Certificate

of Conformity

Registered No.:

COCPVP05054/23B-01

File reference	Test report No.	Date of issue
PVP05054/23B-03	TRPVP05054/23B/03	2023-10-13

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 Electric Technology Co., Ltd.**

No.11, Jinxing Road, Xiangcheng District, Zhangzhou City, Fujian Province, 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

Three phase, Firmware version: V3

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 0-16:2019-04, CEI 0-16;V1:2020-12

CEI 0-16:2022-03, CEI 0-16;V1:2022-11

See test report for detailed information.

Renewable Energy

CNAS 中国认可 产品 PRODUCT CNAS C183-P

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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 0-16:2019-04, CEI 0-16;V1:2020-12, CEI 0-16:2022-03, CEI 0-16;V1:2022-11 ☒ ISO 9001 certificate: Certificate no. 469539-2021-AQ-RGC-RVA, issued by DNV. ☒ Test report of CEI 0-16:2019-04, CEI 0-16;V1:2020-12, CEI 0-16:2022-03, CEI 0-16;V1:2022-11 Report no. BL-DG23A0046-201, 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	**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					
Overvoltage-Category	DC(PV) II, AC(Main) III					

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Remark: The inverters listed above may be installed with the following batteries:

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

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
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 -B X2**	**SPI33K -B X2**	**SPI36K -B X2**	**SPI36K -B X2P**	**SPI40K -B X2**	**SPI40K -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 -B X2**	**SPI33K -B X2**	**SPI36K -B X2**	**SPI36K -B X2P**	**SPI40K -B X2**	**SPI40K -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 -B X2**	**SPI33K -B X2**	**SPI36K -B X2**	**SPI36K -B X2P**	**SPI40K -B X2**	**SPI40K -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 -B X2**	**SPI33K -B X2**	**SPI36K -B X2**	**SPI36K -B X2P**	**SPI40K -B X2**	**SPI40K -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 -B X2**	**SPI33K -B X2**	**SPI36K -B X2**	**SPI36K -B X2P**	**SPI40K -B X2**	**SPI40K -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.						