

Certificate of conformity with the following European Directive

Registered No.:
NE1105210027

Electromagnetic Compatibility Directive 2014/30/EU

Reference of applicant	Date of application	File reference	Test report No.	Date of issue	Expiry date
-	21.06.2021	TWR2106011	TWR2106011 001	23.06.2021	22.06.2026

This is to certify that the following product complies to all the provisions of the above mentioned European Directive and the following standards:



Product:	Grid-connected PV Inverter
Type designation:	KSG-25KT-M0, KSG-25KT-M1, KSG-25KT-M2, KSG-25KT-M3, KSG-30KT-M0, KSG-30KT-M1, KSG-30KT-M2, KSG-30KT-M3, KSG-30KT-M4, KSG-30KT-M5, KSG-33KT-M0, KSG-33KT-M1, KSG-33KT-M2, KSG-33KT-M3, KSG-33KT-M4, KSG-33KT-M5, KSG-36KT-M0, KSG-36KT-M1, KSG-36KT-M2, KSG-36KT-M3, KSG-36KT-M4, KSG-36KT-M5, KSG-40KT-M0, KSG-40KT-M1, KSG-40KT-M2, KSG-40KT-M3, KSG-40KT-M4, KSG-40KT-M5
Serial No.:	Engineering Sample of KSG-40KT-M3
Applicant:	Shenzhen Kstar New Energy Company Limited The 9 th Floor, R&D building, Kstar Industrial Park, Guangming Hi-Tech Industrial Zone, Shenzhen, Guangdong, P.R. China
Standard(s):	IEC 61000-6-1: 2016, EN IEC 61000-6-1: 2019, IEC 61000-6-3: 2020, EN 61000-6-3: 2007 + A1: 2011 + AC: 2012, EN IEC 61000-6-2: 2019, EN IEC 61000-6-4: 2019, IEC 61000-6-2: 2016, IEC 61000-6-4: 2018, IEC 61000-3-11: 2017, EN IEC 61000-3-11: 2019, IEC 61000-3-12: 2011, EN 61000-3-12: 2011

This Certificate of conformity is based on the evaluation of sample(s) of the above mentioned 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 Group. This is to certify that the tested sample is in compliance with the essential requirements referred to in Annex I of Council Directive 2014/30/EU and demonstrated by means of procedure described in Annex II of Council Directive 2014/30/EU. This certificate can be used by holder in connection with the EC declaration of conformity indicating conformity according to Electromagnetic Compatibility Directive.


 Certification Department

Email: info.pc@tuv-nord.com
www.tuv-nord.com
 TÜV NORD GROUP IN TAIWAN

The certificate can be verified by Online certification search in TÜV Asia Pacific Ltd. Taiwan Branch website: www.tuvnord.com.tw.
 The certification system is based on ISO 17065.


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


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Certificate of Conformity

Registered No.:
COC PVP01100/21B-01

File reference
PVP01100/21B-05

Test report No.
TRPVP01100/21B/05

Date of issue
2021-06-22

On the basis of the tests undertaken, the samples of the below product(s) have been found to comply with the essential requirements of the referenced specifications at the time the tests were carried out:

Applicant: **Shenzhen Kstar New Energy Company Limited**
The 9th Floor, R&D Building, Kstar Industrial Park, Guangming Hi-tech Industrial Zone, Shenzhen, Guangdong Province, 518107, PEOPLE'S REPUBLIC OF CHINA

Manufacturer: **Shenzhen Kstar New Energy Company Limited**
The 9th Floor, R&D Building, Kstar Industrial Park, Guangming Hi-tech Industrial Zone, Shenzhen, Guangdong Province, 518107, PEOPLE'S REPUBLIC OF CHINA

Factory: **Shenzhen KSTAR Science & Technology Co., Ltd. Guangming Branch**
Kstar High Tech Park, Guangming High Technology Town, Gongming Street, Bao'an District, Shenzhen, Guangdong Province, 516229, PEOPLE'S REPUBLIC OF CHINA

Product: Grid-Connected PV Inverter

Type designation: KSG-25KT-M0, KSG-25KT-M1, KSG-25KT-M2, KSG-25KT-M3, KSG-30KT-M0, KSG-30KT-M1, KSG-30KT-M2, KSG-30KT-M3, KSG-30KT-M4, KSG-30KT-M5, KSG-33KT-M0, KSG-33KT-M1, KSG-33KT-M2, KSG-33KT-M3, KSG-33KT-M4, KSG-33KT-M5, KSG-36KT-M0, KSG-36KT-M1, KSG-36KT-M2, KSG-36KT-M3, KSG-36KT-M4, KSG-36KT-M5, KSG-40KT-M0, KSG-40KT-M1, KSG-40KT-M2, KSG-40KT-M3, KSG-40KT-M4, KSG-40KT-M5



Renewable Energy

BOS-T-015 COC



中国认可
国际互认
产品
PRODUCT
CNAS C183-P

TÜV NORD (HANGZHOU) CO., LTD.
Member of TÜV NORD Group
Tel: +86-571-85386989
Fax: +86-571-85386986
www.tuv-nord.com/cn
P.R. China

Certificate of Conformity

Certification fundamental(s): BOS-P-01 Rev. 00

Standard(s): IEC 61727:2004, IEC 62116:2014

See test report for detailed information.

This document is based on the evaluation of the samples of the above mentioned product(s). It does not imply an assessment of the mass-production of the product(s), and it does not permit the use of a TÜV NORD mark. The holder of this document may use it in connection with the related test report(s).



Renewable Energy

BOS-T-015 COC



中国认可
国际互认
产品
PRODUCT
CNAS C183-P

TÜV NORD (HANGZHOU) CO., LTD.
Member of TÜV NORD Group
Tel: +86-571-85386989
Fax: +86-571-85386986
www.tuv-nord.com/cn
P.R. China

CERTIFICATE

of conformity with the following European Directives

Low Voltage Directive 2014/35/EU

This certifies that below described products of the applicant:

Shenzhen Kstar New Energy Company Limited.

The 9th Floor, R&D Building, Kstar Industrial Park, Guangming
Hi-tech Industrial Zone, Shenzhen, Guangdong Province,
518107, PEOPLE'S REPUBLIC OF 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):	Grid-Connected PV Inverter
Model type(s):	KSG-25KT-M0, KSG-25KT-M1, KSG-25KT-M2, KSG-25KT-M3, KSG-30KT-M0, KSG-30KT-M1, KSG-30KT-M2, KSG-30KT-M3, KSG-30KT-M4, KSG-30KT-M5, KSG-33KT-M0, KSG-33KT-M1, KSG-33KT-M2, KSG-33KT-M3, KSG-33KT-M4, KSG-33KT-M5, KSG-36KT-M0, KSG-36KT-M1, KSG-36KT-M2, KSG-36KT-M3, KSG-36KT-M4, KSG-36KT-M5, KSG-40KT-M0, KSG-40KT-M1, KSG-40KT-M2, KSG-40KT-M3, KSG-40KT-M4, KSG-40KT-M5
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 - 069
Test report no.:	492011722.001
File no.:	PVP01100/21B-01

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

Essen, 2021-06-25

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.

