

Certificate of Conformity

Registered No.:

COCVP08198/23E-01

File reference

PVP08198/23E-01

Test report No.

TRPVP08198/23E/01

Date of issue

2023-11-17

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: **Ningbo Sunways Technologies Co., Ltd.**
No. 1, Second Road, Green Industrial Zone, Chongshou Town, 315334
Cixi, Ningbo, Zhejiang, PEOPLE'S REPUBLIC OF CHINA

Manufacturer: **Ningbo Sunways Technologies Co., Ltd.**
No. 1, Second Road, Green Industrial Zone, Chongshou Town, 315334
Cixi, Ningbo, Zhejiang, PEOPLE'S REPUBLIC OF CHINA

Factory: **Ningbo Sunways Technologies Co., Ltd.**
No. 1, Second Road, Green Industrial Zone, Chongshou Town, 315334
Cixi, Ningbo, Zhejiang, PEOPLE'S REPUBLIC OF CHINA

Product: Hybrid Inverter

Type designation: STH-15KTL-HT, STH-17KTL-HT, STH-20KTL-HT, STH-25KTL-HT, STH-29.9KTL-HT, STH-30KTL-HT, STH-33KTL-HT
Three phase, Firmware version: V1.00

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
CEI 0-21;V1:2022-11
See test report for detailed information.



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Member of TÜV NORD Group
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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. ChinaAccredited 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, ChinaAccredited 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, CEI 0-21;V1:2022-11☒ ISO 9001 certificate:Certificate no. 02819Q11035R1S, issued by Beijing Zhong-An-Zhi-Huan
Certification Center Co., Ltd.☒ Test report of CEI 0-21:2019-04, CEI 0-21;V1:2020-12, CEI 0-
21:2022, CEI 0-21;V1:2022-11:Report no. BL-DG23B0729-201, 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):

Model or Type designation	STH-15KTL-HT	STH-17KTL-HT	STH-20KTL-HT	STH-25KTL-HT
PV port:				
V _{max} PV [V d.c.]	1000			
MPPT Voltage Range [V d.c.]	200-850			
Isc PV [A d.c.]	40/40			
Max. Input Current [A d.c.]	32/32			
Battery port:				
Voltage range [V d.c.]	200-800			
Max. charging Current [A d.c.]	50			
Max. Discharging Current [A d.c.]	50			
AC Output port:				
Rated Output Voltage [V a.c.]	3/N/PE~230/400V			
Rated Output Frequency [Hz]	50/60			
Rated Output Power [W]	15000	17000	20000	25000
Rated Apparent Output Power [VA]	15000	17000	20000	25000
Max. Apparent Output Power [VA]	16500	18700	22000	27500
Rated Output Current [A a.c.]	21.7	24.6	29	36.2
Max. Output Current [A a.c.]	25	28.3	33.3	41.7
Power Factor cosφ [λ]	0.8 leading ... 0.8 lagging			
Back-up Output port:				
Rated Output Voltage [V a.c.]	3/N/PE~230/400V			
Rated Output Frequency [Hz]	50/60			
Rated Output Power [W]	15000	17000	20000	25000
Rated Apparent Output Power [VA]	15000	17000	20000	25000
Max. Apparent Output Power [VA]	16500	18700	22000	27500
Others				
Protective Class	Class I			
Inverter Topology	Transformerless			
Operation Temperature Range	-30~60°C			
Ingress Protection	IP66			
Size [W*H*D mm]	640*490*290			
Max. Weight [kg]	48			
Overvoltage Category	DC II, AC III			
Model or Type designation	STH-29.9KTL-HT	STH-30KTL-HT	STH-33KTL-HT	
PV port:				
V _{max} PV [V d.c.]	1000			
MPPT Voltage Range [V d.c.]	200-850			
Isc PV [A d.c.]	40/40			



