Dichiarazione di Conformità del Generatore

I seguenti generatori rispettano le prescrizioni della norma CEI 0-21

Sez. A	**Costruttore**	**Shenzen Growatt New Energy Co., Ltd** 4-13/F, Building A, Sino-German (Europe) Industrial Park, Hangcheng Ave, Bao'an District, Shenzhen, China						
	Tipo apparecchiatura	Inverter						
	Marca	**Growatt**						
	N. fasi	☒ Monofase	☐ Trifase	Frequenza: 50 Hz	Tensione: 230 VAC			
	Energia primaria utilizzata	☒ Solare (v. RdP All. B)	☒ Accumulo (v. RdP All. Bbis)	☐ Eolico (v. RdP All. B/Bter)				
		☐ Idroelettrico (v. RdP All. B/Bter)	☐ CHP (v. RdP All. B/Bter)	☐ Altro:				
	Modello del generatore	**MIN 2500 TL-XH/XH2**	**MIN 3000 TL-XH/XH2**	**MIN 3600 TL-XH/XH2**	**MIN 4200 TL-XH/XH2**	**MIN 4600 TL-XH/XH2**	**MIN 5000 TL-XH/XH2**	**MIN 6000 TL-XH/XH2**
	Potenza nominale	2.500 W	3.000 W	3.600 W	4.200 W	4.600 W	5.000 W	6.000 W
	Il generatore:	☒ È idoneo per installazione in impianti con potenza superiore a 11,08 kW						
		☒ È in grado di limitare la Idc allo 0,5% della corrente nominale:						
		☒ Utilizza una funzione di protezione sensibile alla corrente continua						
		☐ Utilizza un trasformatore operante alla frequenza di rete						

Sez. B	**Caratteristiche del sistema di protezione di interfaccia**							
	Costruttore	Shenzen Growatt New Energy Co, Ltd						
	Modello	**MIN 2500 TL-XH/XH2**	**MIN 3000 TL-XH/XH2**	**MIN 3600 TL-XH/XH2**	**MIN 4200 TL-XH/XH2**	**MIN 4600 TL-XH/XH2**	**MIN 5000 TL-XH/XH2**	**MIN 6000 TL-XH/XH2**
	Tipo	☒ Integrata			☐ Non integrata			

Sez. C	**Caratteristiche del convertitore statico**							
	Modello del convertitore statico	**MIN 2500 TL-XH/XH2**	**MIN 3000 TL-XH/XH2**	**MIN 3600 TL-XH/XH2**	**MIN 4200 TL-XH/XH2**	**MIN 4600 TL-XH/XH2**	**MIN 5000 TL-XH/XH2**	**MIN 6000 TL-XH/XH2**
	Costruttore del convertitore statico	**Shenzen Growatt New Energy Co, Ltd**						
	Versione firmware	AL 1.0 e superiori						
	Potenza nominale convertitore (PN_{INV})	2.500 W	3.000 W	3.600 W	4.200 W	4.600 W	5.000 W	6.000 WW

深圳古瑞瓦特新能源有限公司
Shenzhen Growatt New Energy Co., Ltd

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4-13/F,Building A,Sino-German(Europe)Industrial Park, Hangcheng Ave,Bao'an District,Shenzhen,China
Web en.growatt.com
Email info@growatt.com