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to Certificate registration no. 44 799 21 406749 - 069

Description of product(s):

Model type	KSG-40KT-M0		
General information			
Type of inverter	No-Isolated	Separated by	Transformerless
Safety Class	Class I	IP grade	IP66
Over-voltage Category	PV Input: II AC Output: III	Pollution degree	External: 3 Internal: 2
Operating temperature	-25°C to 60°C (>45°C derating)	Altitude	4000m (>3000m derating)
Weight	32.5kg	Dimension (W x H x D)	380mm x 483mm x 227mm
Firmware of control board	0.0.0	Firmware of LCD	1.0.0
PV input			
Vmax	1100V d.c.	Isc	40A d.c.*3
MPP voltage range	200V d.c. - 1000V d.c.	Number of MPPT tracking	3
Back-feed current	0A	Max input current	26A d.c.*3
AC output			
Rated Output Voltage	400/230V a.c. 3P+N+PE	Rated Output Frequency	50Hz/60Hz
Rated output power	40kW	Max. apparent power	44kVA



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Max output current:	63.8 A a.c.	Power factor $\cos\phi$	[-0.8, 0.8]
Model type	KSG-40KT-M1		
General information			
Type of inverter.....	No-Isolated	Separated by.....	Transformerless
Safety Class	Class I	IP grade.....	IP66
Over-voltage Category	PV Input: II AC Output: III	Pollution degree	External: 3 Internal: 2
Operating temperature	-25°C to 60°C (>45°C derating)	Altitude	4000m (>3000m derating)
Weight	32.5kg	Dimension (W x H x D)	380mm x 483mm x 227mm
Firmware of control board	0.0.0	Firmware of LCD.....	1.0.0
PV input			
Vmax	1100V d.c.	Isc.....	40A d.c.*3
MPP voltage range	200V d.c. - 1000V d.c.	Number of MPPT tracking.....	3
Back-feed current	0A	Max input current.....	30A d.c.*3
AC output			
Rated Output Voltage.....	400/230V a.c. 3P+N+PE	Rated Output Frequency.....	50Hz/60Hz



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Rated output power	40kW	Max. apparent power	44kVA
Max output current.....	63.8 A a.c.	Power factor cosφ	[-0.8, 0.8]

Model type	KSG-40KT-M2		
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General information

Type of inverter.....	No-Isolated	Separated by.....	Transformerless
Safety Class	Class I	IP grade.....	IP66
Over-voltage Category	PV Input: II AC Output: III	Pollution degree	External: 3 Internal: 2
Operating temperature	-25°C to 60°C (>45°C derating)	Altitude	4000m (>3000m derating)
Weight	32.5kg	Dimension (W x H x D)	380mm x 483mm x 227mm
Firmware of control board	0.0.0	Firmware of LCD	1.0.0

PV input

Vmax	1100V d.c.	Isc.....	60A/60A/30A
MPP voltage range.....	200V d.c. - 1000V d.c.	Number of MPPT tracking.....	3
Back-feed current	0A	Max input current.....	36A/36A/18A

AC output



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Rated Output Voltage	400/230V a.c. 3P+N+PE	Rated Output Frequency.....	50Hz/60Hz
Rated output power	40kW	Max. apparent power	44kVA
Max output current.....	63.8 A a.c.	Power factor cosφ	[-0.8, 0.8]

Model type	KSG-40KT-M3		
General information			
Type of inverter.....	No-Isolated	Separated by.....	Transformerless
Safety Class	Class I	IP grade.....	IP66
Over-voltage Category	PV Input: II AC Output: III	Pollution degree	External: 3 Internal: 2
Operating temperature	-25°C to 60°C (>45°C derating)	Altitude	4000m (>3000m derating)
Weight	32.5kg	Dimension (W x H x D)	380mm x 483mm x 227mm
Firmware of control board	0.0.0	Firmware of LCD	1.0.0
PV input			
Vmax	1100V d.c.	Isc.....	60A/60A/30A
MPP voltage range	200V d.c. - 1000V d.c.	Number of MPPT tracking.....	3
Back-feed current	0A	Max input current.....	40A/40A/20A



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AC output			
Rated Output Voltage..... :	400/230V a.c. 3P+N+PE	Rated Output Frequency..... :	50Hz/60Hz
Rated output power..... :	40kW	Max. apparent power..... :	44kVA
Max output current..... :	63.8 A a.c.	Power factor cosφ..... :	[-0.8, 0.8]

Model type..... :	KSG-40KT-M4		
General information			
Type of inverter..... :	No-Isolated	Separated by..... :	Transformerless
Safety Class..... :	Class I	IP grade..... :	IP66
Over-voltage Category..... :	PV Input: II AC Output: III	Pollution degree..... :	External: 3 Internal: 2
Operating temperature..... :	-25°C to 60°C (>45°C derating)	Altitude..... :	4000m (>3000m derating)
Weight..... :	32.5kg	Dimension (W x H x D)..... :	380mm x 483mm x 227mm
Firmware of control board..... :	0.0.0	Firmware of LCD..... :	1.0.0
PV input			
Vmax..... :	1100V d.c.	Isc..... :	60A d.c.*2
MPP voltage range..... :	200V d.c. - 1000V d.c.	Number of MPPT tracking..... :	2



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Back-feed current	0A	Max input current.....	40A d.c.*2
AC output			
Rated Output Voltage	400/230V a.c. 3P+N+PE	Rated Output Frequency.....	50Hz/60Hz
Rated output power	40kW	Max. apparent power	44kVA
Max output current.....	63.8 A a.c.	Power factor cosφ	[-0.8, 0.8]

Model type	KSG-40KT-M5		
General information			
Type of inverter.....	No-Isolated	Separated by.....	Transformerless
Safety Class	Class I	IP grade.....	IP66
Over-voltage Category	PV Input: II AC Output: III	Pollution degree	External: 3 Internal: 2
Operating temperature	-25°C to 60°C (>45°C derating)	Altitude	4000m (>3000m derating)
Weight	32.5kg	Dimension (W x H x D)	380mm x 483mm x 247mm
Firmware of control board	0.0.0	Firmware of LCD	1.0.0
PV input			
Vmax	1100V d.c.	Isc.....	60A/60A/40A



