiency up to 98.80%
- Up to 4 MPPTs with DC overload capability (up to 150%)
- Type II SPD for both DC and AC side
- Prolonged AC overload capability (110%)
- Low start-up voltage, wide MPPT voltage range
- Compatible with 500 W+ modules
- I-V curve scanning function



Datasheet	SOFAR 25KTLX-G3	SOFAR 30KTLX-G3	SOFAR 33KTLX-G3	SOFAR 36KTLX-G3	SOFAR 40KTLX-G3	SOFAR 45KTLX-G3	SOFAR 50KTLX-G3
Input (DC)							
Max. input voltage	1100V						
Rated input voltage	620V						
Start-up voltage	200V						
MPPT operating voltage range	180V-1000V						
Number of MPPTs	3				4		
Number of DC inputs	2 for each MPPT						
Max. input MPPT current	3*40A	3*40A	3*40A	3*40A	4*40A	4*40A	4*40A
Max. input short circuit current	3*50A	3*50A	3*50A	3*50A	4*50A	4*50A	4*50A
Output (AC)							
Rated output power	25000W	30000W	33000W	36000W	40000W	45000W	50000W
Max. apparent power	28000VA	34000VA	37000VA	40000VA	44000VA	50000VA	55000VA
Max. output current	42.4A	51.5A	56A	60.6A	66.7A	75.8A	83.3A
Rated output voltage	3/N/PE, 230/400Vac						
Output voltage range	310Vac-480Vac						
Rated output frequency	50/60Hz						
Output frequency range	45Hz-55Hz/55Hz-65Hz						
Active power adjustable range	0-100%						
THDi	<3%						
Power factor	1 (adjustable +/-0.8)						
Efficiency							
Max. efficiency	98.6%	98.6%	98.6%	98.6%	98.8%	98.8%	98.8%
European efficiency	98.2%	98.2%	98.2%	98.2%	98.2%	98.2%	98.2%
Protection							
DC reverse polarity protection	Yes						
Anti-islanding protection	Yes						
Leakage current protection	Yes						
Ground fault monitoring	Yes						
PV-array string fault monitoring	Yes						
DC switch	Yes						
SPD	PV: type II, AC: type II						
General Data							
Ambient temperature range	-30 ℃--+60 ℃						
Self-consumption at night	<3W						
Topology	Transformerless						
Degree of protection	IP65						
Allowable relative humidity range	0-100%						
Max. operating altitude	4000m						
Cooling	Smart air cooling						
Dimension (W×H×D)	585×480×220mm						
Weight	36kg				37kg		
Display	LCD & Bluetooth +APP						
Communication	RS485/WiFi						
Standard	IEC/EN 61000-6-1/2/3/4, IEC 62116, IEC 61727, IEC 61683, IEC 60068-1/2/14/30, IEC/EN 62109-1/2 C99, VDE-AR-N 4105, VDE V 0126-1-1,CEI0-21, EN 50549-1, NRS 097-2-1,UNE 217002-2020						

*All specifications are subject to change without notice.