

Compliance Document

No. D 086470 0088 Rev. 03

Holder of Certificate: **Ginlong Technologies Co., Ltd.**

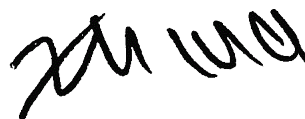
No.57 Jintong Road
Binhai Industrial Park, Xiangshan
315712 Ningbo, Zhejiang
PEOPLE'S REPUBLIC OF CHINA

Product: **Converter**
Grid-interactive inverter with storage
battery system

This Compliance document confirms the compliance with the listed standards on a voluntary basis. It refers only to the sample submitted for testing and certification and does not certify the quality or safety of the serial products. For details see: www.tuvsud.com/ps-cert

Test report no.: 704092103620-03

Date, 2022-12-12



(Zhengdong Ma)

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Model(s):

Grid-interactive inverter: RHI-3K-48ES-5G, RHI-3K-48ES-5G-NS,
RAI-3K-48ES-5G, RHI-3.6K-48ES-5G, RHI-3.6K-48ES-5G-NS, RHI-4K-48ES-5G-NS,
RHI-4.6K-48ES-5G, RHI-4.6K-48ES-5G-NS,
RHI-5K-48ES-5G, RHI-5K-48ES-5G-NS,
RHI-6K-48ES-5G, RHI-6K-48ES-5G-NS,
S5-EH1P3K-L, S5-EH1P3.6K-L, S5-EH1P5K-L, S5-EH1P6K-L, S5-EH1P3.6K-L-NS, S5-EH1P4K-L-NS, S5-EH1P4.6K-L-NS, S5-EH1P5K-L-NS, S5-EH1P6K-L-NS
Storage battery system: US2000 (1-8 pieces), US3000 (1-8 pieces),
Force L1 (2-7 pieces), Force L2 (2-4 pieces),
US2000C (1-8 pieces), Phantom-S (1-8 pieces),
US3000C (1-8 pieces)

Parameters:

Please see pages 3 to 7.

Tested according to:

CEI 0-21:2022

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The following generators meet the requirements of CEI 0-21:2022					
Section A	Manufacturer	Ginlong Technologies Co., Ltd. No.57 Jintong Road, Binhai Industrial Park, Xiangshan, 315712 Ningbo, Zhejiang, PEOPLE'S REPUBLIC OF CHINA			
	Equipment type	Grid-interactive inverter with storage battery system			
	Brand	Solis			
	Number of phase	☒ Single phase ☐ Three phase Frequency: 50Hz Voltage: a.c. 230V			
	Primary energy used	☒ Solar ☒ Storage ☐ Wind ☐ Hydroelectric ☐ CHP ☐ Other: Note: RAI-3K-48ES-5G can be operated with battery input only, other models can be operated with both PV and battery inputs.			
	Generator model	RHI-3K-48ES-5G, RHI-3K-48ES-5G-NS, S5-EH1P3K-L, RAI-3K-48ES-5G, S5-EH1P3K-L-NS	RHI-3.6K-48ES-5G, RHI-3.6K-48ES-5G-NS, RHI-4K-48ES-5G-NS, S5-EH1P3.6K-L, S5-EH1P3.6K-L-NS, S5-EH1P4K-L-NS	RHI-4.6K-48ES-5G, RHI-4.6K-48ES-5G-NS, S5-EH1P4.6K-L, S5-EH1P4.6K-L-NS	RHI-5K-48ES-5G, RHI-5K-48ES-5G-NS, S5-EH1P5K-L, S5-EH1P5K-L-NS
	Rated power	3000 W / 3300 VA	3600 W / 4000 VA	4600 W / 4600 VA	5000 W / 5500 VA
	The generator:	☐ is suitable for installation in systems with an output power of more than 11.08 kW ☒ is capable of limiting Idc to 0.5% of rated current: ☒ uses a DC-sensitive protection function ☐ uses a transformer operating at mains frequency			