Sez. E	Caratteristiche del Sistema di Accumulo (SdA)							
	Modello	**MIN 2500 TL-XH**	**MIN 3000 TL-XH**	**MIN 3600 TL-XH**	**MIN 4200 TL-XH**	**MIN 4600 TL-XH**	**MIN 5000 TL-XH**	**MIN 6000 TL-XH**
	Psn (potenza di scarica nom.)	2.500 W	3.000 W	3.600 W	4.200 W	4.600 W	5.000 W	6.000 WW
	Pcn (potenza di carica nom.)	2.500 W	3.000 W	3.600 W	4.200 W	4.600 W	5.000 W	6.000 WW
	Psmax (potenza di scarica max.)	2.500 W	3.000 W	3.600 W	4.200 W	4.600 W	5.000 W	6.000 WW
	Pcmax (potenza di carica max.)	2.500 W	3.000 W	3.600 W	4.200 W	4.600 W	5.000 W	6.000 WW
	Tipologia	☒ Bidirezionale				☐ Monodirezionale		
	Note	• *La potenza di carica e scarica potrebbe essere limitata dal numero di moduli batteria*						
	Batterie utilizzabili con i convertitori statici sopra riportati							
	Marca	**GROWATT**						
	Tecnologia	Litio Ferro Fosfato						
	Modello sistema batteria	ARK 5H-A1	ARK 7.5H-A1	ARK 10H-A1	ARK 12.5H-A1	ARK 15H-A1	ARK 17.5H-A1	
	Modello modulo batteria	**ARK 2.5H-A1**						
	Modello modulo di controllo(BMS)	BDC 95045-A1						
	CUS modulo batteria	90%						
	Capacità nominale modulo (kWh)	2.56						
	CUS sistema batteria (kWh)	4,608	6,912	9,216	11,520	13,824	16,128	
	Versione firmware BMS	VC 1.0						
	N. moduli batteria	2	3	4	5	6	7	
	Note	• *Le batterie non sono integrate nell'inverter e devono essere installate secondo le normative locali.*						

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Web en.growatt.com
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	Caratteristiche del Sistema di Accumulo (SdA)							
	Modello	**MIN 2500 TL-XH/XH2**	**MIN 3000 TL-XH/XH2**	**MIN 3600 TL-XH/XH2**	**MIN 4200 TL-XH/XH2**	**MIN 4600 TL-XH/XH2**	**MIN 5000 TL-XH/XH2**	**MIN 6000 TL-XH/XH2**
	Psn (potenza di scarica nom.)	2.500 W	3.000 W	3.600 W	4.200 W	4.600 W	5.000 W	6.000 WW
	Pcn (potenza di carica nom.)	2.500 W	3.000 W	3.600 W	4.200 W	4.600 W	5.000 W	6.000 WW
	Psmax (potenza di scarica max.)	2.500 W	3.000 W	3.600 W	4.200 W	4.600 W	5.000 W	6.000 WW
	Pcmax (potenza di carica max.)	2.500 W	3.000 W	3.600 W	4.200 W	4.600 W	5.000 W	6.000 WW
	Tipologia	☒ Bidirezionale			☐ Monodirezionale			
	Note	• La potenza di carica e scarica può essere limitata dal numero di moduli batteria installato						
Sez. E	**Batterie utilizzabili con i convertitori statici sopra riportati**							
	Marca	**GROWATT**						
	Tecnologia	Litio Ferro Fosfato (Elettrochimica)						
	Modello sistema batteria	APX5.0P -S0	APX10.0P -S0	APX15.0P -S0	APX20.0P -S0	APX25.0P -S0	APX30.0P -S0	
	Modello modulo batteria	**APX5.0P-B1**						
	Modello modulo di controllo(BMS)	APX 55027-P0						
	CUS modulo batteria	90%						
	CUS sistema batteria (kWh)	4,5	9,0	13,5	18,0	22,5	27,0	
	Versione firmware BMS	VC 1.0						
	N. moduli batteria	1	2	3	4	5	6	
	Note	• · Le batterie non sono integrate nell'inverter e devono essere installate secondo le normative locali.						

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4-13/F,Building A,Sino-German(Europe)Industrial Park, Hangcheng Ave,Bao'an District,Shenzhen,China
Web en.growatt.com
Email info@growatt.com

Sez. I	**Riferimenti dei laboratori che hanno eseguito le prove e dei relativi rapporti di prova (RdP)**	
	Metodo prescelto	☒ Prove eseguite da laboratorio accreditato ☐ Prove eseguite sotto la sorveglianza di un ente certificatore
	N. rapporto di prova	230403058GZU-014 - 221220011GZU-001
	Emessi da:	**Intertek Testing Services Shenzhen Ltd. Guangzhou Branch**
	N. accreditamento	**PRD N° 306B**
	Rif. ente accreditamento	**ACCREDIA**

Dichiarazione di conformità alle prescrizioni CEI 0-21:2025-04

Con la presente dichiarazione, resa ai sensi degli artt. 46 e 47 DPR 28 dicembre 2000, n. 445, consapevole delle responsabilità e delle sanzioni penali previste dall'art. 76 del citato DPR per false attestazioni e dichiarazioni mendaci, il sottoscritto Liangcai Wu residente in Shenzhen (Cina), in qualità di CTO e vicepresidente della società **Shenzhen Growatt New Energy Co., Ltd.** con sede in 4-13/F, Building A, Sino-German (Europe) Industrial Park, Hangcheng Ave, Bao'an District, Shenzhen, China, Numero di registrazione 91440300570039265Y

