

CERTIFICATE

Xiamen Kehua Digital Energy Tech Co., Ltd.

Room 208-38, Hengye Building, No. 100 Xiangxing Road, Torch High-tech Zone (Xiangan) Industrial Zone, Xiamen, China

is authorized to provide the product(s) mentioned below with the mark as illustrated:



Description of product(s) (details see Annex 2):

PV Grid-Tied Inverter

It is certified by TÜV NORD CERT GmbH that the product(s) described above has(have) been assessed according to the certification program mentioned below and found in compliance with the requirements of below specified certification fundamental(s). This certification is based on evaluation results as documented in test report(s) referenced below and production site(s) audit results as documented in factory inspection report(s) referenced in Annex 1. This certificate is valid in conjunction with these quoted report(s).

Certification program:	P33-VA-01 Rev. 02 / 04.20	
Certification fundamental(s):	IEC 62109-1:2010; IEC 62109-2:2011	
Registered no.:	44 780 22 406749 - 130	
Manufacturer and factory(-ies):	See Annex 1	
Report no.:	492012074.001	Valid from: 2022-06-23
File no.:	PVP03019/22B-02	Valid until: 2027-06-22



Essen, 2022-06-23

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

TÜV NORD CERT GmbH

Am TÜV 1, D-45307 Essen

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Please also pay attention to the information stated overleaf.

ANNEX

Annex 1, Page 1 of 1

to Certificate registration no. 44 780 22 406749 - 130

Manufacturer:

Xiamen Kehua Digital Energy Tech Co., Ltd.

Room 208-38, Hengye Building, No. 100 Xiangxing Road, Torch High-tech Zone (Xiangan) Industrial Zone, Xiamen, China

Factory(-ies):

Factory :

ZHANGZHOU KEHUA ELECTRIC TECHNOLOGY CO., LTD.

NO.11, JINXING ROAD, XIANGCHENG DISTRICT, ZHANGZHOU CITY, FUJIAN PROVINCE, CHINA

Factory inspection report no.: 862010484.002

Remark:

Factory inspection is mandatory to be performed annually. Please refer to factory inspection report for detailed information.

ANNEX

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to Certificate registration no. 44 780 22 406749 - 130

Description of product(s):

Model type..... :	SPI8K-B X2		
General information			
Type of Inverter..... :	Non-Isolated	Separated by..... :	Non Transformer
Safety Class..... :	Class I	IP grade..... :	IP66
Over-Voltage Category..... :	PV Input: II AC Output: III	Pollution Degree..... :	External PD3 Internal PD2
Hardware Version..... :	V3.0	Software Version..... :	V3.00
PV input			
V_{max} [V d.c.]..... :	1100	I_{sc} [V d.c.]..... :	18.75*2
MPP Voltage Range [V d.c.]..... :	180~1100	Max. Input Current [A d.c.]..... :	15*2
AC output			
Rated output voltage [V a.c.]..... :	400, 3W+N+PE	Rated Output Frequency[Hz] .. :	50/60
Rated Output Power [kW a.c.] ... :	8	Max. Apparent Power[kVA a.c.] :	8.8
Max. Output Current [A a.c.]..... :	12.7	Power Factor..... :	[-0.80, 0.80]

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Model type	SP110K-B X2		
General information			
Type of Inverter	Non-Isolated	Separated by	Non Transformer
Safety Class	Class I	IP grade	IP66
Over-Voltage Category	PV Input: II AC Output: III	Pollution Degree	External PD3 Internal PD2
Hardware Version	V3.0	Software Version	V3.00
PV input			
V_{max} [V d.c.]	1100	I_{sc} [V d.c.]	18.75*2
MPP Voltage Range [V d.c.]	180~1100	Max. Input Current [A d.c.]	15*2
AC output			
Rated output voltage [V a.c.]	400, 3W+N+PE	Rated Output Frequency [Hz] ..	50/60
Rated Output Power [kW a.c.] ...	10	Max. Apparent Power [kVA a.c.]	11
Max. Output Current [A a.c.]	15.9	Power Factor	[-0.80, 0.80]

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Model type	SPI12K-B X2		
General information			
Type of Inverter	Non-Isolated	Separated by	Non Transformer
Safety Class	Class I	IP grade	IP66
Over-Voltage Category	PV Input: II AC Output: III	Pollution Degree	External PD3 Internal PD2
Hardware Version	V3.0	Software Version	V3.00
PV input			
V_{max} [V d.c.]	1100	I_{sc} [V d.c.]	18.75*2
MPP Voltage Range [V d.c.]	180~1100	Max. Input Current [A d.c.]	15*2
AC output			
Rated output voltage [V a.c.]	400, 3W+N+PE	Rated Output Frequency[Hz] ..	50/60
Rated Output Power [kW a.c.] ...	12	Max. Apparent Power[kVA a.c.]	13.2
Max. Output Current [A a.c.]	19.1	Power Factor	[-0.80, 0.80]

