Ginlong Technologies Co., Ltd.
No. 57 Jintong Road,
Binhai Industrial Park - Xiangshan
Ningbo - Zhejiang Province, 315712 - P.R. China
Tel: (+86) 574 6580 2188 - info@ginlong.com

Dichiarazione di conformità alle prescrizioni della Norma CEI 0-21;V1:2022-11
Declaration of Conformity to Requirements of the Standard CEI 0-21;V1:2022-11

TIPOLOGIA DEL SISTEMA DI ACCUMULO CUI SI RIFERISCE LA DICHIARAZIONE:
Type of Storage System to Which This Declaration Refers:

DISPOSITIVO DI INTERFACCIA Interface Device	**PROTEZIONE DI INTERFACCIA** Interface Protection	**DISPOSITIVO DI CONVERSIONE STATICA** Static Conversion Device	**DISPOSITIVO DI GENERAZIONE ROTANTE** Rotary Generating Device
Sì/Yes	Sì/Yes	Sì/Yes	No

COSTRUTTORE: Manufacturer	**MODELLO DI INVERTER:** Inverter Model	**VERSIONE FIRMWARE:** Firmware Version	**NUMERO DI FASI (monofase/trifase)** Number of Phase (Single/Three Phase)	**POTENZA NOMINALE:** Rated Power [W]
Ginlong Technologies Co., Ltd. No. 57 Jintong Road, Binhai Industrial Park - Xiangshan Ningbo - Zhejiang Province, 315712 - P.R. China	RHI-3K-48ES-5G RHI-3K-48ES-5G-NS S5-EH1P3K-L	V2F o superiore or upper	Monofase /SinglePhase	3000
	RHI-3.6K-48ES-5G RHI-3.6K-48ES-5G-NS S5-EH1P3.6K-L			3600
	RHI-4.6K-48ES-5G RHI-4.6K-48ES-5G-NS S5-EH1P4.6K-L			4600
	RHI-5K-48ES-5G RHI-5K-48ES-5G-NS S5-EH1P5K-L			5000
	RHI-6K-48ES-5G RHI-6K-48ES-5G-NS S5-EH1P6K-L			6000
	RAI-3K-48ES-5G	V08 o superiore or upper		3000

Gli inverter suddetti sono certificati in combinazione con una delle seguenti opzioni di Batteria al Litio:
The inverters here above listed are certified according with one of the following options of Lithium Battery:

COSTRUTTORE: Manufacturer	**MODELLO DI BATTERIA:** Battery Model		**Capacità del sistema di accumulo (CUS)** Storage system capacity (CUS)	
			Capacità per singolo modulo (kWh) Capacity For Each Battery Module (kWh)	**Numero di batterie raccomandate dal costruttore** Number(s) of Battery Module Recommended By Manufacturer
Pylontech	US2000/US2000C/Phantom-S		2.4	1-8
	US3000/US3000C		3.55	1-8
	Force L2	FL4874M (Modulo/Module)	3.55	2-4
		FC0048M (BMS)		1-6
	Force L1	FL48074 (Modulo/Module)	3.55	2-7
		FC0048 (BMS)		1-6
	US5000/US5000B		4.8	1-16
LG	Resu 3.3		3.3	1-2
	Resu 6.5		6.5	
LG	Resu 10		9.8	1-2

Ginlong Technologies Co., Ltd.
No. 57 Jintong Road,
Binhai Industrial Park - Xiangshan
Ningbo - Zhejiang Province, 315712 - P.R. China
Tel: (+86) 574 6580 2188 - info@ginlong.com

	Resu 12	13.1	
UZ Energy	L051100-A	5.12	1-16
	L051100-A1	5.12	
Dyness	B4850	2.4	1-40
	PowerDepot	2.4	1-2
	PowerBox	2.4	1-4
	A48100	4.8	1-40
WECO	5K3-XP-EU	5.37	1-15

NOTA: Il dispositivo è in grado di limitare la Idc allo 0,5% della corrente nominale.

Note: The device is capable to limit Idc to 0,5% of the rated current

Esaminati i Fascicoli Prove n° 704092103620-02, 704092008118-01, 704092103634-01, 704092103621-01 e 704092201818-00, emessi dal laboratorio TÜV SÜD Certification and Testing (China) Co., Ltd con accreditamento DAkkS n. D-PL-19065-01-00 and i Fascicoli Prove n° CN210CFH 002 e CN22RB1Z 002 emessi dal laboratorio TÜV Rheinland (Shanghai) Co. Ltd con accreditamento CNAS n. L 38038.
Ai sensi degli articolo 76 del DPR 28 Dicembre 2000, n° 445, il sottoscritto Yiming Wang, in qualità di legale rappresentante di Ginlong Technologies Co., Ltd. - No. 57 Jintong Road - Binhai Industrial Park - Xiangshan - Ningbo - Zhejiang Province - China, dichiara che il prodotto indicato è conforme alle prescrizioni CEI 0-21;V1:2022-11.

Taken into account test report No. 704092103620-02, 704092008118-01,704092103634-01, 704092103621-01 and 704092201818-00 issued by test TÜV SÜD Certification and Testing (China) Co., Ltd with DAkkS accreditation No. D-PL-19065-01-00 and the test report No. CN210CFH 002 and CN22RB1Z 002 issued by test TÜV Rheinland (Shanghai) Co. Ltd with CNAS accreditation No. L 38038.
According with the article 76 of Italian DPR 28 December 2000, n° 445, the undersigned Yiming Wang, as legal representative of Ginlong technologies Co., Ltd. - No. 57 Jintong Road - Binhai Industrial Park - Xiangshan - Ningbo - Zhejiang Province - China, herewith declare that the product complies with the requirements of CEI 0-21;V1:2022-11

DATA 13/12/2023
DATE 13/12/2023

FIRMA LEGALE RAPPRESENTANTE
SIGNATURE LEGAL REPRESENTATIVE

I hereby certify, that the above is the true signature, subscribed in my presence, of

Mr. Yiming Wang, born on April 13, 1981, business address No.57 Jintong Road, Binhai Industrial Park, Xiangshan Ningbo, Zhejiang Province, China, identified himself by submission of his valid government-issued photo identification

Acting on behalf of Ginlong Technologies Co., Ltd. as Chief Executive Officer under the document

Dichiarazioni di conformit_Declaration_of _Comformity_CEI_0-21;V1_2022-11_1PH_RHI_RAI_REV.00

Grandall Law Firm (Beijing)

January 2nd 2024

ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

Product Service

Compliance Document

No. D 086470 0088 Rev. 02

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.: 704092103620-02

Date, 2022-11-25

(Zhengdong Ma)

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

Product Service

Compliance Document

No. D 086470 0088 Rev. 02

Model(s):

Gird-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-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