DICHIARA

che gli inverter di propria costruzione di cui al precedente punto 1, sono conformi alle prescrizioni della norma

CEI 0-21 (2022-03) - CEI 0-21;V1 (2022-11) - CEI 0-21;V2 (2024-01) - CEI 0-21;V2/EC (2024-03) - CEI 0-21;V2/EC2 (2025-02) - CEI 0-21;V3 (2025-10)

Si attesta inoltre che la produzione delle apparecchiature oggetto di questa dichiarazione avviene in regime di qualità secondo ISO 9001:2015.

Shenzhen Growatt New Energy Co., Ltd.
Shenzhen, P.R. China, 2026-01-30

Firma del dichiarante
Liangcai Wu & Vice President

深圳古瑞瓦特新能源有限公司
Shenzhen Growatt New Energy Co., Ltd

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深圳古瑞瓦特新能源有限公司
Shenzhen Growatt New Energy Co., Ltd

Certificate of Conformity

Certificate Number: CN-PV-220055R1

On the basis of the tests undertaken, the samples of the below product have been found to comply with the requirements of the referenced specification/standard at the time the tests were carried out. It does not imply that Intertek has performed any surveillance or control of the manufacture. The manufacturer shall ensure that the manufacturing process assures compliance of the production units with the examined products mentioned in this certificate.

Applicant:	Shenzhen Growatt New Energy Co., Ltd. 4-13/F, Building A, Sino-German (Europe) Industrial Park, Hangcheng Ave, Bao'an District, Shenzhen, China
Product:	Energy Storage system
Ratings & Principle Characteristics:	See appendix of Certificate of Conformity
Model:	Smarter AC interface model: SYN 50-XH-10, SYN 50-XH-11, SYN 50-XH-12, SYN 50-XH-13 Brands: GROWATT Inverter conversion device: MIN 2500TL-XH, MIN 3000TL-XH, MIN 3600TL-XH, MIN 4200TL-XH, MIN 4600TL-XH, MIN 5000TL-XH, MIN 6000TL-XH, MIN 2500TL-XA, MIN 3000TL-XA, MIN 3600TL-XA, MIN 4200TL-XA, MIN 4600TL-XA, MIN 5000TL-XA, MIN 6000TL-XA MIN 2500TL-XH2, MIN 3000TL-XH2, MIN 3600TL-XH2, MIN 4200TL-XH2, MIN 4600TL-XH2, MIN 5000TL-XH2, MIN 6000TL-XH2 Batteries and BMS - Battery Management System: Battery module model: See appendix of Certificate of Conformity
Brand Name:	GROWATT
Product Complies with:	CEI 0-21: 2022-03 + V1:2022-11: Reference technical rules for the connection of active and passive users to the LV electrical Utilities
Certificate Issuing Office Name & Address:	Intertek Testing Services Ltd. Shanghai West Area, 2nd Floor, No. 707, Zhangyang Road China (Shanghai) Pilot Free Trade Zone, Shanghai, P. R. China Accredited by ACCREDIA in accordance with ISO/IEC 17065:2012
Test Report Number:	230403058GZU-014, dated 08 Aug 2023 Issued by Intertek Testing Services Shenzhen Ltd. Guangzhou Branch accredited by IAS (TL-395) in accordance with ISO/IEC 17025:2017

Replaces certificate CN-PV-220055,dated 14 March 2022
Additional information in Appendix

Signature
Certification Manager: Grady Ye
Date: 11 August 2023

PRD N° 306B

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APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-220055R1

