

Certificate of Conformity

Registered No.:

COCPVP05054/23B-02

File reference

PVP05054/23B-02

Test report No.

TRPVP05054/23B/02

Date of issue

2023-12-11

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: **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

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: **Zhangzhou Kehua New Energy Technology Co.,Ltd.**
No.10. Kongxue Road, Wenpu Industrial Zone, Jiaomei Industrial Zone Comprehensive Development District, Longhai District, Zhangzhou City, Fujian, P.R.China

Product: PV Grid-tied Inverter

Type designation: SPI30K-B X2, SPI33K-B X2, SPI36K-B X2,
SPI36K-B X2P, SPI40K-B X2, SPI40K-B X2P

Type of equipment: Interface device
 Interface protection
 Static conversion device
 Rotary generation device
Remark: The device is for plants of each power are above 11.08kVA.

Certification program: BOS-P-01 Rev. 00

Certification fundamental(s): CEI 0-21:2019-04, CEI 0-21;V1:2020-12
CEI 0-21:2022-03, CEI 0-21;V1:2022-11
See test report for detailed information.



Renewable Energy

BOS&ESS-T-004 COC



中国认可
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

Certification body:

TÜV NORD (HANGZHOU) CO., LTD.

Room B409, Building 1, No. 9, Jiuhuan Road, Shangcheng District,
Hangzhou City, Zhejiang Province, 310019, P.R. China

Accredited by CNAS according to ISO/IEC 17065:2012, certificate no.
CNAS C183-P.

Testing laboratory:

Dongguan BALUN Testing Technology Co., Ltd.

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

Accredited by CNAS according to ISO/IEC 17025:2017, certificate no.
CNAS L14701

Conclusion:

After verifying following documents, it is concluded that the product is in
compliance with the requirements of CEI 0-21:2019-04, CEI 0-
21;V1:2020-12, CEI 0-21:2022-03, CEI 0-21;V1:2022-11.

ISO 9001 certificate:

Certificate no. 00223Q20360R2M, issued by China Quality Mark
Certification Group (CQM).

Test report of CEI 0-21:2019-04, CEI 0-21;V1:2020-12, CEI 0-
21:2022-03, CEI 0-21;V1:2022-11:

Report no. BL-DG23A0045-201 rev.01, issued by Dongguan BALUN
Testing Technology Co., Ltd., accredited by CNAS according to ISO/IEC
17025:2017, certificate no. CNAS L14701

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&ESS-T-004 COC



中国认可
产品
PRODUCT
CNAS C183-P

Page 2 of 5

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

Description of product(s):

PV Grid-tied Inverter						
Model or Type designation	SPI30K -B X2	SPI33K -B X2	SPI36K -B X2	SPI36K -B X2P	SPI40K -B X2	SPI40K -B X2P
PV input parameters:						
Max. Input PV Voltage [Vd.c.]	1100					
MPPT Voltage Range [Vd.c.]	180-1100					
Max. PV Input Current [Ad.c.]	3*30	3*30	3*30	40+20+ 20	3*30	40+20+ 20
PV Short-circuit current [Ad.c.]	3*37.5	3*37.5	3*37.5	50+25+ 25	3*37.5	50+25+ 25
AC output (Grid Side) parameters:						
Rated Output Voltage [Va.c.]	400Vac, 3W+N+PE					
Rated Output Frequency [Hz]	50/ 60					
Rated Output Power [kW]	30	33	36	36	40	40
Max. Apparent Power [kVA]	33	36.3	39.6	39.6	40	40
Max. Output Current [Aa.c.]	47.6	52.4	57.2	57.2	57.7	57.7
Power Factor cosφ [λ]	>0.99(±0.8)					
Battery charge/discharge parameters (charge from PV, discharge to Grid) (Optional):						
Charge/discharge Voltage Range [Vd.c.]	650-900					
Max. charge/discharge Current [Ad.c.]	45.0	49.2	49.2	49.2	49.2	49.2
Others:						
Protective Class	Class I					
Inverter Topology	Non-isolated					
Operation Temperature Range	-35~60°C					
Ingress Protection	IP66					
Weight	27kg					
Dimension (W*H*D)	550*480*200mm					
Oversvoltage-Category	DC(PV) II, AC(Main) III					



Renewable Energy

BOS&ESS-T-004 COC



中国认可
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

Battery	
Model or Type designation	IStorage B5-S2
Manufacture	Kehua
Battery Type	LFP
Energy [kWh]	5
Capacity [Ah]	100
Rated Voltage [Vdc]	720
Working Voltage Range [Vdc]	650 ~ 900
Max Charge Current [Adc]	6.15
Max Discharge Current [Adc]	6.15
Standard Charge Current [Adc]	5.56
Standard Discharge Current [Adc]	5.56
Operating Temperature	-20°C~50°C
Operation Humidity	0~100%RH (Non-condensing)
Nominal Operation Altitude	3000m/9842ft (Derating above 2000m/6561ft)
IP Rating	IP65
Net Weight	52kg/114.64lb