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

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

TÜV®

Product Service

Compliance Document

No. D 086470 0088 Rev. 02

	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	RHI-6K-48ES-5G, RHI-6K-48ES-5G-NS, S5-EH1P6K-L, S5-EH1P6K-L-NS
	Rated power	3000 W / 3300 VA	3600 W / 4000 VA	4600 W / 4600 VA	5000 W / 5500 VA	6000 W / 6600 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				
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				

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

Product Service

Compliance Document

No. D 086470 0088 Rev. 02

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	
Section E	Characteristics of the Storage System (SdA)						
	Representative Combination	RAI-3K-48ES-5G, RHI-3K-48ES-5G, RHI-3.6K-48ES-5G, RHI-4K-48ES-5G, RHI-4.6K-48ES-5G, RHI-5K-48ES-5G, RHI-6K-48ES-5G, RHI-3K-48ES-5G-L-NS, RHI-3.6K-48ES-5G-L-NS, RHI-4K-48ES-5G-L-NS, RHI-4.6K-48ES-5G-L-NS, RHI-5K-48ES-5G-L-NS, RHI-6K-48ES-5G-L-NS, S5-EH1P3K-L, S5-EH1P3.6K-L, S5-EH1P4K-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 with US2000 or US2000C or Phantom-S (1 piece)	RAI-3K-48ES-5G, RHI-3K-48ES-5G, RHI-3.6K-48ES-5G, RHI-4K-48ES-5G, RHI-4.6K-48ES-5G, RHI-5K-48ES-5G, RHI-6K-48ES-5G, RHI-3K-48ES-5G-L-NS, RHI-3.6K-48ES-5G-L-NS, RHI-4K-48ES-5G-L-NS, RHI-4.6K-48ES-5G-L-NS, RHI-5K-48ES-5G-L-NS, RHI-6K-48ES-5G-L-NS 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, 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, S5-EH1P3.6K-L-NS, S5-EH1P4K-L-NS with US2000 or US2000C or Phantom-S (3-8 pieces)	RHI-4.6K-48ES-5G, RHI-5K-48ES-5G, RHI-6K-48ES-5G, RHI-4.6K-48ES-5G-NS, RHI-5K-48ES-5G-NS, RHI-6K-48ES-5G-NS, S5-EH1P4.6K-L, EH1P5K-L, EH1P6K-L, S5-EH1P4.6K-L-NS, EH1P5K-L-NS, EH1P6K-L-NS 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-EH1P4.6-K-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
	Psmax (max. discharge power)	1100	2300	3000	3000	3450	4600	4600
	Pcmax (max. charging power)	1300	2750	3000	3600	4200	4600	5000

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

TÜV®

Product Service

Compliance Document

No. D 086470 0088 Rev. 02

	Representative Combination	RAI-3K-48ES-5G, RHI-3K-48ES-5G, RHI-3.6K-48ES-5G, RHI-4K-48ES-5G, RHI-4.6K-48ES-5G, RHI-5K-48ES-5G, RHI-6K-48ES-5G, RHI-(3-6)K-48ES-5G-NS, S5-EH1P3K-L, S5-EH1P3.6K-L, S5-EH1P4K-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 with US3000 or US3000C (1 piece)	RAI-3K-48ES-5G, RHI-3K-48ES-5G, RHI-3K-48ES-5G-NS, S5-EH1P3K-L, S5-EH1P3-K-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, S5-EH1P3.6K-L-NS, S5-EH1P4K-L-NS with US3000 or US3000C (2-8 pieces)	RHI-4.6K-48ES-5G, RHI-5K-48ES-5G, RHI-6K-48ES-5G, RHI-4.6K-48ES-5G-NS, RHI-5K-48ES-5G-NS, RHI-6K-48ES-5G-NS, S5-EH1P4.6K-L, EH1P5K-L, EH1P6K-L, S5-EH1P4.6K-L-NS, EH1P5K-L-NS, EH1P6K-L-NS with US3000 or US3000C (2 pieces)	RHI-4.6K-48ES-5G, RHI-4.6K-48ES-5G-NS, S5-EH1P4.6K-L, S5-EH1P4.6-K-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	
	Psmax (max. discharge power)	1700	3000	3000	3400	4600	4600	
	Pcmax (max. charging power)	2050	3000	3600	4100	4600	5000	
	Representative Combination	RAI-3K-48ES-5G, RHI-3K-48ES-5G, RHI-3.6K-48ES-5G, RHI-4K-48ES-5G, RHI-4.6K-48ES-5G, RHI-5K-48ES-5G, RHI-6K-48ES-5G, RHI-(3-6)K-48ES-5G-NS, S5-EH1P3K-L, S5-EH1P3.6K-L, S5-EH1P4K-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 with Force L1 or Force L2 (2 pieces)	RAI-3K-48ES-5G, RHI-3K-48ES-5G, RHI-3.6K-48ES-5G, RHI-4K-48ES-5G, RHI-4.6K-48ES-5G, RHI-5K-48ES-5G, RHI-6K-48ES-5G, RHI-(3-6)K-48ES-5G-NS, S5-EH1P3K-L, S5-EH1P3.6K-L, S5-EH1P4K-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 with Force L1 or force L2 (3 pieces)	RAI-3K-48ES-5G, RHI-3K-48ES-5G, RHI-3K-48ES-5G-NS,S5-EH1P3K-L with Force L1 or Force L2 (4 pieces)	RHI-(3.6-6)K-48ES-5G, RHI-(3.6-6)K-48ES-5G-NS, S5-EH1P(3.6-6)K-L, S5-EH1P(3.6-6)K-L-NS with Force L1 or Force L2 (4 pieces)	RAI-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-4.6K-48ES-5G, RHI-5K-48ES-5G, RHI-6K-48ES-5G, RHI-4.6K-48ES-5G-NS, RHI-5K-48ES-5G-NS, RHI-6K-48ES-5G-NS, S5-EH1P4.6K-L, EH1P5K-L, EH1P6K-L, S5-EH1P4.6K-L-NS, EH1P5K-L-NS, EH1P6K-L-NS with Force L1 (5 pieces)
	Psn (nominal discharge power)	1350	2050	2750	2750	3000	3000	3400

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

TÜV®

Product Service

Compliance Document

No. D 086470 0088 Rev. 02

	Pcn (nominal charging power)	1650	2450	3000	3300	3000	3600	4100
	Psmax (max. discharge power)	1350	2050	2750	2750	3000	3000	3400
	Pcmax (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			
	Psmax (max. discharge power)	4100	4100	4600	4600			
	Pcmax (max. charging power)	4600	5000	4600	5000			
	Type	☒ Bidirectional ☐ Monodirectional						
	Batteries that can be used with the above static converters							
	Brand	Pylon						
	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.						