Test item description……:	Energy Storage system
Trademark……:	GROWATT
Manufacturer……:	Same as applicant
Model/Type reference……:	Smarter AC interface model: SYN 50-XH-10, SYN 50-XH-11, SYN 50-XH-12, SYN 50-XH-13 Brands: GROWATT Inverter conversion device: MIN 2500TL-XH, MIN 3000TL-XH, MIN 3600TL-XH, MIN 4200TL-XH, MIN 4600TL-XH, MIN 5000TL-XH, MIN 6000TL-XH, MIN 2500TL-XA, MIN 3000TL-XA, MIN 3600TL-XA, MIN 4200TL-XA, MIN 4600TL-XA, MIN 5000TL-XA, MIN 6000TL-XA MIN 2500TL-XH2, MIN 3000TL-XH2, MIN 3600TL-XH2, MIN 4200TL-XH2, MIN 4600TL-XH2, MIN 5000TL-XH2, MIN 6000TL-XH2 Brands: GROWATT Batteries and BMS - Battery Management System Battery module model: ARK 5.1XH-A1, ARK 7.6XH-A1.ARK 10.2XH-A1, ARK 12.8XH-A1, ARK 15.3XH-A1, ARK 17.9XH-A1 Battery pack: ARK 2.5H-A1 High voltage control model: BDC 95045-A1 Brands: GROWATT
Inverter Firmware Version……:	AL1.0
Number of phases……:	Single-phase
Nominal Power……:	2500W (MIN 2500TL-XH/XA/XH2), 3000W (MIN 3000TL-XH/XA/XH2) 3600W (MIN 3600TL-XH/XA/XH2), 4200W (MIN 4200TL-XH/XA/XH2) 4600W (MIN 4600TL-XH/XA/XH2), 5000W (MIN 5000TL-XH/X1 /XH2), 6000W (MIN 6000TL-XH/XA/XH2)
Type……:	Bidirectional
CUS (useful capacity of the storage system)……:	4.608kWh ~ 16.128kWh
Psn (nominal discharge power):	2500W (MIN 2500TL-XH/XA/XH2), 3000W (MIN 3000TL-XH/XA/XH2) 3600W (MIN 3600TL-XH/XA/XH2), 4200W (MIN 4200TL-XH/XA/XH2) 4600W (MIN 4600TL-XH/XA/XH2), 5000W (MIN 5000TL-XH/X1 /XH2), 6000W (MIN 6000TL-XH/XA/XH2)
Pcn (nominal charge power)……:	Same as above
Psmax (maximum discharge power)……:	Same as above
Pcmax (maximum charge power)……:	Same as above
BMS Firmware Version ……:	VC1.0

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APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-220055R1

Battery		CUS (useful capacity of the storage system)	
Basic Model	Manufacturer	Capacity of per battery module (kWh)	Number of Battery pack
ARK 5.1XH-A1	Shenzhen Growatt New Energy Co., Ltd.	4.608	2
ARK 7.6XH-A1		6.912	3
ARK 10.2XH-A1		9.216	4
ARK 12.8XH-A1		11.52	5
ARK 15.3XH-A1		13.82	6
ARK 17.9XH-A1		16.128	7

Note:

1. Batteries are not integrated within the inverter, and shall be installed according to local regulation.

2. The ARK high voltage battery system is composed if a high voltage controller BDC 95045-A1 and 2 to 7 battery packs ARK 2.5H-A1 in series.

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APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-220055R1

Model	MIN 2500TL-XH MIN 2500TL-XA	MIN 3000TL-XH MIN 3000TL-XA	MIN 3600TL-XH MIN 3600TL-XA	MIN 4200TL-XH MIN 4200TL-XA
Max.PV voltage	500 d.c.V (excluding XA series)		550 d.c.V (excluding XA series)	
PV voltage range	70-500 d.c.V (excluding XA series)		70-550 d.c.V (excluding XA series)	
PV Isc	16.9 d.c.A*2 (excluding XA series)			
Max.input current	13.5 d.c.A*2 (excluding XA series)			
Max. DC voltage	550 d.c.V			
DC voltage range	360-550 d.c.V			
Max. DC current	17 d.c.A			
Type of battery	Lithium battery			
Capacity of battery	5.12kWh~35.84kWh			
Nominal input / output power	2500/2500W	3000/3000W	3600/3600W	4200/4200W
Max. apparent power	2500VA	3000VA	3600VA	4200VA
Nominal output voltage	230 a.c.V			
Nominal input/output current	11.3/11.3 a.c.A	13.6/13.6 a.c.A	16/16 a.c.A	19/19 a.c.A
Nominal Frequency	50Hz			
Power factor range	0.8Leading – 0.8 lagging			
Safety level	Class I			
Ingress Protection	IP 65			
Operation Ambient Temperature	-25℃ - +60℃			
Software version	AL 1.0			

