

Certificate of Conformity

Registered No.:

COCPVP05054/23B-03

File reference

PVP05054/23B-05

Test report No.

TRPVP05054/23B/05

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:

SPI8K-B X2, SPI10K-B X2, SPI12K-B X2,
SPI15K-B X2, SPI17K-B X2, SPI20K-B X2
SPI23K-B X2, SPI25K-B X2P, SPI25K-B X2

Type of equipment:

- Interface device
- Interface protection
- Static conversion device
- Rotary generation device

Remark: The device is for plants of each power.

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.



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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, Jiujuan 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-DG23A0048-201 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).



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Description of product(s):

PV Grid-tied Inverter			
Model or Type designation	SPI8K-B X2	SPI10K-B X2	SPI12K-B X2
PV input parameters:			
Max. Input PV Voltage [Vd.c.]	1100		
MPPT Voltage Range [Vd.c.]	180-1100		
Max. PV Input Current [Ad.c.]	2*15	2*15	2*15
PV Short-circuit current [Ad.c.]	2*18.75	2*18.75	2*18.75
AC output (Grid Side) parameters:			
Rated Output Voltage [Va.c.]	400Vac, 3W+N+PE		
Rated Output Frequency [Hz]	50/ 60		
Rated Output Power [W]	8000	10000	12000
Max. Apparent Power [VA]	8800	11000	13200
Max. Output Current [Aa.c.]	12.7	15.9	19.1
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.]	12	15	18
Others:			
Protective Class	Class I		
Inverter Topology	Non-isolated		
Operation Temperature Range	-35~60°C		
Ingress Protection	IP66		
Weight	16kg	16kg	17kg
Dimension (W*H*D)	460*182*420mm		
Overvoltage-Category	DC(PV) II, AC(Main) III		
PV Grid-tied Inverter			
Model or Type designation	SPI15K-B X2	SPI17K-B X2	SPI20K-B X2
PV input parameters:			
Max. Input PV Voltage [Vd.c.]	1100		
MPPT Voltage Range [Vd.c.]	180-1100		
Max. PV Input Current [Ad.c.]	30+15	30+15	2*30
PV Short-circuit current [Ad.c.]	37.5+18.75	37.5+18.75	2*37.5
AC output (Grid Side) parameters:			



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Rated Output Voltage [Va.c.]	400Vac, 3W+N+PE		
Rated Output Frequency [Hz]	50/ 60		
Rated Output Power [W]	15000	17000	20000
Max. Apparent Power [VA]	16500	18700	22000
Max. Output Current [Aa.c.]	23.8	27	31.8
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.]	23	26	30
Others:			
Protective Class	Class I		
Inverter Topology	Non-isolated		
Operation Temperature Range	-35~60°C		
Ingress Protection	IP66		
Weight	17kg		
Dimension (W*H*D)	460*182*420mm		
Overvoltage-Category	DC(PV) II, AC(Main) III		
PV Grid-tied Inverter			
Model or Type designation	SPI23K-B X2	SPI25K-B X2P	SPI25K-B X2
PV input parameters:			
Max. Input PV Voltage [Vd.c.]	1100		
MPPT Voltage Range [Vd.c.]	180-1100		
Max. PV Input Current [Ad.c.]	2*30	40+20	2*30
PV Short-circuit current [Ad.c.]	2*37.5	50+25	2*37.5
AC output (Grid Side) parameters:			
Rated Output Voltage [Va.c.]	400Vac, 3W+N+PE		
Rated Output Frequency [Hz]	50/ 60		
Rated Output Power [W]	23000	25000	25000
Max. Apparent Power [VA]	25300	27500	27500
Max. Output Current [Aa.c.]	36.5	39.7	39.7
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.]	35	38	38



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Others:	
Protective Class	Class I
Inverter Topology	Non-isolated
Operation Temperature Range	-35~60°C
Ingress Protection	IP66
Weight	17kg
Dimension (W*H*D)	460*182*420mm
Overvoltage-Category	DC(PV) II, AC(Main) III

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	-20~50°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