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

TÜV®

Product Service

Compliance Document

No. D 086470 0088 Rev. 02

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	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	

ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

Product Service

Compliance Document

No. D 086470 0080 Rev. 01

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**
Hybrid inverter and AC coupled 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.: 704092008118-01

Date, 2022-03-17

(Zhengdong Ma)

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

Product Service

Compliance Document

No. D 086470 0080 Rev. 01

Model(s):

AC coupled energy inverter: RAI-3K-48ES-5G

Hybrid inverter: RHI-3K-48ES, RHI-3K-48ES-5G, RHI-3K-48ES-5G-NS, RHI-3.6K-48ES, RHI-3.6K-48ES-5G, RHI-3.6K-48ES-5G-NS, RHI-4K-48ES-5G-NS, RHI-4.6K-48ES, RHI-4.6K-48ES-5G, RHI-4.6K-48ES-5G-NS, RHI-5K-48ES, 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

Storage battery system: RESU3.3(1~2 pieces), RESU6.5(1~2 pieces), RESU10(1~2 pieces), RESU12(1~2 pieces)

Parameters:

Pease see the page 3 to page 8

Tested according to:

CEI 0-21:2019/V1:2020

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

TÜV®

Product Service

Compliance Document

No. D 086470 0080 Rev. 01

AC coupled energy inverter with storage battery system:	
1) Storage battery system parameters:	
Battery Type:	Li-ion
Model:	Manufacturer
RESU3.3	LG Energy Solution Ltd
RESU6.5	LG Energy Solution Ltd
RESU10	LG Energy Solution Ltd
RESU12	LG Energy Solution Ltd
BMS firmware version	2.0.0.0
Note: In any combination, up to two of the above-mentioned batteries can be connected in parallel to the inverter.	
2) AC coupled energy inverter	
Model name:	RAI-3K-48ES-5G
a) Battery:	
Battery Type:	Li-ion
Battery voltage range:	40-60 Vd.c.
Max. Charge current:	60 Ad.c.
Max. Discharge current:	60 Ad.c.
b) AC-Output (Back-up):	
Rated output voltage:	230 Va.c.
Rated frequency:	50 Hz
Rated output current:	13 Aa.c.
Rated output active power:	3000 W
Rated output apparent power:	3000 VA
c) AC-Output (Grid Side):	
Rated output voltage:	230 Va.c.
Rated frequency:	50 Hz
Rated output current:	13 Aa.c.
Max. output active power:	3000 W
Max. output apparent power:	3300 VA
Power factor:	0.8 leading - 0.8 lagging
d) AC input:	
Rated input voltage:	230 Va.c.
Rated frequency:	50 Hz
Max. intput current:	32 Aa.c.
e) General:	
Protective class:	Class I
Operation temperature range:	-25...60°C
Ingress protection:	IP65
Overvoltage-category:	II (DC), III (MAINS)

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

TÜV®

Product Service

Compliance Document

No. D 086470 0080 Rev. 01

Hybrid inverter with storage battery system:				
1) Storage battery system parameters:				
Battery Type:	Li-ion			
Model:	Manufacturer			
RESU3.3	LG Energy Solution Ltd			
RESU6.5	LG Energy Solution Ltd			
RESU10	LG Energy Solution Ltd			
RESU12	LG Energy Solution Ltd			
BMS firmware version	2.0.0.0			
Note: In any combination, up to two of the above-mentioned batteries can be connected in parallel to the inverter.				
2) Hybrid inverter:				
Model name	RHI-3K-48ES	RHI-3.6K-48ES	RHI-4.6K-48ES	RHI-5K-48ES
a) PV input parameters:				
Max. Input Voltage:	600 Vd.c.			
MPP Voltage Range:	90-520 Vd.c.			
Max. Input Current:	2×11 Ad.c.			
Isc PV:	2×17,2 Ad.c.			
b) Battery parameters:				
Battery Type:	Li-Ion			
Battery Voltage Range:	42-58 Vd.c.			
Max. Charge Current:	62,5 Ad.c.			
Max. Discharge Current:	62,5 Ad.c.			
c) AC-Output (Back-up) parameters:				
Rated Output Voltage:	230 Va.c.			
Rated Output Frequency:	50 Hz			
Rated Output Current:	13 Aa.c.			
Rated Output Power:	3000 W			
d) AC-Output (Grid Side) parameters:				
Rated Output Voltage:	230 Va.c.			
Rated Output Frequency:	50 Hz			
Rated Output Power:	3000 W	3600 W	4600 W	5000 W
Max. Apparent Output Power:	3300VA	4000VA	4600VA	5500VA
Max. Output Current:	15,7 Aa.c.	17,3 Aa.c.	23 Aa.c.	23,9 Aa.c.
Model name	RHI-3K-48ES	RHI-3.6K-48ES	RHI-4.6K-48ES	RHI-5K-48ES
Power Factor(adj.):	0,8(lagging)…0,8(leading)			
e) AC input parameters:				
Rated Voltage:	230 Va.c.			
Current (Maximum Continuous):	23,9 Aa.c.			
Rated Frequency:	50 Hz			
f) General:				
Operating Temperature Range:	-25 °C…+60 °C			
Protective Class:	I			
Ingress Protection:	IP65			
Overvoltage Category:	II(PV), III(MAINS)			
Inverter Topology:	Non-isolated			

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

TÜV®

Product Service

Compliance Document

No. D 086470 0080 Rev. 01

2) Hybrid inverter:			
Model name	RHI-3K-48ES-5G, RHI-3K-48ES-5G-NS	RHI-3.6K-48ES-5G, RHI-3.6K-48ES-5G-NS	RHI-4K-48ES-5G-NS
a) PV input parameters:			
Max. Input Voltage:	600 Vd.c.		
MPP Voltage Range:	90-520 Vd.c.		
Max. Input Current:	2×11 Ad.c.		
Isc PV:	2×17,2 Ad.c.		
b) Battery parameters:			
Battery Type:	Li-ion / Lead-acid		
Battery Voltage Range:	42-58 Vd.c.		
Max. Charge Current:	62,5 Ad.c.		
Max. Discharge Current:	62,5 Ad.c.		
c) AC-Output (Back-up) parameters:			
Rated Output Voltage:	230 Va.c.		
Rated Output Frequency:	50 Hz		
Rated Output Current:	13 Aa.c.		
Rated Output Power:	3000 W		
d) AC-Output (Grid Side) parameters:			
Rated Output Voltage:	230 Va.c.		
Rated Output Frequency:	50 Hz		
Rated Output Power:	3000 W	3600 W	3600 W
Max. Apparent Output Power:	3300VA	4000VA	4000VA
Max. Output Current:	15,7 Aa.c.	17,3 Aa.c.	17,3 Aa.c.
Power Factor(adj.):	0,8(lagging)…0,8(leading)		
e) AC input parameters:			
Rated Voltage:	230 Va.c.		
Current (Maximum Continuous):	26,1 Aa.c.		
Rated Frequency:	50 Hz		
f) General:			
Operating Temperature Range:	-25 °C…+60 °C		
Protective Class:	I		
Ingress Protection:	IP65		
Overvoltage Category:	II(PV), III(MAINS)		
Inverter Topology:	Non-isolated		