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APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-220055R1

Model	MIN 4600TL-XH MIN 4600TL-XA	MIN 5000TL-XH MIN 5000TL-XA	MIN 6000TL-XH MIN 6000TL-XA
Max.PV voltage	550 d.c.V (excluding XA series)		
PV voltage range	70-550 d.c.V (excluding XA series)		
PV Isc	16.9 d.c.A*2 (excluding XA series)		
Max.input current	13.5 d.c.A*2 (excluding XA series)		
Max. DC voltage	550 d.c.V		
DC voltage range	360-550 d.c.V		
Max. DC current	17 d.c.A		
Type of battery	Lithium battery		
Capacity of battery	5.12kWh~35.84kWh		
Nominal input/output power	4600/4600W	5000/5000W	5000/6000W
Max. apparent power	4600VA	5000VA	6000VA
Nominal voltage	230 a.c.V		
Nominal input/output current	20.9/20.9 a.c.A	22.7/22.7 a.c.A	22.7/27.2 a.c.A
Nominal Frequency	50Hz		
Power factor range	0.8Leading – 0.8 lagging		
Safety level	Class I		
Ingress Protection	IP 65		
Operation Ambient Temperature	-25℃ - +60℃		
Software version	AL 1.0		

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APPENDIX: Certificate of Conformity

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Model	MIN 2500TL-XH2	MIN 3000TL-XH2	MIN 3600TL-XH2	MIN 4200TL-XH2
Max.PV voltage	500 d.c.V		550 d.c.V	
PV voltage range	40-500 d.c.V		40-550 d.c.V	
PV Isc	24 d.c.A*2			
Max.input current	16 d.c.A*2			
Max. DC voltage	500 d.c.V (only for MIN 2500TL-XH2, MIN 3000TL-XH2)		550 d.c.V (only for MIN 3600TL-XH2, MIN 4200TL-XH2	
DC voltage range	360-500 d.c.V (only for MIN 2500TL-XH2, MIN 3000TL-XH2)		360-550 d.c.V (only for MIN 3600TL-XH2, MIN 4200TL-XH2)	
Max. DC current	17 d.c.A (only for MIN 2500TL-XH2, MIN 3000TL-XH2, MIN 3600TL-XH2, MIN 4200TL-XH2)			
Max.output power	2500W	3000W	3600W	4200W
Max.apparent power	2500VA	3000VA	3600VA	4200VA
Nominal output voltage	230 a.c.V			
Max.output current	11.3 a.c.A	13.6 a.c.A	16 a.c.A	19 a.c.A
Nominal output Frequency	50/60Hz			
Power factor range	0.8Leading – 0.8 lagging			
Safety level	Class I			
Ingress Protection	IP 66			
Operation Ambient Temperature	-30℃ - +60℃			
Software version	AL 1.0			

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APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-220055R1

Model	MIN 4600TL-XH2	MIN 5000TL-XH2	MIN 6000TL-XH2
Max.PV voltage	550 d.c.V		
PV voltage range	40-550 d.c.V		
PV Isc	24 d.c.A*2		
Max.input current	16 d.c.A*2		
Max. DC voltage	550 d.c.V (only for MIN 4600TL-XH2, MIN 5000TL-XH2, MIN 6000TL-XH2)		
DC voltage range	360-550 d.c.V (only for MIN 4600TL-XH2, MIN 5000TL-XH2, MIN 6000TL-XH2)		
Max. DC current	17 d.c.A (only for MIN 4600TL-XH2, MIN 5000TL-XH2, MIN 6000TL-XH2)		
Max.output power	4600W	5000W	6000W
Max.apparent power	4600VA	5000VA	6000VA
Nominal output voltage	230 a.c.V		
Max.output current	20.9 a.c.A	22.7 a.c.A	27.2 a.c.A
Nominal output Frequency	50/60Hz		
Power factor range	0.8Leading – 0.8 lagging		
Safety level	Class I		
Ingress Protection	IP 66		
Operation Ambient Temperature	-30℃ - +60℃		
Software version	AL 1.0		