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MPP voltage range	200V d.c. - 1000V d.c.	Number of MPPT tracking.....	3
Back-feed current	0A	Max input current.....	39A/39A/26A
AC output			
Rated Output Voltage	400/230V a.c. 3P+N+PE	Rated Output Frequency.....	50Hz/60Hz
Rated output power	40kW	Max. apparent power	44kVA
Max output current.....	63.8 A a.c.	Power factor cosφ	[-0.8, 0.8]

Model type	KSG-36KT-M0		
General information			
Type of inverter.....	No-Isolated	Separated by.....	Transformerless
Safety Class	Class I	IP grade.....	IP66
Over-voltage Category	PV Input: II AC Output: III	Pollution degree	External: 3 Internal: 2
Operating temperature	-25°C to 60°C (>45°C derating)	Altitude	4000m (>3000m derating)
Weight	32.5kg	Dimension (W x H x D)	380mm x 483mm x 227mm
Firmware of control board	0.0.0	Firmware of LCD	1.0.0
PV input			



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Vmax	1100V d.c.	Isc.....	40A d.c.*3
MPP voltage range.....	200V d.c. - 1000V d.c.	Number of MPPT tracking.....	3
Back-feed current	0A	Max input current.....	26A d.c.*3
AC output			
Rated Output Voltage.....	400/230V a.c. 3P+N+PE	Rated Output Frequency.....	50Hz/60Hz
Rated output power	36kW	Max. apparent power	39.6kVA
Max output current.....	57.3 A a.c.	Power factor cosφ	[-0.8, 0.8]

Model type	KSG-36KT-M1		
General information			
Type of inverter.....	No-Isolated	Separated by.....	Transformerless
Safety Class	Class I	IP grade.....	IP66
Over-voltage Category	PV Input: II AC Output: III	Pollution degree	External: 3 Internal: 2
Operating temperature	-25°C to 60°C (>45°C derating)	Altitude	4000m (>3000m derating)
Weight	32.5kg	Dimension (W x H x D).....	380mm x 483mm x 227mm
Firmware of control board	0.0.0	Firmware of LCD	1.0.0



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PV input			
Vmax	1100V d.c.	Isc.....	40A d.c.*3
MPP voltage range.....	200V d.c. - 1000V d.c.	Number of MPPT tracking.....	3
Back-feed current	0A	Max input current.....	30A d.c.*3
AC output			
Rated Output Voltage.....	400/230V a.c. 3P+N+PE	Rated Output Frequency.....	50Hz/60Hz
Rated output power	36kW	Max. apparent power	39.6kVA
Max output current	57.3 A a.c.	Power factor cosφ	[-0.8, 0.8]

Model type	KSG-36KT-M2		
General information			
Type of inverter	No-Isolated	Separated by	Transformerless
Safety Class.....	Class I	IP grade	IP66
Over-voltage Category.....	PV Input: II AC Output: III	Pollution degree.....	External: 3 Internal: 2
Operating temperature.....	-25°C to 60°C (>45°C derating)	Altitude.....	4000m (>3000m derating)
Weight.....	32.5kg	Dimension (W x H x D).....	380mm x 483mm x 227mm



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Firmware of control board	0.0.0	Firmware of LCD	1.0.0
PV input			
Vmax	1100V d.c.	Isc	60A/60A/30A
MPP voltage range	200V d.c. - 1000V d.c.	Number of MPPT tracking	3
Back-feed current.....	0A	Max input current.....	36A/36A/18A
AC output			
Rated Output Voltage	400/230V a.c. 3P+N+PE	Rated Output Frequency	50Hz/60Hz
Rated output power.....	36kW	Max. apparent power	39.6kVA
Max output current	57.3 A a.c.	Power factor cosφ.....	[-0.8, 0.8]

Model type	KSG-36KT-M3		
General information			
Type of inverter	No-Isolated	Separated by	Transformerless
Safety Class	Class I	IP grade	IP66
Over-voltage Category	PV Input: II AC Output: III	Pollution degree.....	External: 3 Internal: 2
Operating temperature.....	-25°C to 60°C (>45°C derating)	Altitude.....	4000m (>3000m derating)



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Weight.....:	32.5kg	Dimension (W x H x D).....:	380mm x 483mm x 227mm
Firmware of control board.....:	0.0.0	Firmware of LCD	1.0.0
PV input			
Vmax.....:	1100V d.c.	Isc	60A/60A/30A
MPP voltage range	200V d.c. - 1000V d.c.	Number of MPPT tracking	3
Back-feed current.....:	0A	Max input current.....:	40A/40A/20A
AC output			
Rated Output Voltage	400/230V a.c. 3P+N+PE	Rated Output Frequency	50Hz/60Hz
Rated output power.....:	36kW	Max. apparent power	39.6kVA
Max output current	57.3 A a.c.	Power factor cosφ.....:	[-0.8, 0.8]

Model type	KSG-36KT-M4		
General information			
Type of inverter	No-Isolated	Separated by	Transformerless
Safety Class.....:	Class I	IP grade	IP66
Over-voltage Category.....:	PV Input: II AC Output: III	Pollution degree.....:	External: 3 Internal: 2
Operating temperature.....:	-25°C to 60°C	Altitude	4000m



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	(>45°C derating)		(>3000m derating)
Weight.....:	32.5kg	Dimension (W x H x D).....:	380mm x 483mm x 227mm
Firmware of control board.....:	0.0.0	Firmware of LCD.....:	1.0.0
PV input			
Vmax.....:	1100V d.c.	Isc.....:	60A d.c.*2
MPP voltage range.....:	200V d.c. - 1000V d.c.	Number of MPPT tracking.....:	2
Back-feed current.....:	0A	Max input current.....:	40A d.c.*2
AC output			
Rated Output Voltage.....:	400/230V a.c. 3P+N+PE	Rated Output Frequency.....:	50Hz/60Hz
Rated output power.....:	36kW	Max. apparent power.....:	39.6kVA
Max output current.....:	57.3 A a.c.	Power factor cosφ.....:	[-0.8, 0.8]

Model type.....:	KSG-36KT-M5		
General information			
Type of inverter.....:	No-Isolated	Separated by.....:	Transformerless
Safety Class.....:	Class I	IP grade.....:	IP66
Over-voltage Category.....:	PV Input: II AC Output: III	Pollution degree.....:	External: 3 Internal: 2



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Operating temperature.....:	-25°C to 60°C (>45°C derating)	Altitude.....:	4000m (>3000m derating)
Weight.....:	32.5kg	Dimension (W x H x D).....:	380mm x 483mm x 247mm
Firmware of control board.....:	0.0.0	Firmware of LCD.....:	1.0.0
PV input			
Vmax.....:	1100V d.c.	Isc.....:	60A/60A/40A
MPP voltage range.....:	200V d.c. - 1000V d.c.	Number of MPPT tracking.....:	3
Back-feed current.....:	0A	Max input current.....:	39A/39A/26A
AC output			
Rated Output Voltage.....:	400/230V a.c. 3P+N+PE	Rated Output Frequency.....:	50Hz/60Hz
Rated output power.....:	36kW	Max. apparent power.....:	39.6kVA
Max output current.....:	57.3 A a.c.	Power factor cosφ.....:	[-0.8, 0.8]