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

TÜV®

Product Service

Compliance Document

No. D 086470 0080 Rev. 01

2) Hybrid inverter:			
Model name	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
a) PV input parameters:			
Max. Input Voltage:	600 Vd.c.		
MPP Voltage Range:	90-520 Vd.c.		
Max. Input Current:	2×11 Ad.c.		
Isc PV:	2×17,2 Ad.c.		
b) Battery parameters:			
Battery Type:	Li-ion / Lead-acid		
Battery Voltage Range:	42-58 Vd.c.		
Max. Charge Current:	100 Ad.c.		
Max. Discharge Current:	100 Ad.c.		
c) AC-Output (Back-up) parameters:			
Rated Output Voltage:	230 Va.c.		
Rated Output Frequency:	50 Hz		
Rated Output Current:	22 Aa.c.		
Rated Output Power:	5000 W		
d) AC-Output (Grid Side) parameters:			
Rated Output Voltage:	230 Va.c.		
Rated Output Frequency:	50 Hz		
Rated Output Power:	4600 W	5000 W	6000 W
Max. Apparent Output Power:	4600VA	5500VA	6600 VA
Max. Output Current:	23 Aa.c.	23,9 Aa.c.	30Aa.c.
Power Factor(adj.):	0,8(lagging)…0,8(leading)		
e) AC input parameters:			
Rated Voltage:	230 Va.c.		
Current (Maximum Continuous):	26,1 Aa.c.		
Rated Frequency:	50 Hz		
f) General:			
Operating Temperature Range:	-25 °C…+60 °C		
Protective Class:	I		
Ingress Protection:	IP65		
Overvoltage Category:	II(PV), III(MAINS)		
Inverter Topology:	Non-isolated		

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

TÜV®

Product Service

Compliance Document

No. D 086470 0080 Rev. 01

2) Hybrid inverter:			
Model name	S5-EH1P3K-L	S5-EH1P3.6K-L	S5-EH1P4.6K-L
a) PV input parameters:			
Max. Input Voltage:	600 Vd.c.	600 Vd.c.	600 Vd.c.
MPP Voltage Range:	90-520 Vd.c.	90-520 Vd.c.	90-520 Vd.c.
Max. Input Current:	2×15 Ad.c.	2×15 Ad.c.	2×15 Ad.c.
Isc PV:	2×22,5 Ad.c.	2×22,5 Ad.c.	2×22,5 Ad.c.
b) Battery parameters:			
Battery Type:	Li-ion / Lead-acid	Li-ion / Lead-acid	Li-ion / Lead-acid
Battery Voltage Range:	42-58 Vd.c.	42-58 Vd.c.	42-58 Vd.c.
Max. Charge Current:	62,5 Ad.c.	62,5 Ad.c.	100 Ad.c.
Max. Discharge Current:	62,5 Ad.c.	62,5 Ad.c.	100 Ad.c.
c) AC-Output (Back-up) parameters:			
Rated Output Voltage:	230 Va.c.	230 Va.c.	230 Va.c.
Rated Output Frequency:	50 Hz	50 Hz	50 Hz
Rated Output Current:	13,5 Aa.c.	13,5 Aa.c.	22 Aa.c.
Rated Output Power:	3000 W	3000 W	5000 W
d) AC-Output (Grid Side) parameters:			
Rated Output Voltage:	230 Va.c.	230 Va.c.	230 Va.c.
Rated Output Frequency:	50 Hz	50 Hz	50 Hz
Model name	S5-EH1P3K-L	S5-EH1P3.6K-L	S5-EH1P4.6K-L
Rated Output Power:	3000 W	3600 W	4600 W
Max. Apparent Output Power:	3300VA	4000VA	4600VA
Max. Output Current:	15 Aa.c.	18,5 Aa.c.	21 Aa.c.
Power Factor(adj.):	0,8(lagging)…0,8(leading)		
e) AC input parameters:			
Rated Voltage:	230 Va.c.		
Current (Maximum Continuous):	20,5 Aa.c.	25 Aa.c.	31,5 Aa.c.
Rated Frequency:	50 Hz		
f) General:			
Operating Temperature Range:	-25 °C…+60 °C		
Protective Class:	I		
Ingress Protection:	IP65		
Overvoltage Category:	II(PV), III(MAINS)		
Inverter Topology:	Non-isolated		

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

TÜV®

Product Service

Compliance Document

No. D 086470 0080 Rev. 01

Model name	S5-EH1P5K-L	S5-EH1P6K-L
a) PV input parameters:		
Max. Input Voltage:	600 Vd.c.	
MPP Voltage Range:	90-520 Vd.c.	
Max. Input Current:	2×15 Ad.c.	
Isc PV:	2×22,5 Ad.c.	
b) Battery parameters:		
Battery Type:	Li-ion / Lead-acid	
Battery Voltage Range:	42-58 Vd.c.	
Max. Charge Current:	100 Ad.c.	
Max. Discharge Current:	100 Ad.c.	
c) AC-Output (Back-up) parameters:		
Rated Output Voltage:	230 Va.c.	
Rated Output Frequency:	50 Hz	
Rated Output Current:	22 Aa.c.	
Rated Output Power:	5000 W	
d) AC-Output (Grid Side) parameters:		
Rated Output Voltage:	230 Va.c.	
Rated Output Frequency:	50 Hz	
Rated Output Power:	5000 W	6000 W
Max. Apparent Output Power:	5500VA	6600 VA
Max. Output Current:	25 Aa.c.	30 Aa.c.
Power Factor(adj.):	0,8(lagging)…0,8(leading)	
e) AC input parameters:		
Rated Voltage:	230 Va.c.	
Current (Maximum Continuous):	34,5 Aa.c.	
Rated Frequency:	50 Hz	
f) General:		
Operating Temperature Range:	-25 °C…+60 °C	
Protective Class:	I	
Ingress Protection:	IP65	
Overvoltage Category:	II(PV), III(MAINS)	
Inverter Topology:	Non-isolated	

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

TÜV®

ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

Product Service

Compliance Document

No. D 086470 0099 Rev. 01

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.: 704092103634-01

Date, 2022-09-09

(Zhengdong Ma)

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

Product Service

Compliance Document

No. D 086470 0099 Rev. 01

Model(s):

Gird-interactive inverter: RHI-3K-48ES, RHI-3K-48ES-5G, RHI-3K-48ES-5G-NS, RHI-3.6K-48ES, RHI-3.6K-48ES-5G, RHI-3.6K-48ES-5G-NS, RHI-4K-48ES-5G-NS, RHI-4.6K-48ES, RHI-4.6K-48ES-5G, RHI-4.6K-48ES-5G-NS, RHI-5K-48ES, 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, RAI-3K-48ES-5G

Storage battery system: L051100-A (Power Lite), L051100-A1 (Power Lite)

Parameters:

Please see page 3 to page 6.