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Section B	Characteristics of the interface protection system					
	Manufacturer	Ginlong Technologies Co., Ltd.				
	Model	RHI-3K-48ES-5G, RHI-3K-48ES-5G-NS, RAI-3K-48ES-5G, RHI-3.6K-48ES-5G, RHI-3.6K-48ES-5G-NS, RHI-4K-48ES-5G-NS, RHI-4.6K-48ES-5G, RHI-4.6K-48ES-5G-NS, RHI-5K-48ES-5G, RHI-5K-48ES-5G-NS, RHI-6K-48ES-5G, RHI-6K-48ES-5G-NS, S5-EH1P3K-L, S5-EH1P3.6K-L, S5-EH1P4.6K-L, S5-EH1P5K-L, S5-EH1P6K-L, S5-EH1P3K-L-NS, S5-EH1P3.6K-L-NS, S5-EH1P4K-L-NS, S5-EH1P4.6K-L-NS, S5-EH1P5K-L-NS, S5-EH1P6K-L-NS				
	Type	☒ Integrated ☐ Not integrated				
Section C	Characteristics of inverter(s)					
	Model of inverter	RHI-3K-48ES-5G, RHI-3K-48ES-5G-NS, S5-EH1P3K-L, RAI-3K-48ES-5G, S5-EH1P3K-L-NS	RHI-3.6K-48ES-5G, RHI-3.6K-48ES-5G-NS, RHI-4K-48ES-5G-NS, S5-EH1P3.6K-L, S5-EH1P3.6K-L-NS, S5-EH1P4K-L-NS	RHI-4.6K-48ES-5G, RHI-4.6K-48ES-5G-NS, S5-EH1P4.6K-L, S5-EH1P4.6K-L-NS	RHI-5K-48ES-5G, RHI-5K-48ES-5G-NS, S5-EH1P5K-L, S5-EH1P5K-L-NS	RHI-6K-48ES-5G, RHI-6K-48ES-5G-NS, S5-EH1P6K-L, S5-EH1P6K-L-NS
	Manufacturer of inverter	Ginlong Technologies Co., Ltd.				
	Firmware version	A1				
	Rated power of inverter (PNINV)	3000 W	3600 W	4600 W	5000 W	6000 W