Model type.....:	KSG-33KT-M0		
General information			
Type of inverter.....:	No-Isolated	Separated by.....:	Transformerless
Safety Class.....:	Class I	IP grade.....:	IP66
Over-voltage Category.....:	PV Input: II	Pollution degree.....:	External: 3



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	AC Output: III		Internal: 2
Operating temperature.....:	-25°C to 60°C (>45°C derating)	Altitude.....:	4000m (>3000m derating)
Weight.....:	32.5kg	Dimension (W x H x D).....:	380mm x 483mm x 227mm
Firmware of control board.....:	0.0.0	Firmware of LCD.....:	1.0.0
PV input			
Vmax.....:	1100V d.c.	Isc.....:	40A d.c.*3
MPP voltage range.....:	200V d.c. - 1000V d.c.	Number of MPPT tracking.....:	3
Back-feed current.....:	0A	Max input current.....:	26A d.c.*3
AC output			
Rated Output Voltage.....:	400/230V a.c. 3P+N+PE	Rated Output Frequency.....:	50Hz/60Hz
Rated output power.....:	33kW	Max. apparent power.....:	36.3kVA
Max output current.....:	52.6 A a.c.	Power factor cosφ.....:	[-0.8, 0.8]

Model type.....:	KSG-33KT-M1		
General information			
Type of inverter.....:	No-Isolated	Separated by.....:	Transformerless
Safety Class.....:	Class I	IP grade.....:	IP66



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Over-voltage Category.....:	PV Input: II AC Output: III	Pollution degree.....:	External: 3 Internal: 2
Operating temperature.....:	-25°C to 60°C (>45°C derating)	Altitude.....:	4000m (>3000m derating)
Weight.....:	32.5kg	Dimension (W x H x D).....:	380mm x 483mm x 227mm
Firmware of control board.....:	0.0.0	Firmware of LCD.....:	1.0.0
PV input			
Vmax.....:	1100V d.c.	Isc.....:	40A d.c.*3
MPP voltage range.....:	200V d.c. - 1000V d.c.	Number of MPPT tracking.....:	3
Back-feed current.....:	0A	Max input current.....:	30A d.c.*3
AC output			
Rated Output Voltage.....:	400/230V a.c. 3P+N+PE	Rated Output Frequency.....:	50Hz/60Hz
Rated output power.....:	33kW	Max. apparent power.....:	36.3kVA
Max output current.....:	52.6 A a.c.	Power factor cosφ.....:	[-0.8, 0.8]

Model type.....:	KSG-33KT-M2		
General information			
Type of inverter.....:	No-Isolated	Separated by.....:	Transformerless



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Safety Class.....:	Class I	IP grade.....:	IP66
Over-voltage Category.....:	PV Input: II AC Output: III	Pollution degree.....:	External: 3 Internal: 2
Operating temperature.....:	-25°C to 60°C (>45°C derating)	Altitude.....:	4000m (>3000m derating)
Weight.....:	32.5kg	Dimension (W x H x D).....:	380mm x 483mm x 227mm
Firmware of control board.....:	0.0.0	Firmware of LCD.....:	1.0.0
PV input			
Vmax.....:	1100V d.c.	Isc.....:	60A/60A/30A
MPP voltage range.....:	200V d.c. - 1000V d.c.	Number of MPPT tracking.....:	3
Back-feed current.....:	0A	Max input current.....:	36A/36A/18A
AC output			
Rated Output Voltage.....:	400/230V a.c. 3P+N+PE	Rated Output Frequency.....:	50Hz/60Hz
Rated output power.....:	33kW	Max. apparent power.....:	36.3kVA
Max output current.....:	52.6 A a.c.	Power factor cosφ.....:	[-0.8, 0.8]

Model type.....:	KSG-33KT-M3
General information	



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Type of inverter	No-Isolated	Separated by	Transformerless
Safety Class	Class I	IP grade	IP66
Over-voltage Category	PV Input: II AC Output: III	Pollution degree	External: 3 Internal: 2
Operating temperature	-25°C to 60°C (>45°C derating)	Altitude	4000m (>3000m derating)
Weight	32.5kg	Dimension (W x H x D)	380mm x 483mm x 227mm
Firmware of control board	0.0.0	Firmware of LCD	1.0.0
PV input			
Vmax	1100V d.c.	Isc	60A/60A/30A
MPP voltage range	200V d.c. - 1000V d.c.	Number of MPPT tracking	3
Back-feed current	0A	Max input current	40A/40A/20A
AC output			
Rated Output Voltage	400/230V a.c. 3P+N+PE	Rated Output Frequency	50Hz/60Hz
Rated output power	33kW	Max. apparent power	36.3kVA
Max output current	52.6 A a.c.	Power factor cosφ	[-0.8, 0.8]



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Model type	KSG-33KT-M4		
General information			
Type of inverter	No-Isolated	Separated by	Transformerless
Safety Class	Class I	IP grade	IP66
Over-voltage Category	PV Input: II AC Output: III	Pollution degree	External: 3 Internal: 2
Operating temperature	-25°C to 60°C (>45°C derating)	Altitude	4000m (>3000m derating)
Weight	32.5kg	Dimension (W x H x D)	380mm x 483mm x 227mm
Firmware of control board	0.0.0	Firmware of LCD	1.0.0
PV input			
Vmax	1100V d.c.	Isc	60A d.c.*2
MPP voltage range	200V d.c. - 1000V d.c.	Number of MPPT tracking	2
Back-feed current	0A	Max input current	40A d.c.*2
AC output			
Rated Output Voltage	400/230V a.c. 3P+N+PE	Rated Output Frequency	50Hz/60Hz
Rated output power	33kW	Max. apparent power	36.3kVA
Max output current	52.6 A a.c.	Power factor cosφ	[-0.8, 0.8]



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Model type	KSG-33KT-M5		
General information			
Type of inverter	No-Isolated	Separated by	Transformerless
Safety Class	Class I	IP grade	IP66
Over-voltage Category	PV Input: II AC Output: III	Pollution degree	External: 3 Internal: 2
Operating temperature	-25°C to 60°C (>45°C derating)	Altitude	4000m (>3000m derating)
Weight	32.5kg	Dimension (W x H x D)	380mm x 483mm x 247mm
Firmware of control board	0.0.0	Firmware of LCD	1.0.0
PV input			
Vmax	1100V d.c.	Isc	60A/60A/40A
MPP voltage range	200V d.c. - 1000V d.c.	Number of MPPT tracking	3
Back-feed current	0A	Max input current	39A/39A/26A
AC output			
Rated Output Voltage	400/230V a.c. 3P+N+PE	Rated Output Frequency	50Hz/60Hz
Rated output power	33kW	Max. apparent power	36.3kVA
Max output current	52.6 A a.c.	Power factor cosφ	[-0.8, 0.8]