Tested according to:

CEI 0-21:2022

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

TÜV®

Product Service

Compliance Document

No. D 086470 0099 Rev. 01

	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, RHI-3K-48ES-5G, RHI-3K-48ES-5G-NS, S5-EH1P3K-L, RAI-3K-48ES-5G	RHI-3.6K-48ES, RHI-3.6K-48ES-5G, RHI-3.6K-48ES-5G-NS, RHI-4K-48ES-5G-NS, S5-EH1P3.6K-L	RHI-4.6K-48ES, RHI-4.6K-48ES-5G, RHI-4.6K-48ES-5G-NS, S5-EH1P4.6K-L	RHI-5K-48ES, RHI-5K-48ES-5G, RHI-5K-48ES-5G-NS, S5-EH1P5K-L	RHI-6K-48ES-5G, RHI-6K-48ES-5G-NS, S5-EH1P6K-L
	Rated power	3000 W / 3300 VA	3600 W / 4000 VA	4600 W / 4600 VA	5000 W / 5500 VA	6000 W / 6600 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				

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

Product Service

Compliance Document

No. D 086470 0099 Rev. 01

Section B	Characteristics of the interface protection system					
	Manufacturer	Ginlong Technologies Co., Ltd.				
	Model	RAI-3K-48ES-5G, RHI-3K-48ES, RHI-3K-48ES-5G, RHI-3K-48ES-5G-NS, RHI-3.6K-48ES, RHI-3.6K-48ES-5G, RHI-3.6K-48ES-5G-NS, RHI-4K-48ES-5G-NS, RHI-4.6K-48ES, RHI-4.6K-48ES-5G, RHI-4.6K-48ES-5G-NS, RHI-5K-48ES, 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				
	Type	☒ Integrated ☐ Not integrated				
Section C	Characteristics of inverter (s)					
	Model of inverter	RHI-3K-48ES, RHI-3K-48ES-5G, RHI-3K-48ES-5G-NS, S5-EH1P3K-L, RAI-3K-48ES-5G	RHI-3.6K-48ES, RHI-3.6K-48ES-5G, RHI-3.6K-48ES-5G-NS, RHI-4K-48ES-5G-NS, S5-EH1P3.6K-L	RHI-4.6K-48ES, RHI-4.6K-48ES-5G, RHI-4.6K-48ES-5G-NS, S5-EH1P4.6K-L	RHI-5K-48ES, RHI-5K-48ES-5G, RHI-5K-48ES-5G-NS, S5-EH1P5K-L	RHI-6K-48ES-5G, RHI-6K-48ES-5G-NS, S5-EH1P6K-L
	Manufacturer of inverter	Ginlong Technologies Co., Ltd.				
	Firmware version	A1				
	Rated power	3000 W / 3300 VA	3600 W / 4000 VA	4600 W / 4600 VA	5000 W / 5500 VA	6000 W / 6600 VA

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

TÜV®

Product Service

Compliance Document

No. D 086470 0099 Rev. 01

Section E	Characteristics of the Storage System (SdA)							
	Representative Combination	RHI-3K-48ES, RHI-3K-48ES-5G, RHI-3K-48ES-5G-NS, RAI-3K-48ES-5G with L051100-A / L051100-A1 (1 piece)	RHI-3K-48ES, RHI-3K-48ES-5G, RHI-3K-48ES-5G-NS, RAI-3K-48ES-5G with L051100-A / L051100-A1 (2~16 pieces)	RHI-3.6K-48ES, RHI-3.6K-48ES-5G, RHI-3.6K-48ES-5G-NS, S5-EH1P3.6K-L RHI-4K-48ES-5G-NS, RHI-4.6K-48ES, RHI-4.6K-48ES-5G, RHI-4.6K-48ES-5G-NS, S5-EH1P4.6K-L RHI-5K-48ES, RHI-5K-48ES-5G, RHI-5K-48ES-5G-NS, S5-EH1P5K-L RHI-6K-48ES-5G, RHI-6K-48ES-5G-NS, S5-EH1P6K-Lwith L051100-A / L051100-A1 (1 piece)	RHI-3.6K-48ES, RHI-3.6K-48ES-5G, RHI-3.6K-48ES-5G-NS, S5-EH1P3.6K-L RHI-4K-48ES-5G-NS with L051100-A / L051100-A1 (2~16 pieces)	RHI-4.6K-48ES, RHI-4.6K-48ES-5G, RHI-4.6K-48ES-5G-NS, S5-EH1P4.6K-L with L051100-A / L051100-A1 (2~16 pieces)	RHI-5K-48ES, RHI-5K-48ES-5G, RHI-5K-48ES-5G-NS, S5-EH1P5K-L with L051100-A / L051100-A1 (2~16 pieces)	RHI-6K-48ES-5G, RHI-6K-48ES-5G-NS, S5-EH1P6K-L with L051100-A / L051100-A1 (2~16 pieces)
	Psn (nominal discharge power)	2300	3000	2300	3600	4600	4600	4600
	Pcn (nominal charging power)	3000	3000	3300	3600	4600	5000	6000
	Psmax (max. discharge power)	2300	3000	2300	3600	4600	4600	4600
	Pcmax (max. charging power)	3000	3000	3300	3600	4600	5000	6000

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

TÜV®

Product Service

Compliance Document

No. D 086470 0099 Rev. 01

	Type	☒ Bidirectional ☐ Monodirectional	
	Batteries that can be used with the above static converters		
	Brand	Shenzhen UZ Energy Limited	
	Technology	Li-Ion	
	Models	L051100-A	L051100-A1
	CUS module (kWh)	5.12	5.12
	BMS firmware version	LM-M01A-YZ107	
	Number of modules	1-16	1-16
	Note	Batteries are not contained in the inverter and should be installed according to local regulations and in accordance with BYD 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, 70.409.21.036.34-00 and 70.409.21.036.34-01	2) Test report EMC: a) C19-447-WT-01; b) C19-447-WT-02
	Issued by	Testing lab: 1) Ginlong Technologies Co., Ltd. Tests performed under supervision of certifier from TÜV SÜD Product Service GmbH	2) -a) & -b) Shanghai Inspection and Testing Institute of Instruments and Automation Systems Co.,Ltd.
	Accreditation No.	D-ZE-11321-01-00	2) -a) & -b) CNAS L0130
	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	

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

TÜV®

ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

Product Service

Compliance Document

No. D 086470 0108 Rev. 01

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.: 704092103621-01

Date, 2022-11-25

(Zhengdong Ma)

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

Product Service

Compliance Document

No. D 086470 0108 Rev. 01

Model(s):

Gird-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-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

Storage battery system: US5000, US5000-B

Parameters:

	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	RHI-6K-48ES-5G, RHI-6K-48ES-5G-NS, S5-EH1P6K-L, S5-EH1P6K-L-NS
	Rated power	3000 W / 3300 VA	3600 W / 4000 VA	4600 W / 4600 VA	5000 W / 5500 VA	6000 W / 6600 VA