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Model type	SPI15K-B X2		
General information			
Type of Inverter	Non-Isolated	Separated by	Non Transformer
Safety Class	Class I	IP grade	IP66
Over-Voltage Category	PV Input: II AC Output: III	Pollution Degree	External PD3 Internal PD2
Hardware Version	V3.0	Software Version	V3.00
PV input			
V_{max} [V d.c.]	1100	I_{sc} [V d.c.]	37.5/18.75
MPP Voltage Range [V d.c.]	180~1100	Max. Input Current [A d.c.]	30/15
AC output			
Rated output voltage [V a.c.]	400, 3W+N+PE	Rated Output Frequency [Hz] ..	50/60
Rated Output Power [kW a.c.] ...	15	Max. Apparent Power [kVA a.c.]	16.5
Max. Output Current [A a.c.]	23.8	Power Factor	[-0.80, 0.80]

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Model type	SPI17K-B X2		
General information			
Type of Inverter	Non-Isolated	Separated by	Non Transformer
Safety Class	Class I	IP grade	IP66
Over-Voltage Category	PV Input: II AC Output: III	Pollution Degree	External PD3 Internal PD2
Hardware Version	V3.0	Software Version	V3.00
PV input			
V_{max} [V d.c.]	1100	I_{sc} [V d.c.]	37.5/18.75
MPP Voltage Range [V d.c.]	180~1100	Max. Input Current [A d.c.]	30/15
AC output			
Rated output voltage [V a.c.]	400, 3W+N+PE	Rated Output Frequency [Hz] ..	50/60
Rated Output Power [kW a.c.] ...	17	Max. Apparent Power [kVA a.c.]	18.7
Max. Output Current [A a.c.]	27	Power Factor	[-0.80, 0.80]

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Model type	SPI20K-B X2		
General information			
Type of Inverter	Non-Isolated	Separated by	Non Transformer
Safety Class	Class I	IP grade	IP66
Over-Voltage Category	PV Input: II AC Output: III	Pollution Degree	External PD3 Internal PD2
Hardware Version	V3.0	Software Version	V3.00
PV input			
V _{max} [V d.c.]	1100	I _{sc} [V d.c.]	2*37.5
MPP Voltage Range [V d.c.]	180~1100	Max. Input Current [A d.c.]	2*30
AC output			
Rated output voltage [V a.c.]	400, 3W+N+PE	Rated Output Frequency [Hz] ..	50/60
Rated Output Power [kW a.c.] ...	20	Max. Apparent Power [kVA a.c.]	22
Max. Output Current [A a.c.]	31.8	Power Factor	[-0.80, 0.80]

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Model type	SPI23K-B X2		
General information			
Type of Inverter	Non-Isolated	Separated by	Non Transformer
Safety Class	Class I	IP grade	IP66
Over-Voltage Category	PV Input: II AC Output: III	Pollution Degree	External PD3 Internal PD2
Hardware Version	V3.0	Software Version	V3.00
PV input			
V _{max} [V d.c.]	1100	I _{sc} [V d.c.]	37.5*2
MPP Voltage Range [V d.c.]	180~1100	Max. Input Current [A d.c.]	30*2
AC output			
Rated output voltage [V a.c.]	400, 3W+N+PE	Rated Output Frequency [Hz] ..	50/60
Rated Output Power [kW a.c.] ...	23	Max. Apparent Power [kVA a.c.]	25.3
Max. Output Current [A a.c.]	36.5	Power Factor	[-0.80, 0.80]

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Model type	SPI25K-B X2		
General information			
Type of Inverter	Non-Isolated	Separated by	Non Transformer
Safety Class	Class I	IP grade	IP66
Over-Voltage Category	PV Input: II AC Output: III	Pollution Degree	External PD3 Internal PD2
Hardware Version	V3.0	Software Version	V3.00
PV input			
V _{max} [V d.c.]	1100	I _{sc} [V d.c.]	37.5*2
MPP Voltage Range [V d.c.]	180~1100	Max. Input Current [A d.c.]	30*2
AC output			
Rated output voltage [V a.c.]	400, 3W+N+PE	Rated Output Frequency [Hz] ..	50/60
Rated Output Power [kW a.c.] ...	25	Max. Apparent Power [kVA a.c.]	27.5
Max. Output Current [A a.c.]	39.7	Power Factor	[-0.80, 0.80]

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Model type	SPI25K-B X2P		
General information			
Type of Inverter	Non-Isolated	Separated by.....	Non Transformer
Safety Class	Class I	IP grade.....	IP66
Over-Voltage Category	PV Input: II AC Output: III	Pollution Degree.....	External PD3 Internal PD2
Hardware Version	V3.0	Software Version.....	V3.00
PV input			
V_{max} [V d.c.]	1100	I_{sc} [V d.c.].....	50/25
MPP Voltage Range [V d.c.]	180~1100	Max. Input Current [A d.c.]	40/20
AC output			
Rated output voltage [V a.c.].....	400, 3W+N+PE	Rated Output Frequency[Hz] ..	50/60
Rated Output Power [kW a.c.] ...	25	Max. Apparent Power[kVA a.c.]	27.5
Max. Output Current [A a.c.]	39.7	Power Factor.....	[-0.80, 0.80]

Remark:

For detailed product information, please refer to CDF (Constructional Data Form) in Annex 1 of test report.