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Model type	KSG-30KT-M0		
General information			
Type of inverter	No-Isolated	Separated by	Transformerless
Safety Class	Class I	IP grade	IP66
Over-voltage Category	PV Input: II AC Output: III	Pollution degree	External: 3 Internal: 2
Operating temperature	-25°C to 60°C (>45°C derating)	Altitude	4000m (>3000m derating)
Weight	32.5kg	Dimension (W x H x D)	380mm x 483mm x 227mm
Firmware of control board	0.0.0	Firmware of LCD	1.0.0
PV input			
Vmax	1100V d.c.	Isc	40A d.c.*3
MPP voltage range	200V d.c. - 1000V d.c.	Number of MPPT tracking	3
Back-feed current	0A	Max input current	26A d.c.*3
AC output			
Rated Output Voltage	400/230V a.c. 3P+N+PE	Rated Output Frequency	50Hz/60Hz
Rated output power	30kW	Max. apparent power	33kVA
Max output current	47.8A a.c.	Power factor cosφ	[-0.8, 0.8]



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Model type	KSG-30KT-M1		
General information			
Type of inverter	No-Isolated	Separated by	Transformerless
Safety Class	Class I	IP grade	IP66
Over-voltage Category	PV Input: II AC Output: III	Pollution degree	External: 3 Internal: 2
Operating temperature	-25°C to 60°C (>45°C derating)	Altitude	4000m (>3000m derating)
Weight	32.5kg	Dimension (W x H x D)	380mm x 483mm x 227mm
Firmware of control board	0.0.0	Firmware of LCD	1.0.0
PV input			
Vmax	1100V d.c.	Isc	40A d.c.*3
MPP voltage range	200V d.c. - 1000V d.c.	Number of MPPT tracking	3
Back-feed current	0A	Max input current	30A d.c.*3
AC output			
Rated Output Voltage	400/230V a.c. 3P+N+PE	Rated Output Frequency	50Hz/60Hz
Rated output power	30kW	Max. apparent power	33kVA
Max output current	47.8A a.c.	Power factor cosφ	[-0.8, 0.8]



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Model type	KSG-30KT-M2		
General information			
Type of inverter	No-Isolated	Separated by	Transformerless
Safety Class	Class I	IP grade	IP66
Over-voltage Category	PV Input: II AC Output: III	Pollution degree	External: 3 Internal: 2
Operating temperature	-25°C to 60°C (>45°C derating)	Altitude	4000m (>3000m derating)
Weight	32.5kg	Dimension (W x H x D)	380mm x 483mm x 227mm
Firmware of control board	0.0.0	Firmware of LCD	1.0.0
PV input			
Vmax	1100V d.c.	Isc	60A/60A/30A
MPP voltage range	200V d.c. - 1000V d.c.	Number of MPPT tracking	3
Back-feed current	0A	Max input current	36A/36A/18A
AC output			



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Rated Output Voltage	400/230V a.c. 3P+N+PE	Rated Output Frequency	50Hz/60Hz
Rated output power.....	30kW	Max. apparent power	33kVA
Max output current	47.8A a.c.	Power factor cosφ.....	[-0.8, 0.8]

Model type	KSG-30KT-M3		
General information			
Type of inverter	No-Isolated	Separated by	Transformerless
Safety Class	Class I	IP grade	IP66
Over-voltage Category	PV Input: II AC Output: III	Pollution degree.....	External: 3 Internal: 2
Operating temperature.....	-25°C to 60°C (>45°C derating)	Altitude	4000m (>3000m derating)
Weight.....	32.5kg	Dimension (W x H x D).....	380mm x 483mm x 227mm
Firmware of control board	0.0.0	Firmware of LCD	1.0.0
PV input			
Vmax.....	1100V d.c.	Isc	60A/60A/30A
MPP voltage range	200V d.c. - 1000V d.c.	Number of MPPT tracking	3



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Back-feed current.....:	0A	Max input current.....:	40A/40A/20A
AC output			
Rated Output Voltage	400/230V a.c. 3P+N+PE	Rated Output Frequency	50Hz/60Hz
Rated output power.....:	30kW	Max. apparent power	33kVA
Max output current.....:	47.8A a.c.	Power factor cosφ.....:	[-0.8, 0.8]

Model type	KSG-30KT-M4		
General information			
Type of inverter	No-Isolated	Separated by	Transformerless
Safety Class.....:	Class I	IP grade	IP66
Over-voltage Category.....:	PV Input: II AC Output: III	Pollution degree.....:	External: 3 Internal: 2
Operating temperature.....:	-25°C to 60°C (>45°C derating)	Altitude.....:	4000m (>3000m derating)
Weight.....:	32.5kg	Dimension (W x H x D).....:	380mm x 483mm x 227mm
Firmware of control board.....:	0.0.0	Firmware of LCD	1.0.0
PV input			
Vmax.....:	1100V d.c.	Isc	60A d.c.*2



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MPP voltage range	200V d.c. - 1000V d.c.	Number of MPPT tracking	2
Back-feed current.....	0A	Max input current.....	40A d.c.*2
AC output			
Rated Output Voltage	400/230V a.c. 3P+N+PE	Rated Output Frequency	50Hz/60Hz
Rated output power.....	30kW	Max. apparent power	33kVA
Max output current	47.8A a.c.	Power factor cosφ.....	[-0.8, 0.8]

Model type	KSG-30KT-M5		
General information			
Type of inverter	No-Isolated	Separated by	Transformerless
Safety Class.....	Class I	IP grade	IP66
Over-voltage Category.....	PV Input: II AC Output: III	Pollution degree.....	External: 3 Internal: 2
Operating temperature.....	-25°C to 60°C (>45°C derating)	Altitude.....	4000m (>3000m derating)
Weight.....	32.5kg	Dimension (W x H x D).....	380mm x 483mm x 247mm
Firmware of control board	0.0.0	Firmware of LCD	1.0.0
PV input			



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Vmax.....:	1100V d.c.	Isc.....:	60A/60A/40A
MPP voltage range.....:	200V d.c. - 1000V d.c.	Number of MPPT tracking.....:	3
Back-feed current.....:	0A	Max input current.....:	39A/39A/26A
AC output			
Rated Output Voltage.....:	400/230V a.c. 3P+N+PE	Rated Output Frequency.....:	50Hz/60Hz
Rated output power.....:	30kW	Max. apparent power.....:	33kVA
Max output current.....:	47.8A a.c.	Power factor cosφ.....:	[-0.8, 0.8]