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Section E	Characteristics of the Storage System (SdA)							
	Representative Combination	RAI-3K-48ES-5G, RHI-"X"-K-48ES-5G, RHI-"Y"-K-48ES-5G-NS, S5-EH1P"X"-K-L, S5-EH1P"Y"-K-L-NS ("X"=3, 3.6, 4.6, 5, 6, "Y"=3, 3.6, 4, 4.6, 5, 6) with US2000 or US2000C or Phantom-S (1 piece)	RAI-3K-48ES-5G, RHI-"X"-K-48ES-5G, RHI-"Y"-K-48ES-5G-NS, S5-EH1P"X"-K-L, S5-EH1P"Y"-K-L-NS ("X"=3, 3.6, 4.6, 5, 6, "Y"=3, 3.6, 4, 4.6, 5, 6) with US2000 or US2000C or Phantom-S (2 pieces)	RAI-3K-48ES-5G, RHI-3K-48ES-5G, RHI-3K-48ES-5G-NS, S5-EH1P3K-L-NS with US2000 or US2000C or Phantom-S (3-8 pieces)	RHI-3.6K-48ES-5G, RHI-3.6K-48ES-5G-NS, RHI-4K-48ES-5G-NS, S5-EH1P3.6K-L-NS, S5-EH1P3.6K-L-NS, S5-EH1P4K-L-NS with US2000 or US2000C or Phantom-S (3-8 pieces)	RHI-"X"-K-48ES-5G, RHI-"X"-K-48ES-5G-NS, S5-EH1P"X"-K-L, S5-EH1P"X"-K-L-NS ("X"=4.6, 5, 6) with US2000 or US2000C or Phantom-S (3 pieces)	RHI-4.6K-48ES-5G, RHI-4.6K-48ES-5G-NS, S5-EH1P4.6K-L, S5-EH1P4.6K-L-NS with US2000 or US2000C or Phantom-S (4-8 pieces)	RHI-5K-48ES-5G, RHI-6K-48ES-5G, RHI-5K-48ES-5G-NS, RHI-6K-48ES-5G-NS, S5-EH1P5K-L, S5-EH1P6K-L, S5-EH1P5K-L-NS, S5-EH1P6K-L-NS with US2000 or US2000C or Phantom-S (4-8 pieces)
	Psn (nominal discharge power)	1100	2300	3000	3000	3450	4600	4600
	Pcn (nominal charging power)	1300	2750	3000	3600	4200	4600	5000
	Psm (max. discharge power)	1100	2300	3000	3000	3450	4600	4600
	Pcm (max. charging power)	1300	2750	3000	3600	4200	4600	5000
	Representative Combination	RAI-3K-48ES-5G, RHI-"X"-K-48ES-5G, RHI-"Y"-K-48ES-5G-NS, S5-EH1P"X"-K-L, S5-EH1P"Y"-K-L-NS ("X"=3, 3.6, 4.6, 5, 6, "Y"=3, 3.6, 4, 4.6, 5, 6) with US3000 or US3000C (1 piece)	RAI-3K-48ES-5G, RHI-3K-48ES-5G, RHI-3K-48ES-5G-NS, S5-EH1P3K-L-NS with US3000 or US3000C (2-8 pieces)	RHI-3.6K-48ES-5G, RHI-3.6K-48ES-5G-NS, RHI-4K-48ES-5G-NS, S5-EH1P3.6K-L-NS, S5-EH1P3.6K-L-NS, S5-EH1P4K-L-NS with US3000 or US3000C (2-8 pieces)	RHI-"X"-K-48ES-5G, RHI-"X"-K-48ES-5G-NS, S5-EH1P"X"-K-L, S5-EH1P"X"-K-L-NS ("X"=4.6, 5, 6) with US3000 or US3000C (2 pieces)	RHI-4.6K-48ES-5G, RHI-4.6K-48ES-5G-NS, S5-EH1P4.6K-L, S5-EH1P4.6K-L-NS with US3000 or US3000C (3-8 pieces)	RHI-5K-48ES-5G, RHI-6K-48ES-5G, RHI-5K-48ES-5G-NS, RHI-6K-48ES-5G-NS, S5-EH1P5K-L, S5-EH1P6K-L, S5-EH1P5K-L-NS, S5-EH1P6K-L-NS with US3000 or US3000C (3-8 pieces)	
	Psn (nominal discharge power)	1700	3000	3000	3400	4600	4600	
	Pcn (nominal charging power)	2050	3000	3600	4100	4600	5000	
	Psm (max. discharge power)	1700	3000	3000	3400	4600	4600	
	Pcm (max. charging power)	2050	3000	3600	4100	4600	5000	