Technical specification of storage system						
Battery						
Model of Battery	IStorage B5-S2					
BMS model	KC781L					
Firmware version of BMS	V1					
Inverter with 1 Battery						
Model of Inverter	SPI30K -B X2	SPI33K -B X2	SPI36K -B X2	SPI36K -B X2P	SPI40K -B X2	SPI40K -B X2P
Nominal Discharge Power P_{SN} [kW]	4	4	4	4	4	4
Nominal Charge Power P_{CN} [kW]	-	-	-	-	-	-
Maximum Discharge Power P_{SMAX} [kW]	4	4	4	4	4	4
Maximum Charge Power P_{CMAX} [kW]	-	-	-	-	-	-
Inverter with 2 Batteries						
Model of Inverter	SPI30K -B X2	SPI33K -B X2	SPI36K -B X2	SPI36K -B X2P	SPI40K -B X2	SPI40K -B X2P
Nominal Discharge Power P_{SN} [kW]	8	8	8	8	8	8
Nominal Charge Power P_{CN} [kW]	-	-	-	-	-	-
Maximum Discharge Power P_{SMAX} [kW]	8	8	8	8	8	8
Maximum Charge Power P_{CMAX} [kW]	-	-	-	-	-	-
Inverter with 3 Batteries						
Model of Inverter	SPI30K -B X2	SPI33K -B X2	SPI36K -B X2	SPI36K -B X2P	SPI40K -B X2	SPI40K -B X2P
Nominal Discharge Power P_{SN} [kW]	12	12	12	12	12	12



Renewable Energy

BOS&ESS-T-004 COC



中国认可
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

Nominal Charge Power P_{CN} [kW]	-	-	-	-	-	-
Maximum Discharge Power P_{SMAX} [kW]	12	12	12	12	12	12
Maximum Charge Power P_{CMAX} [kW]	-	-	-	-	-	-
Inverter with 4 Battery						
Model of Inverter	SPI30K	SPI33K	SPI36K	SPI36K	SPI40K	SPI40K
	-B X2	-B X2	-B X2	-B X2P	-B X2	-B X2P
Nominal Discharge Power P_{SN} [kW]	16	16	16	16	16	16
Nominal Charge Power P_{CN} [kW]	-	-	-	-	-	-
Maximum Discharge Power P_{SMAX} [kW]	16	16	16	16	16	16
Maximum Charge Power P_{CMAX} [kW]	-	-	-	-	-	-
Inverter with 5 Batteries						
Model of Inverter	SPI30K	SPI33K	SPI36K	SPI36K	SPI40K	SPI40K
	-B X2	-B X2	-B X2	-B X2P	-B X2	-B X2P
Nominal Discharge Power P_{SN} [kW]	20	20	20	20	20	20
Nominal Charge Power P_{CN} [kW]	-	-	-	-	-	-
Maximum Discharge Power P_{SMAX} [kW]	20	20	20	20	20	20
Maximum Charge Power P_{CMAX} [kW]	-	-	-	-	-	-
Inverter with 6 Batteries						
Model of Inverter	SPI30K	SPI33K	SPI36K	SPI36K	SPI40K	SPI40K
	-B X2	-B X2	-B X2	-B X2P	-B X2	-B X2P
Nominal Discharge Power P_{SN} [kW]	24	24	24	24	24	24
Nominal Charge Power P_{CN} [kW]	-	-	-	-	-	-
Maximum Discharge Power P_{SMAX} [kW]	24	24	24	24	24	24
Maximum Charge Power P_{CMAX} [kW]	-	-	-	-	-	-
Inverter with 7 Batteries						
Model of Inverter	SPI30K	SPI33K	SPI36K	SPI36K	SPI40K	SPI40K
	-B X2	-B X2	-B X2	-B X2P	-B X2	-B X2P
Nominal Discharge Power P_{SN} [kW]	28	28	28	28	28	28
Nominal Charge Power P_{CN} [kW]	-	-	-	-	-	-
Maximum Discharge Power P_{SMAX} [kW]	28	28	28	28	28	28
Maximum Charge Power P_{CMAX} [kW]	-	-	-	-	-	-
Inverter with 8 Batteries						
Model of Inverter	SPI30K	SPI33K	SPI36K	SPI36K	SPI40K	SPI40K
	-B X2	-B X2	-B X2	-B X2P	-B X2	-B X2P
Nominal Discharge Power P_{SN} [kW]	30	32	32	32	32	32
Nominal Charge Power P_{CN} [kW]	-	-	-	-	-	-
Maximum Discharge Power P_{SMAX} [kW]	32	32	32	32	32	32
Maximum Charge Power P_{CMAX} [kW]	-	-	-	-	-	-
Note: SPI series inverters are unidirectional, battery can only be charged by PV, cannot charged by Grid.						



Renewable Energy

BOS&ESS-T-004 COC



中国认可
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