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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	SPI8K-B X2	SPI10K-B X2	SPI12 K-B X2	SPI15K-B X2	SPI17K-B X2	SPI20 K-B X2	SPI23K-B X2	SPI25K-B X2	SPI25K-B X2P
Nominal Discharge Power P_{SN} [kW]	4	4	4	4	4	4	4	4	4
Nominal Charge Power P_{CN} [kW]	0	0	0	0	0	0	0	0	0
Maximum Discharge Power P_{SMAX} [kW]	4	4	4	4	4	4	4	4	4
Maximum Charge Power P_{CMAX} [kW]	0	0	0	0	0	0	0	0	0
Inverter with 2 Battery									
Model of Inverter	SPI8K-B X2	SPI10K-B X2	SPI12 K-B X2	SPI15K-B X2	SPI17K-B X2	SPI20 K-B X2	SPI23K-B X2	SPI25K-B X2	SPI25K-B X2P
Nominal Discharge Power P_{SN} [kW]	8	8	8	8	8	8	8	8	8
Nominal Charge Power P_{CN} [kW]	0	0	0	0	0	0	0	0	0
Maximum Discharge Power P_{SMAX} [kW]	8	8	8	8	8	8	8	8	8
Maximum Charge Power P_{CMAX} [kW]	0	0	0	0	0	0	0	0	0
Inverter with 3 Battery									
Model of Inverter	SPI8K-B X2	SPI10K-B X2	SPI12 K-B X2	SPI15K-B X2	SPI17K-B X2	SPI20 K-B X2	SPI23K-B X2	SPI25K-B X2	SPI25K-B X2P
Nominal Discharge Power P_{SN} [kW]	8	10	12	12	12	12	12	12	12
Nominal	0	0	0	0	0	0	0	0	0



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Charge Power P _{CN} [kW]									
Maximum Discharge Power P _{SMAx} [kW]	8.8	11	12	12	12	12	12	12	12
Maximum Charge Power P _{CMAX} [kW]	0	0	0	0	0	0	0	0	0
Inverter with 4 Battery									
Model of Inverter	SPI8K-B X2	SPI10K-B X2	SPI12K-B X2	SPI15K-B X2	SPI17K-B X2	SPI20K-B X2	SPI23K-B X2	SPI25K-B X2	SPI25K-B X2P
Nominal Discharge Power P _{SN} [kW]	8	10	12	15	16	16	16	16	16
Nominal Charge Power P _{CN} [kW]	0	0	0	0	0	0	0	0	0
Maximum Discharge Power P _{SMAx} [kW]	8.8	11	13.2	16	16	16	16	16	16
Maximum Charge Power P _{CMAX} [kW]	0	0	0	0	0	0	0	0	0
Inverter with 5 Battery									
Model of Inverter	SPI8K-B X2	SPI10K-B X2	SPI12K-B X2	SPI15K-B X2	SPI17K-B X2	SPI20K-B X2	SPI23K-B X2	SPI25K-B X2	SPI25K-B X2P
Nominal Discharge Power P _{SN} [kW]	8	10	12	15	17	20	20	20	20
Nominal Charge Power P _{CN} [kW]	0	0	0	0	0	0	0	0	0
Maximum Discharge Power P _{SMAx} [kW]	8.8	11	13.2	16.5	18.7	20	20	20	20
Maximum Charge Power P _{CMAX} [kW]	0	0	0	0	0	0	0	0	0
Inverter with 6 Battery									
Model of Inverter	SPI8K-B X2	SPI10K-B X2	SPI12K-B X2	SPI15K-B X2	SPI17K-B X2	SPI20K-B X2	SPI23K-B X2	SPI25K-B X2	SPI25K-B X2P
Nominal Discharge	8	10	12	15	17	20	23	24	24



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Power P _{SN} [kW]									
Nominal Charge Power P _{CN} [kW]	0	0	0	0	0	0	0	0	0
Maximum Discharge Power P _{SMAX} [kW]	8.8	11	13.2	16.5	18.7	22	24	24	24
Maximum Charge Power P _{CMAX} [kW]	0	0	0	0	0	0	0	0	0
Inverter with 7 Battery									
Model of Inverter	SPI8K-B X2	SPI10K-B X2	SPI12K-B X2	SPI15K-B X2	SPI17K-B X2	SPI20K-B X2	SPI23K-B X2	SPI25K-B X2	SPI25K-B X2P
Nominal Discharge Power P _{SN} [kW]	8	10	12	15	17	20	23	25	25
Nominal Charge Power P _{CN} [kW]	0	0	0	0	0	0	0	0	0
Maximum Discharge Power P _{SMAX} [kW]	8.8	11	13.2	16.5	18.7	22	25.5	27.5	27.5
Maximum Charge Power P _{CMAX} [kW]	0	0	0	0	0	0	0	0	0
Inverter with 8 Battery									
Model of Inverter	SPI8K-B X2	SPI10K-B X2	SPI12K-B X2	SPI15K-B X2	SPI17K-B X2	SPI20K-B X2	SPI23K-B X2	SPI25K-B X2	SPI25K-B X2P
Nominal Discharge Power P _{SN} [kW]	8	10	12	15	17	20	23	25	25
Nominal Charge Power P _{CN} [kW]	0	0	0	0	0	0	0	0	0
Maximum Discharge Power P _{SMAX} [kW]	8.8	11	13.2	16.5	18.7	22	25.5	27.5	27.5
Maximum Charge Power P _{CMAX} [kW]	0	0	0	0	0	0	0	0	0
Note: SPI series inverters are unidirectional, battery can only be charged by PV, cannot charged by Grid.									



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