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

TÜV®

Product Service

Compliance Document

No. D 086470 0108 Rev. 01

	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

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 (P_{NINV})	3000 W	3600 W	4600 W	5000 W	6000 W

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

Product Service

Compliance Document

No. D 086470 0108 Rev. 01

Section E	Characteristics of the Storage System (SdA)						
	Representative Combination	RHI-3K-48ES-5G, RHI-3K-48ES-5G-NS, RAI-3K-48ES-5G, S5-EH1P3K-L, S5-EH1P3K-L-NS with US5000 or US5000-B (1-16 pieces)	RHI-3.6K-48ES-5G, RHI-3.6K-48ES-5G-NS, S5-EH1P3.6K-L, S5-EH1P3.6K-L-NS, RHI-4K-48ES-5G-NS, S5-EH1P4K-L-NS with US5000 or US5000-B (1-16 pieces)	RHI-XK-48ES-5G, RHI-XK-48ES-5G-NS, S5-EH1PXK-L, S5-EH1PXK-L-NS(X=4.6, 5, 6) with US5000 or US5000-B (1 piece)	RHI-4.6K-48ES-5G, RHI-4.6K-48ES-5G-NS, S5-EH1P4.6K-L, S5-EH1P4.6K-L-NS with US5000 or US5000-B (2-16 pieces)	RHI-5K-48ES-5G, RHI-5K-48ES-5G-NS, S5-EH1P5K-L, S5-EH1P5K-L-NS with US5000 or US5000-B (2-16 pieces)	RHI-6K-48ES-5G, RHI-6K-48ES-5G-NS, S5-EH1P6K-L, S5-EH1P6K-L-NS with US5000 or US5000-B (2-16 pieces)
	Psn (nominal discharge power)	3000	3000	3400	4500	4500	4500
	Pcn (nominal charging power)	3000	3600	4200	4600	5000	6000
	Psmax (max. discharge power)	3000	3000	3400	4500	4500	4500
	Pcmax (max. charging power)	3000	3600	4200	4600	5000	6000
	Type	☒ Bidirectional ☐ Monodirectional					
	Batteries that can be used with the above static converters						
	Brand	Pylon					
	Technology	Li-Ion					
	Models	US5000, US5000-B					
	CUS module (kWh)	4.8					
	BMS firmware version	US5000_MMCB_U150					
	Number of modules	1-16					
	Note	Batteries are not contained in the inverter and should be installed according to local regulations and in accordance with Pylon instruction.					

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

TÜV®

Product Service

Compliance Document

No. D 086470 0108 Rev. 01

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, 70.409.21.036.20-00 and 70.409.21.036.21-01	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	2) -a) & -b) Shanghai Inspection and Testing Institute of Instruments and Automation Systems Co.,Ltd. 2) -c) TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch
	Accreditation No.	D-ZE-11321-01-00	2) -a) & b) CNAS L0130 2) -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	

Tested according to: CEI 0-21:2022

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

TÜV®

CERTIFICATE
of Conformity

TÜVRheinland®

Registration No.: AK 50550741 0001

Report No.: CN210CFH 002

Holder:

Ginlong technologies Co., Ltd.
No.57 Jintong Road, Binhai,
(seafront), Industrial Park,
Xiangshan Ningbo
315712 Zhejiang
P.R. China

Product:

Energy Storage system
(Grid-Interactive Inverter With Storage Battery System)

Identification:

Type Designation : RAI-3K-48ES-5G RHI-xK-48ES-5G
S5-EH1PxK-L RHI-yK-48ES-5G-NS
(x=3,3.6,4.6,5,6) (y=3,3.6,4,4.6,5,6)
Firmware Version : Inverter:A1
Battery System:210415DPBM
Serial Number : Engineering samples

Tested acc. to:

CEI 0-21:2019-04
CEI 0-21; V1:2020-12

The certificate of conformity refers to the above mentioned product. This is to certify that the specimen is in conformity with the assessment requirement mentioned above. This certificate does not imply assessment of the production of the product and does not permit the use of a TÜV Rheinland mark of conformity.

Certification Body

Date 08.07.2022

TÜV Rheinland LGA Products GmbH

Weichun Li

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg

CERTIFICATE
of Conformity

TÜVRheinland®

Registration No.: AK 50550741 0002

Report No.: CN210CFH 002

Holder:
Ginlong technologies Co., Ltd.
No.57 Jintong Road, Binhai,
(seafront), Industrial Park,
Xiangshan Ningbo
315712 Zhejiang
P.R. China

Product:
Energy Storage system
(Grid-Interactive Inverter With Storage Battery System)

Identification:
As page 0001 continuation
Remark(s) : The product maybe installed with Storage Battery System Dyness battery: B4850, PowerDepot Hxx (xx=2.5,5), Powerbox F-yy (yy=2.5, 5.0,7.5,10.0).
Refer to report CN210CFH 002 for details.

Tested acc. to:
CEI 0-21:2019-04
CEI 0-21; V1:2020-12

The certificate of conformity refers to the above mentioned product. This is to certify that the specimen is in conformity with the assessment requirement mentioned above. This certificate does not imply assessment of the production of the product and does not permit the use of a TÜV Rheinland mark of conformity.

Certification Body

Date 08.07.2022

TÜV Rheinland LGA Products GmbH TÜVRheinland Zertifizierstelle

Weichun Li

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg

OGGETTO: Dichiarazione di conformita aila normative CEI 0-21:2019-04 e CEI 0-21;V1:2020-12 "Regola tecnica di riferimento per la connessione di Utenti attivi e passivi alle reti BT delle imprese distributrici di energia elettrica"
SUBJECT: Declaration of Conformity to CEI 0-21:2019-04 and CEI 0-21;V1:2020-12
"Reference technical rules for the connection of active and passive users to the LV electrical Utilities"

Certificate No.: AK 50550741 0001-0002

TIPOLOGIA DI APPARATO A CUI SI RIFERISCE LA DICHIARAZIONE:
TYPE OF APPARATUS WHICH THE DECLARATION IS REFERED TO:

DISPOSITIVO DI INTERFACCIA Interface Device	PROTEZIONE DI INTERFACCIA Interface Protection Device	DISPOSITIVO DI CONVERSIONE STATICA Static Conversion Device	DISPOSITIVO DI GENERAZIONE ROTANTE Rotating Device
☒	☒	☒	☐

Costruttore
Manufacturer

Ginlong technologies Co., Ltd.
No.57 Jintong Road, Binhai, (seafront) industrial Park, Xiangshan, Ningbo, 315712, Zhejiang, P.R. China