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Max. Input Current [A d.c.]	32/32		
Battery port:			
Voltage range [V d.c.]	200-800		
Max. charging Current [A d.c.]	50		
Max. Discharging Current [A d.c.]	50		
AC Output port:			
Rated Output Voltage [V a.c.]	3/N/PE~230/400V		
Rated Output Frequency [Hz]	50/60		
Rated Output Power [W]	29900	30000	33000
Rated Apparent Output Power [VA]	29900	30000	33000
Max. Apparent Output Power [VA]	29900	33000	36300
Rated Output Current [A a.c.]	43.3	43.5	47.8
Max. Output Current [A a.c.]	49.8	50.0	55.0
Power Factor cosφ [λ]	0.8 leading ... 0.8 lagging		
Back-up Output port:			
Rated Output Voltage [V a.c.]	3/N/PE~230/400V		
Rated Output Frequency [Hz]	50/60		
Rated Output Power [W]	29900	30000	33000
Rated Apparent Output Power [VA]	29900	30000	33000
Max. Apparent Output Power [VA]	29900	33000	36300
Others			
Protective Class	Class I		
Inverter Topology	Transformerless		
Operation Temperature Range	-30~60°C		
Ingress Protection	IP66		
Size [W*H*D mm]	640*490*290		
Max. Weight [kg]	48		
Overvoltage Category	DC II, AC III		

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

Battery				
Model of Battery	STE-FS20	STE-FS30	STE-FS40	STE-FS50
Capacity of each battery module (kWh)	10.24			
Capacity of Battery [kWh]	10.24*2	10.24*3	10.24*4	10.24*5
Working Voltage Range [Vdc]	160-233.6	240-350.4	320-467.2	400-584
BMS model	STE-FS BMS			
Firmware version of BMS	Hardware version: P-HV-100AH-V1.0 Software version: HV-52AH-V1.0			
Inverter with STE-FS20				



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Model of Inverter	STH-15KTL-HT	STH-17KTL-HT	STH-20KTL-HT	STH-25KTL-HT
Maximum Discharge Power P _S MAX [kW]	10.24			
Maximum Charge Power P _C MAX [kW]	10.24			
Model of Inverter	STH-29.9KTL-HT	STH-30KTL-HT	STH-33KTL-HT	
Maximum Discharge Power P _S MAX [kW]	10.24			
Maximum Charge Power P _C MAX [kW]	10.24			
Inverter with STE-FS30				
Model of Inverter	STH-15KTL-HT	STH-17KTL-HT	STH-20KTL-HT	STH-25KTL-HT
Maximum Discharge Power P _S MAX [kW]	15.00	15.36		
Maximum Charge Power P _C MAX [kW]	15.00	15.36		
Model of Inverter	STH-29.9KTL-HT	STH-30KTL-HT	STH-33KTL-HT	
Maximum Discharge Power P _S MAX [kW]	15.36			
Maximum Charge Power P _C MAX [kW]	15.36			
Inverter with STE-FS40				
Model of Inverter	STH-15KTL-HT	STH-17KTL-HT	STH-20KTL-HT	STH-25KTL-HT
Maximum Discharge Power P _S MAX [kW]	15.00	17.00	20.00	20.48
Maximum Charge Power P _C MAX [kW]	15.00	17.00	20.00	20.48
Model of Inverter	STH-29.9KTL-HT	STH-30KTL-HT	STH-33KTL-HT	
Maximum Discharge Power P _S MAX [kW]	20.48			
Maximum Charge Power P _C MAX [kW]	20.48			
Inverter with STE-FS50				
Model of Inverter	STH-15KTL-HT	STH-17KTL-HT	STH-20KTL-HT	STH-25KTL-HT
Maximum Discharge Power P _S MAX [kW]	15.00	17.00	20.00	25.00
Maximum Charge Power P _C MAX [kW]	15.00	17.00	20.00	25.00
Model of Inverter	STH-29.9KTL-HT	STH-30KTL-HT	STH-33KTL-HT	
Maximum Discharge Power P _S MAX [kW]	25.60			
Maximum Charge Power P _C MAX [kW]	25.60			
Note: The batteries are not integrated into the inverter and must be installed according to the local regulations.				



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