Model type.....:	KSG-25KT-M0		
General information			
Type of inverter.....:	No-Isolated	Separated by.....:	Transformerless
Safety Class.....:	Class I	IP grade.....:	IP66
Over-voltage Category.....:	PV Input: II AC Output: III	Pollution degree.....:	External: 3 Internal: 2
Operating temperature.....:	-25°C to 60°C (>45°C derating)	Altitude.....:	4000m (>3000m derating)
Weight.....:	32.5kg	Dimension (W x H x D).....:	380mm x 483mm x 227mm
Firmware of control board.....:	0.0.0	Firmware of LCD.....:	1.0.0



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PV input			
Vmax.....:	1100V d.c.	Isc.....:	40A d.c.*3
MPP voltage range.....:	200V d.c. - 1000V d.c.	Number of MPPT tracking.....:	3
Back-feed current.....:	0A	Max input current.....:	26A d.c.*3
AC output			
Rated Output Voltage.....:	400/230V a.c. 3P+N+PE	Rated Output Frequency.....:	50Hz/60Hz
Rated output power.....:	25kW	Max. apparent power.....:	27.5kVA
Max output current.....:	39.9A a.c.	Power factor cosφ.....:	[-0.8, 0.8]

Model type.....:	KSG-25KT-M1		
General information			
Type of inverter.....:	No-Isolated	Separated by.....:	Transformerless
Safety Class.....:	Class I	IP grade.....:	IP66
Over-voltage Category.....:	PV Input: II AC Output: III	Pollution degree.....:	External: 3 Internal: 2
Operating temperature.....:	-25°C to 60°C (>45°C derating)	Altitude.....:	4000m (>3000m derating)
Weight.....:	32.5kg	Dimension (W x H x D).....:	380mm x 483mm x 227mm



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Firmware of control board.....:	0.0.0	Firmware of LCD	1.0.0
PV input			
Vmax.....:	1100V d.c.	Isc	40A d.c.*3
MPP voltage range	200V d.c. - 1000V d.c.	Number of MPPT tracking	3
Back-feed current.....:	0A	Max input current.....:	30A d.c.*3
AC output			
Rated Output Voltage	400/230V a.c. 3P+N+PE	Rated Output Frequency	50Hz/60Hz
Rated output power.....:	25kW	Max. apparent power	27.5kVA
Max output current	39.9A a.c.	Power factor cosφ.....:	[-0.8, 0.8]

Model type	KSG-25KT-M2		
General information			
Type of inverter	No-Isolated	Separated by	Transformerless
Safety Class	Class I	IP grade	IP66
Over-voltage Category.....:	PV Input: II AC Output: III	Pollution degree.....:	External: 3 Internal: 2
Operating temperature.....:	-25°C to 60°C (>45°C derating)	Altitude.....:	4000m (>3000m derating)



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Weight.....:	32.5kg	Dimension (W x H x D).....:	380mm x 483mm x 227mm
Firmware of control board.....:	0.0.0	Firmware of LCD.....:	1.0.0
PV input			
Vmax.....:	1100V d.c.	Isc.....:	60A d.c.*2
MPP voltage range.....:	200V d.c. - 1000V d.c.	Number of MPPT tracking.....:	2
Back-feed current.....:	0A	Max input current.....:	36A d.c.*2
AC output			
Rated Output Voltage.....:	400/230V a.c. 3P+N+PE	Rated Output Frequency.....:	50Hz/60Hz
Rated output power.....:	25kW	Max. apparent power.....:	27.5kVA
Max output current.....:	39.9A a.c.	Power factor cosφ.....:	[-0.8, 0.8]

Model type.....:	KSG-25KT-M3		
General information			
Type of inverter.....:	No-Isolated	Separated by.....:	Transformerless
Safety Class.....:	Class I	IP grade.....:	IP66
Over-voltage Category.....:	PV Input: II AC Output: III	Pollution degree.....:	External: 3 Internal: 2
Operating temperature.....:	-25°C to 60°C	Altitude.....:	4000m



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	(>45°C derating)		(>3000m derating)
Weight.....:	32.5kg	Dimension (W x H x D).....:	380mm x 483mm x 227mm
Firmware of control board.....:	0.0.0	Firmware of LCD.....:	1.0.0
PV input			
Vmax.....:	1100V d.c.	Isc.....:	60A d.c.*2
MPP voltage range.....:	200V d.c. - 1000V d.c.	Number of MPPT tracking.....:	2
Back-feed current.....:	0A	Max input current.....:	40A d.c.*2
AC output			
Rated Output Voltage.....:	400/230V a.c. 3P+N+PE	Rated Output Frequency.....:	50Hz/60Hz
Rated output power.....:	25kW	Max. apparent power.....:	27.5kVA
Max output current.....:	39.9A a.c.	Power factor cosφ.....:	[-0.8, 0.8]

Remark:

For detailed product information, please refer to CDF (Constructional Data Form) in Annex 4 of test report.



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Certification Body
Balance of System (BOS) for Photovoltaics

Essen, 2021-06-25

Certificate of Conformity

Registered No.:
COC PVP03041/21B-01

File reference
PVP03041/21B-03

Test report No.
TRPVP03041/21B/03

Date of issue
2021-07-29

On the basis of the tests undertaken, the samples of the below product(s) have been found to comply with the essential requirements of the referenced specifications at the time the tests were carried out:

Applicant: **Shenzhen Kstar New Energy Company Limited.**
The 9th Floor, R&D Building, Kstar Industrial Park, Guangming Hi-tech Industrial Zone, Shenzhen, Guangdong Province, 518107, PEOPLE'S REPUBLIC OF CHINA

Manufacturer: **Shenzhen Kstar New Energy Company Limited.**
The 9th Floor, R&D Building, Kstar Industrial Park, Guangming Hi-tech Industrial Zone, Shenzhen, Guangdong Province, 518107, PEOPLE'S REPUBLIC OF CHINA

Factory: **Shenzhen KSTAR Science & Technology Co., Ltd. Guangming Branch.**
Kstar High Tech Park, Guangming High Technology Town, Gongming Street, Bao'an District, Shenzhen, Guangdong Province, 516229, PEOPLE'S REPUBLIC OF CHINA

Product: Grid-connected PV Inverter

Type designation: KSG-25KT-M0, KSG-25KT-M1, KSG-25KT-M2, KSG-25KT-M3, KSG-30KT-M0, KSG-30KT-M1, KSG-30KT-M2, KSG-30KT-M3, KSG-30KT-M4, KSG-30KT-M5, KSG-33KT-M0, KSG-33KT-M1, KSG-33KT-M2, KSG-33KT-M3, KSG-33KT-M4, KSG-33KT-M5, KSG-36KT-M0, KSG-36KT-M1, KSG-36KT-M2, KSG-36KT-M3, KSG-36KT-M4, KSG-36KT-M5, KSG-40KT-M0, KSG-40KT-M1, KSG-40KT-M2, KSG-40KT-M3, KSG-40KT-M4, KSG-40KT-M5
Three-phase, Firmware version: 0.0.0



Certification fundamental(s): BOS-P-01 Rev. 00

Standard(s): DIN V VDE V 0126-1-1:2013

See test report for detailed information.