Modello/Tipo *Model/Type*	RAI-3K-48ES-5G						
	B4850	PowerDepot H2.5	PowerDepot H5	Powerbox F-2.5	Powerbox F-5.0	Powerbox F-7.5	Powerbox F-10.0
Potenza Attiva Nominate (P_{NINV}) *Nominal Power [W]*				3000			
Max. Potenza Apparente (S_{MAX}) *Maximum Apparent Power [VA]*				3300			
Numero di unità batteria *Number of battery unit*	1	1	2	1	2	3	4
Potenza di Scarica Massima (P_{Smax})* *Maximum Discharge Power [W]*	1120	1120	2240	1120	2240	3000	3000
Potenza di Carica massima (P_{Cmax})* *Maximum charging power [W]*	1300	1300	2600	1300	2600	3000	3000
Capacità della batteria *Capacity of battery [kWh]*	2.4	2.4	4.8	2.4	4.8	7.2	9.6

Modello/Tipo *Model/Type*	RHI-3K-48ES-5G, RHI-3K-48ES-5G-NS, S5-EH1P3K-L						
	B4850	PowerDepot H2.5	PowerDepot H5	Powerbox F-2.5	Powerbox F-5.0	Powerbox F-7.5	Powerbox F-10.0
Potenza Attiva Nominate (P_{NINV}) *Nominal Power [W]*				3000			
Max. Potenza Apparente (S_{MAX}) *Maximum Apparent Power [VA]*				3300			
Numero di unità batteria *Number of battery unit*	1	1	2	1	2	3	4
Potenza di Scarica Massima (P_{Smax})* *Maximum Discharge Power [W]*	1120	1120	2240	1120	2240	3000	3000
Potenza di Carica massima (P_{Cmax})* *Maximum charging power [W]*	1300	1300	2600	1300	2600	3000	3000
Capacità della batteria *Capacity of battery [kWh]*	2.4	2.4	4.8	2.4	4.8	7.2	9.6

OGGETTO: Dichiarazione di conformita aila normative CEI 0-21:2019-04 e CEI 0-21;V1:2020-12 "Regola tecnica di riferimento per la connessione di Utenti attivi e passivi alle reti BT delle imprese distributrici di energia elettrica"
SUBJECT: Declaration of Conformity to CEI 0-21:2019-04 and CEI 0-21;V1:2020-12
"Reference technical rules for the connection of active and passive users to the LV electrical Utilities"

Certificate No.: AK 50550741 0001-0002

TIPOLOGIA DI APPARATO A CUI SI RIFERISCE LA DICHIARAZIONE:
TYPE OF APPARATUS WHICH THE DECLARATION IS REFERED TO:

DISPOSITIVO DI INTERFACCIA Interface Device	PROTEZIONE DI INTERFACCIA Interface Protection Device	DISPOSITIVO DI CONVERSIONE STATICA Static Conversion Device	DISPOSITIVO DI GENERAZIONE ROTANTE Rotating Device
☒	☒	☒	☐

Costruttore
Manufacturer

Ginlong technologies Co., Ltd.
No.57 Jintong Road, Binhai, (seafront) industrial Park, Xiangshan, Ningbo, 315712, Zhejiang, P.R. China

Modello/Tipo *Model/Type*	RHI-3.6K-48ES-5G, RHI-3.6K-48ES-5G-NS, RHI-4K-48ES-5G-NS, S5-EH1P3.6K-L						
	B4850	PowerDepot H2.5	PowerDepot H5	Powerbox F-2.5	Powerbox F-5.0	Powerbox F-7.5	Powerbox F-10.0
Potenza Attiva Nominate (P_{NINV}) *Nominal Power [W]*				3600			
Max. Potenza Apparente (S_{MAX}) *Maximum Apparent Power [VA]*				4000			
Numero di unità batteria *Number of battery unit*	1	1	2	1	2	3	4
Potenza di Scarica Massima (P_{Smax})* *Maximum Discharge Power [W]*	1120	1120	2240	1120	2240	3360	3600
Potenza di Carica massima (P_{Cmax})* *Maximum charging power [W]*	1300	1300	2600	1300	2600	3600	3600
Capacità della batteria *Capacity of battery [kWh]*	2.4	2.4	4.8	2.4	4.8	7.2	9.6

Modello/Tipo *Model/Type*	RHI-4.6K-48ES-5G, RHI-4.6K-48ES-5G-NS, S5-EH1P4.6K-L						
	B4850	PowerDepot H2.5	PowerDepot H5	Powerbox F-2.5	Powerbox F-5.0	Powerbox F-7.5	Powerbox F-10.0
Potenza Attiva Nominate (P_{NINV}) *Nominal Power [W]*				4600			
Max. Potenza Apparente (S_{MAX}) *Maximum Apparent Power [VA]*				4600			
Numero di unità batteria *Number of battery unit*	1	1	2	1	2	3	4
Potenza di Scarica Massima (P_{Smax})* *Maximum Discharge Power [W]*	1120	1120	2240	1120	2240	3360	4180
Potenza di Carica massima (P_{Cmax})* *Maximum charging power [W]*	1300	1300	2600	1300	2600	3900	4600
Capacità della batteria *Capacity of battery [kWh]*	2.4	2.4	4.8	2.4	4.8	7.2	9.6

OGGETTO: Dichiarazione di conformita aila normative CEI 0-21:2019-04 e CEI 0-21;V1:2020-12 "Regola tecnica di riferimento per la connessione di Utenti attivi e passivi alle reti BT delle imprese distributrici di energia elettrica"
SUBJECT: Declaration of Conformity to CEI 0-21:2019-04 and CEI 0-21;V1:2020-12
"Reference technical rules for the connection of active and passive users to the LV electrical Utilities"

Certificate No.: AK 50550741 0001-0002

TIPOLOGIA DI APPARATO A CUI SI RIFERISCE LA DICHIARAZIONE:
TYPE OF APPARATUS WHICH THE DECLARATION IS REFERED TO:

DISPOSITIVO DI INTERFACCIA Interface Device	PROTEZIONE DI INTERFACCIA Interface Protection Device	DISPOSITIVO DI CONVERSIONE STATICA Static Conversion Device	DISPOSITIVO DI GENERAZIONE ROTANTE Rotating Device
☒	☒	☒	☐

Costruttore
Manufacturer

Ginlong technologies Co., Ltd.
No.57 Jintong Road, Binhai, (seafront) industrial Park, Xiangshan, Ningbo, 315712, Zhejiang, P.R. China

RHI-5K-48ES-5G, RHI-5K-48ES-5G-NS, S5-EH1P5K-L

Modello/Tipo *Model/Type*	B4850	PowerDepot H2.5	PowerDepot H5	Powerbox F-2.5	Powerbox F-5.0	Powerbox F-7.5	Powerbox F-10.0
Potenza Attiva Nominate (P_{NINV}) *Nominal Power [W]*				5000			
Max. Potenza Apparente (S_{MAX}) *Maximum Apparent Power [VA]*				5500			
Numero di unità batteria *Number of battery unit*	1	1	2	1	2	3	4
Potenza di Scarica Massima (P_{Smax})* *Maximum Discharge Power [W]*	1120	1120	2240	1120	2240	3360	4180
Potenza di Carica massima (P_{Cmax})* *Maximum charging power [W]*	1300	1300	2600	1300	2600	3900	5000
Capacità della batteria *Capacity of battery [kWh]*	2.4	2.4	4.8	2.4	4.8	7.2	9.6