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Representative Combination	RAI-3K-48ES-5G, RHI-"X"-K-48ES-5G, RHI-"Y"-K-48ES-5G-NS, S5-EH1P"X"-K-L, S5-EH1P"Y"-K-L-NS ("X"=3, 3.6, 4.6, 5, 6, "Y"=3, 3.6, 4, 4.6, 5, 6) with Force L1 or Force L2 (2 pieces)	RAI-3K-48ES-5G, RHI-"X"-K-48ES-5G, RHI-"Y"-K-48ES-5G-NS, S5-EH1P"X"-K-L, S5-EH1P"Y"-K-L-NS ("X"=3, 3.6, 4.6, 5, 6, "Y"=3, 3.6, 4, 4.6, 5, 6) with Force L1 or Force L2 (3 pieces)	RAI-3K-48ES-5G, RHI-3K-48ES-5G, RHI-3K-48ES-5G-NS, S5-EH1P3K-L, S5-EH1P3K-L-NS with Force L1 or Force L2 (4 pieces)	RHI-"X"-K-48ES-5G, RHI-"Y"-K-48ES-5G-NS, S5-EH1P"X"-K-L, S5-EH1P"Y"-K-L-NS ("X"=3.6, 4.6, 5, 6, "Y"=3.6, 4, 4.6, 5, 6) with Force L1 or Force L2 (4 pieces)	RAI-3K-48ES-5G, RHI-3K-48ES-5G, RHI-3K-48ES-5G-NS, S5-EH1P3K-L, S5-EH1P3K-L-NS with Force L1 (5-7 pieces)	RHI-3.6K-48ES-5G, RHI-3.6K-48ES-5G-NS, RHI-4K-48ES-5G-NS, S5-EH1P3.6K-L, S5-EH1P3.6K-L-NS, S5-EH1P4K-L-NS with Force L1 (5-7 pieces)	RHI-"X"-K-48ES-5G, RHI-"X"-K-48ES-5G-NS, S5-EH1P"X"-K-L, S5-EH1P"X"-K-L-NS ("X"=4.6, 5, 6) with Force L1 (5 pieces)
Psn (nominal discharge power)	1350	2050	2750	2750	3000	3000	3400
Pcn (nominal charging power)	1650	2450	3000	3300	3000	3600	4100
Psmx (max. discharge power)	1350	2050	2750	2750	3000	3000	3400
Pcmx (max. charging power)	1650	2450	3000	3300	3000	3600	4100
Representative Combination	RHI-4.6K-48ES-5G, RHI-4.6K-48ES-5G-NS, S5-EH1P4.6K-L, S5-EH1P4.6K-L-NS with Force L1 (6 pieces)	RHI-5K-48ES-5G, RHI-6K-48ES-5G, RHI-5K-48ES-5G-NS, RHI-6K-48ES-5G-NS, S5-EH1P5K-L, S5-EH1P6K-L, S5-EH1P5K-L-NS, S5-EH1P6K-L-NS with Force L1 (6 pieces)	RHI-4.6K-48ES-5G, RHI-4.6K-48ES-5G-NS, S5-EH1P4.6K-L, S5-EH1P4.6K-L-NS with Force L1 (7 pieces)	RHI-5K-48ES-5G, RHI-6K-48ES-5G, RHI-5K-48ES-5G-NS, RHI-6K-48ES-5G-NS, S5-EH1P5K-L, S5-EH1P6K-L, S5-EH1P5K-L-NS, S5-EH1P6K-L-NS with Force L1 (7 pieces)			
Psn (nominal discharge power)	4100	4100	4600	4600			
Pcn (nominal charging power)	4600	5000	4600	5000			
Psmx (max. discharge power)	4100	4100	4600	4600			
Pcmx (max. charging power)	4600	5000	4600	5000			
Type	☒ Bidirectional ☐ Monodirectional						
Batteries that can be used with the above static converters							
Brand	Pylon						

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Technology	Li-Ion	
Models	US2000 or US2000C or Phantom-S	US3000 or US 3000C or Force L1 or Force L2
CUS module (kWh)	2.40	3.55
BMS firmware version	V4.6	
Number of modules	1-8 pieces	1-8 pieces (US3000 or US 3000C) 2-7 pieces (Force L1) 2-4 pieces (Force L2)
Note	Batteries are not contained in the inverter and should be installed according to local regulations and in accordance with Pylon instruction.	

Section I	References of the laboratories that performed the tests and their test reports (RdP)		
	Selected method	☒ Tests performed under the supervision of a certification body	☒ Tests performed by an accredited laboratory
	Test Reports (RdP)	1) Test report according to Annex A, Annex B & Bbis: 70.409.20.081.14-00, 70.409.20.081.14-01, 70.409.21.036.20-00, 70.409.21.036.20-01, 70.409.21.036.20-02, 70.409.21.036.20-03	2) Test report EMC: a) C19-447-WT-01; b) C19-447-WT-02; c) 64772228001902
	Issued by	Testing lab: 1) Ginlong Technologies Co., Ltd. Tests performed under supervision of certifier from TÜV SÜD Product Service GmbH	1) -a) & -b) Shanghai Inspection and Testing Institute of Instruments and Automation Systems Co.,Ltd. 1) -c) TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch
	Accreditation No.	D-ZE-11321-01-00	1) -a) & b) CNAS L0130 1) -c) CNAS L3584
	Accreditation body ref.	DAKKS	CNAS
Section M	Reference of the certification body		
	Certification Body	TÜV SÜD Product Service GmbH DAKKS accreditation certificate D-ZE-11321-01-00 according to DIN EN ISO/IEC 17065:2013	