This document is based on the evaluation of the samples of the above mentioned product(s). It does not imply an assessment of the mass-production of the product(s), and it does not permit the use of a TÜV NORD mark. The holder of this document may use it in connection with the related test report(s).

A handwritten signature in blue ink, appearing to read "Zhang Peng" or similar, written in a cursive style.

Renewable Energy

BOS-T-005 COC

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TÜV NORD (HANGZHOU) CO., LTD.
Member of TÜV NORD Group
Tel: +86-571-85386989
Fax: +86-571-85386986
www.tuv-nord.com/cn
P.R. China

Version 1.3

Certificate of Conformity

Reingetragene Nr.:
Registered No.:
COCPPV03041/21B-03

Aktenzeichen
File reference
PVP03041/21B-01

Testbericht Nr.
Test report No.
TRPVP03041/21B/01

Ausstellungsdatum
Date of issue
2022-01-18

Auf der Grundlage der durchgeführten Prüfungen wurde festgestellt, dass die Muster des/der folgenden Produkte(s) zum Zeitpunkt der Durchführung der Prüfungen die wesentlichen Anforderungen der genannten Spezifikationen erfüllen:

On the basis of the tests undertaken, the samples of the below product(s) have been found to comply with the essential requirements of the referenced specifications at the time the tests were carried out:

Antragsteller: **Shenzhen Kstar New Energy Company Limited**
Applicant: The 9th Floor, R&D Building, Kstar Industrial Park, Guangming Hi-tech Industrial Zone, Shenzhen, Guangdong Province, 518107, PEOPLE'S REPUBLIC OF CHINA

Hersteller: **Shenzhen Kstar New Energy Company Limited**
Manufacturer: The 9th Floor, R&D Building, Kstar Industrial Park, Guangming Hi-tech Industrial Zone, Shenzhen, Guangdong Province, 518107, PEOPLE'S REPUBLIC OF CHINA

Fertigungsstätte: **Shenzhen KSTAR Science & Technology Co., Ltd. Guangming Branch**
Factory: Kstar High Tech Park, Guangming High Technology Town, Gongming Street, Bao'an District, Shenzhen, Guangdong Province, 516229, PEOPLE'S REPUBLIC OF CHINA

Produkt: Netzgekoppelter PV-Wechselrichter
Product: Grid-connected PV Inverter

Typenbezeichnung: KSG-25KT-M0, KSG-25KT-M1, KSG-25KT-M2, KSG-25KT-M3,
Type designation: KSG-30KT-M0, KSG-30KT-M1, KSG-30KT-M2, KSG-30KT-M3, KSG-30KT-M4, KSG-33KT-M0, KSG-33KT-M1, KSG-33KT-M2, KSG-33KT-M3, KSG-33KT-M4, KSG-36KT-M0, KSG-36KT-M1, KSG-36KT-M2, KSG-36KT-M3, KSG-36KT-M4, KSG-40KT-M0,



Renewable Energy

KSG-40KT-M1, KSG-40KT-M2, KSG-40KT-M3, KSG-40KT-M4

Zertifizierungsprogramm: BOS-P-01 Rev. 00

Certification program:

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

Certification fundamental(s): VDE-AR-N 4105:2018

Detaillierte Informationen finden Sie im Testbericht.

See test report for detailed information.

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TÜV NORD (HANGZHOU) CO., LTD.
Member of TÜV NORD Group
Tel: +86-571-85386989
Fax: +86-571-85386986
www.tuv-nord.com/cn
P.R. China

Version 1.0

E.6 Zertifikat für den NA-Schutz E.6 Certificate of the network and system protection	
Hersteller: Manufacturer:	Shenzhen Kstar New Energy Company Limited The 9th Floor, R&D Building, Kstar Industrial Park, Guangming Hi-tech Industrial Zone, Shenzhen, Guangdong Province, 518107, PEOPLE'S REPUBLIC OF CHINA
Typ NA-Schutz: Type of NS protection:	<input type="checkbox"/> Zentraler NA-Schutz: <i>Central NS protection</i> <input checked="" type="checkbox"/> Integrierter NA-Schutz: Zugewiesen an Stromerzeugungseinheit vom Typ: KSG-25KT-M0, KSG-25KT-M1, KSG-25KT-M2, KSG- 25KT-M3, KSG-30KT-M0, KSG-30KT-M1, KSG-30KT-M2, KSG-30KT-M3, KSG-30KT-M4, KSG-33KT-M0, KSG-33KT-M1, KSG-33KT-M2, KSG-33KT-M3, KSG-33KT-M4, KSG-36KT-M0, KSG-36KT-M1, KSG-36KT-M2, KSG-36KT-M3, KSG-36KT-M4, KSG-40KT-M0, KSG-40KT-M1, KSG-40KT-M2, KSG-40KT-M3, KSG-40KT-M4 <i>Integrated NS protection: Assigned to power generation unit of type: KSG-25KT-M0, KSG-25KT-M1, KSG-25KT-M2, KSG- 25KT-M3, KSG-30KT-M0, KSG-30KT-M1, KSG-30KT-M2, KSG-30KT-M3, KSG-30KT-M4, KSG-33KT-M0, KSG-33KT-M1, KSG-33KT-M2, KSG-33KT-M3, KSG-33KT-M4, KSG-36KT-M0, KSG-36KT-M1, KSG-36KT-M2, KSG-36KT-M3, KSG-36KT-M4, KSG-40KT-M0, KSG-40KT-M1, KSG-40KT-M2, KSG-40KT-M3, KSG-40KT-M4</i>
Netzanschlussregel: Network connection rule:	VDE-AR-N 4105:2018 "Erzeugungsanlagen am Niederspannungsnetz" <i>VDE-AR-N 4105:2018 "Generators connected to the low-voltage distribution network"</i> Technische Mindestanforderungen für Anschluss und Parallelbetrieb von Erzeugungsanlagen mit Anschluss an das Niederspannungsnetz <i>Technical minimum requirements for connection and parallel operation of power generation systems connected to the low-voltage network</i>
Prüfanforderung: Test requirement:	DIN VDE V 0124-100 (VDE V 0124-100):2020-06 "Netzintegration von Erzeugungsanlagen - Niederspannung" <i>DIN VDE V 0124-100 (VDE V 0124-100):2020-06 "Network integration of power generation systems - Low voltage"</i> Prüfanforderungen für Erzeugungseinheiten zum Anschluss und Parallelbetrieb am Niederspannungsnetz