RHI-6K-48ES-5G, RHI-6K-48ES-5G-NS, S5-EH1P6K-L

Modello/Tipo *Model/Type*	B4850	PowerDepot H2.5	PowerDepot H5	Powerbox F-2.5	Powerbox F-5.0	Powerbox F-7.5	Powerbox F-10.0
Potenza Attiva Nominate (P_{NINV}) *Nominal Power [W]*				6000			
Max. Potenza Apparente (S_{MAX}) *Maximum Apparent Power [VA]*				6600			
Numero di unità batteria *Number of battery unit*	1	1	2	1	2	3	4
Potenza di Scarica Massima (P_{Smax})* *Maximum Discharge Power [W]*	1120	1120	2240	1120	2240	3360	4180
Potenza di Carica massima (P_{Cmax})* *Maximum charging power [W]*	1300	1300	2600	1300	2600	3900	5250
Capacità della batteria *Capacity of battery [kWh]*	2.4	2.4	4.8	2.4	4.8	7.2	9.6

OGGETTO: Dichiarazione di conformita aila normative CEI 0-21:2019-04 e CEI 0-21;V1:2020-12 "Regola tecnica di riferimento per la connessione di Utenti attivi e passivi alle reti BT delle imprese distributrici di energia elettrica"
SUBJECT: Declaration of Conformity to CEI 0-21:2019-04 and CEI 0-21;V1:2020-12
"Reference technical rules for the connection of active and passive users to the LV electrical Utilities"

Certificate No.: AK 50550741 0001-0002

(*) The inverter have a PV input and AC output with the batteries system and it's compliant to Annex A, B and Bbis of standard CEI 0-21
The nominal charging and discharging power can be reached only according with a minimum number of battery modules connected to the inverter with limitation of the inverter's capability.
Numbers of battery modules recommended by the manufacturer: 1-40(B4850)

Firmware release *Firmware*	Inverter: A1 Battery system: 210415DPBM
Numero di Fasi *Number of phases*	Monofase Single-Phase
Note *Remarks*	Il dispositivo è in grado di limitare la Idc allo 0,5% della corrente nominale. *The device is capable to limit the Idc to 0,5% of the nominal current.*
laboratorio di prova *Test laboratory*	TÜV Rheinland (Shanghai) Co., Ltd. Accrediation CNAS no. L3038

Esaminati I Fascicoli Prove N.: CN210CFH 002 emesso da TÜV Rheinland (Shanghai) S.r.l.
Having assessed the Test Files N. CN210CFH 002 issued by TÜV Rheinland (Shanghai) Co., Ltd.

Si dichiara che i prodotti indicati soddisfano i requisiti della CEI 0-21:2019-04 e CEI 0-21;V1:2020-12 "Regola tecnica di riferimento per la connessione di Utenti attivi e passivi alle reti BT delle imprese distributrici di energia elettrica"
We declare that the products indicated meet the requirements laid down by CEI 0-21:2019-04 and CEI 0-21;V1:2020-12 "Reference technical rules for the connection of active and passive users to the LV electrical Utilities"

Validità della Dichiarazione *Validity of the Declaration*	Questa Dichiarazione è valida per i prodotti indicate, cosl come descritt nei Fascicoli citati. Nuovi requisiti o emendamenti a requisiti esistenti, cosl come modifiche al prodotto, possono implicare nuove verifiche e certificazioni. *This Declaration is valid only for the products indicated herein, as described in the Files mentioned. New requirements or amendment to existing ones, or modifications to the product, may imply re-verification and re-certification.*

Date: 08.07.2022

Signature : _____

TÜV Rheinland LGA Products GmbH
Tillystraße 2 · 90431 Nürnberg · Germany

TÜVRheinland®
Precisely Right.

ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

Product Service

Compliance Document

No. D 086470 0128 Rev. 00

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.: 704092201818-00

Date, 2023-03-07

(Zhengdong Ma)

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

Product Service

Compliance Document

No. D 086470 0128 Rev. 00

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-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

Storage battery system: 5K3-XP-EU

Parameters:

	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, S5-EH1P3K-L-NS, RAI-3K-48ES-5G	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
	Rated power	3000 W / 3300 VA	3600 W / 4000 VA	4600 W / 4600 VA	5000 W / 5500 VA	6000 W / 6600 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				

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

Product Service

Compliance Document

No. D 086470 0128 Rev. 00

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, S5-EH1P3K-L-NS, RAI-3K-48ES-5G	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 (P_{NINV})	3000 W	3600 W	4600 W	5000 W	6000 W

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

Product Service

Compliance Document

No. D 086470 0128 Rev. 00

Section E	Characteristics of the Storage System (SdA)					
	Representative Combination	RHI-3K-48ES-5G, RHI-3K-48ES-5G-NS, S5-EH1P3K-L, S5-EH1P3K-L-NS, RAI-3K-48ES-5G with 5K3-XP-EU (1 -15 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 5K3-XP-EU (1 -15 pieces)	RHI-4.6K-48ES-5G, RHI-4.6K-48ES-5G-NS, S5-EH1P4.6K-L, S5-EH1P4.6K-L-NS with 5K3-XP-EU (1 -15 pieces)	RHI-5K-48ES-5G, RHI-5K-48ES-5G-NS, S5-EH1P5K-L, S5-EH1P5K-L-NS with 5K3-XP-EU (1 -15 pieces)	RHI-6K-48ES-5G, RHI-6K-48ES-5G-NS, S5-EH1P6K-L, S5-EH1P6K-L-NS with 5K3-XP-EU (1 -15 pieces)
	Psn (nominal discharge power)	3000	3600	4600	4600	4600
	Pcn (nominal charging power)	3000	3600	4600	5000	5600
	Psmax (max. discharge power)	3000	3600	4600	4600	4600
	Pcmax (max. charging power)	3000	3600	4600	5000	5600
	Type	☒ Bidirectional ☐ Monodirectional				
	Batteries that can be used with the above static converters					
	Brand	WECO				
	Technology	Li-Ion				
	Models	5K3-XP-EU				
	CUS module (kWh)	5.37				
	BMS firmware version	6011				
	Number of modules	1-15 pieces				
	Note	Batteries are not contained in the inverter and should be installed according to local regulations and in accordance with WECO instruction.				

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

Product Service

Compliance Document

No. D 086470 0128 Rev. 00

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 & 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 70.409.22.018.18-00	2) Test report EMC: a) C19-447-WT-01; b) C19-447-WT-02; c) 64772228001902
	Issued by	Testing lab: 1) Manufacturer's laboratory 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	

Tested according to: CEI 0-21:2022

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

TÜV®