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	<i>Test requirements for power generation units intended for connection to and parallel operation on the low-voltage network</i>
Prüfbericht: Test report:	TRPVP03041/21B/01 ausgestellt am 2022-01-18 <i>TRPVP03041/21B/01 issued on 2022-01-18</i>
Der oben bezeichnete Netz- und Anlagenschutz entspricht den Anforderungen der VDE-AR-N 4105. <i>The network and system protection designated above meets the requirements of VDE-AR-N 4105.</i> Dieses NA-Schutzzertifikat darf nicht auszugsweise verwendet werden. <i>This NS protection certificate shall not be used in extracts.</i>	



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E.7 Anforderungen an den Prüfbericht zum NA-Schutz E.7 Requirements for the test report for the NS protection		
Typ NA-Schutz: Type of NS protection:	<input type="checkbox"/> Zentraler NA-Schutz <i>Central NS protection</i> <input checked="" type="checkbox"/> Integrierter NA-Schutz:: Zugewiesen an Stromerzeugungseinheit vom Typ: KSG-25KT-M0, KSG-25KT-M1, KSG-25KT-M2, KSG- 25KT-M3, KSG-30KT-M0, KSG-30KT-M1, KSG-30KT-M2, KSG-30KT-M3, KSG-30KT-M4, KSG-33KT-M0, KSG-33KT-M1, KSG-33KT-M2, KSG-33KT-M3, KSG-33KT-M4, KSG-36KT-M0, KSG-36KT-M1, KSG-36KT-M2, KSG-36KT-M3, KSG-36KT-M4, KSG-40KT-M0, KSG-40KT-M1, KSG-40KT-M2, KSG-40KT-M3, KSG-40KT-M4 <i>Integrated NS protection: Assigned to power generation unit of type:</i> KSG-25KT-M0, KSG-25KT-M1, KSG-25KT-M2, KSG- 25KT-M3, KSG-30KT-M0, KSG-30KT-M1, KSG-30KT-M2, KSG-30KT-M3, KSG-30KT-M4, KSG-33KT-M0, KSG-33KT-M1, KSG-33KT-M2, KSG-33KT-M3, KSG-33KT-M4, KSG-36KT-M0, KSG-36KT-M1, KSG-36KT-M2, KSG-36KT-M3, KSG-36KT-M4, KSG-40KT-M0, KSG-40KT-M1, KSG-40KT-M2, KSG-40KT-M3, KSG-40KT-M4	
Software-Version: Software version:	0.0.0	
Hersteller: Manufacturer:	Shenzhen Kstar New Energy Company Limited The 9th Floor, R&D Building, Kstar Industrial Park, Guangming Hi-tech Industrial Zone, Shenzhen, Guangdong Province, 518107, PEOPLE'S REPUBLIC OF CHINA	
Messzeitraum: Measurement period:	Von 20201-08-10 bis 2021-12-30 <i>From 2021-08-10 to 2021-12-30</i>	
-	Stirlinggeneratoren, Brennstoffzellen <i>Stirling generators, fuel cells</i>	Umrichter <i>Inverter(s)</i>
	direkt oder über Umrichter gekoppelte Synchron- und Asynchrongeneratoren mit $P_n \leq 50$ <i>Synchronous and asynchronous</i>	direkt gekoppelte Synchron- und Asynchrongeneratoren mit $P_n > 50$ kW <i>Directly coupled synchronous and</i>



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	generators with $P_n \leq 50 \text{ kW}$ coupled directly or via inverters			asynchronous generators with $P_n > 50 \text{ kW}$		
Schutzfunktion Protective function	Einstellwert Set value	Auslösewert Tripping value	*Auslösezeit NA-Schutz *Tripping time NS protection	Einstellwert Set value	Auslösewert Tripping value	*Auslösezeit NA-Schutz *Tripping time NS protection
Spannungssteigerungsschutz U >> <i>Rise-in-voltage protection U >></i>	1.15 * Un	N/A	N/A	1.25 * Un	287.7V	146ms
Spannungssteigerungsschutz U > * <i>Rise-in-voltage protection U > *</i>	1.10 * Un	N/A	N/A	1.10 * Un	-	519.4s
Spannungsrückgangsschutz U < <i>Voltage drop protection U <</i>	0.8 * Un	N/A	N/A	0.8 * Un	184.7V	3033ms
Spannungsrückgangsschutz U << <i>Voltage drop protection U <<</i>	Entfällt N/A			0.45 * Un	104.0V	348ms
Frequenzrückgangsschutz f < <i>Frequency decrease protection</i> f <	47.5Hz	N/A	N/A	47.5Hz	47.5Hz	188ms
Frequenzsteigerungsschutz f > <i>Frequency increase protection</i> f >	51.5Hz	N/A	N/A	51.5Hz	51.5Hz	170ms

* Die Auslösezeit beinhaltet den Zeitraum von der Grenzwertverletzung U/f bis zum Auslösesignal an den Kuppelschalter.

* The tripping time includes the period from the limit value violation U/f until the tripping signal to the interface switch.

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

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.

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

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



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<input checked="" type="checkbox"/> Bei integriertem NA-Schutz <i>For integrated NS protection</i>	
Zugeordnet zur Erzeugungseinheit des Typ: <i>Assigned to power generation unit of type:</i>	KSG-25KT-M0, KSG-25KT-M1, KSG-25KT-M2, KSG- 25KT-M3, KSG-30KT-M0, KSG-30KT-M1, KSG-30KT-M2, KSG-30KT-M3, KSG-30KT-M4, KSG-33KT-M0, KSG-33KT-M1, KSG-33KT-M2, KSG-33KT-M3, KSG-33KT-M4, KSG-36KT-M0, KSG-36KT-M1, KSG-36KT-M2, KSG-36KT-M3, KSG-36KT-M4, KSG-40KT-M0, KSG-40KT-M1, KSG-40KT-M2, KSG-40KT-M3, KSG-40KT-M4
Typ integrierter Kuppelschalter: <i>Type integrated interface switch:</i>	Relais <i>Relay</i>
Eigenzeit des Kuppelschalters bei integriertem NA-Schutz: <i>Response time of interface switch for integrated NS protection:</i>	≤ 10ms
<input checked="" type="checkbox"/> Die Überprüfung der Gesamtwirkungskette "integrierter NA-Schutz - Kuppelschalter" führte zu einer erfolgreichen Abschaltung. <i>Verification of the entire functional chain "integrated NS protection – interface switch" has resulted in successful disconnection.</i>	



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