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APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-220055R1

Smarter AC interface:

Model	SYN 50-XH-10	SYN 50-XH-11	SYN 50-XH-12	SYN 50-XH-13
Nominal grid voltage	230Vac			
Range of grid voltage	180-270Vac			
Max. grid current	63A			
Max.continuous grid current	50A			
Nominal grid frequency	50Hz			
Range of grid frequency	45-65Hz			
Max. continuous inverter input current	26.1A			
Nominal backup voltage	230Vac, 50Hz			
Max. backup output current	26.1A			
Nominal generator voltage	--		230Vac, 50Hz	
Range of generator voltage	--		180-270Vac	
Max. continuous generator input current	--		50A	
Ingress protection	IP65			
Operation ambient temperature	-25℃ - +50℃			

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APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-220055R1

TYPE OF APPARATUS: Energy Storage system			
Number of phases: Single-phase			
DISCONNECTION DEVICE	INTERFACE PROTECTION DEVICE	DEVICE FOR CONVERSION	ROTATING GENERATOR DEVICE
☒	☒	☒	
Static converters in systems with capacity up to 11.08 kW. The devices are capable to limit I_{dc} to 0.5% of the rated grid current. Having examined the ISO 9001 certificate of the manufacturer No.: 02421Q32012223R0M, issued by: SHENZHEN UNIVERSAL CERTIFICATION CENTRE Co., Ltd.			

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Certificate of Conformity

Certificate Number: CN-PV-230694

On the basis of the tests undertaken, the samples of the below product have been found to comply with the requirements of the referenced specification/standard at the time the tests were carried out. It does not imply that Intertek has performed any surveillance or control of the manufacture. The manufacturer shall ensure that the manufacturing process assures compliance of the production units with the examined products mentioned in this certificate.

Applicant:	Shenzhen Growatt New Energy Co., Ltd. 4-13/F, Building A, Sino-German (Europe) Industrial Park, Hangcheng Ave, Bao'an District, Shenzhen, China
Product:	Energy Storage system
Ratings & Principle Characteristics:	See appendix of Certificate of Conformity
Model:	Smarter AC interface model: SYN 50-XH-10, SYN 50-XH-11, SYN 50-XH-12, SYN 50-XH-13 Brands: GROWATT Inverter conversion device: MIN 2500TL-XH, MIN 3000TL-XH, MIN 3600TL-XH, MIN 4200TL-XH, MIN 4600TL-XH, MIN 5000TL-XH, MIN 6000TL-XH, MIN 2500TL-XA, MIN 3000TL-XA, MIN 3600TL-XA, MIN 4200TL-XA, MIN 4600TL-XA, MIN 5000TL-XA, MIN 6000TL-XA MIN 2500TL-XH2, MIN 3000TL-XH2, MIN 3600TL-XH2, MIN 4200TL-XH2, MIN 4600TL-XH2, MIN 5000TL-XH2, MIN 6000TL-XH2 Brands: GROWATT Batteries and BMS - Battery Management System: Battery system: See appendix of Certificate of Conformity
Brand Name:	GROWATT
Product Complies with:	CEI 0-21: 2022-03 + V1:2022-11: Reference technical rules for the connection of active and passive users to the LV electrical Utilities
Certificate Issuing Office Name & Address:	Intertek Testing Services Ltd. Shanghai West Area, 2nd Floor, No. 707, Zhangyang Road China (Shanghai) Pilot Free Trade Zone, Shanghai, P. R. China Accredited by ACCREDIA in accordance with ISO/IEC 17065:2012
Test Report Number:	221220011GZU-001, 12 Dec 2023; 230403058GZU-013, 08 Aug 2023 Issued by Intertek Testing Services Shenzhen Ltd. Guangzhou Branch accredited by IAS (TL-395) in accordance with ISO/IEC 17025:2017

Additional information in Appendix

Signature
Certification Manager: Grady Ye
Date: 14 December 2023

PRD N° 306B

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APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-230694

Test item description……:	Energy Storage system
Trademark……:	GROWATT
Manufacturer……:	Same as applicant
Model/Type reference……:	Smarter AC interface model: SYN 50-XH-10, SYN 50-XH-11, SYN 50-XH-12, SYN 50-XH-13 Brands: GROWATT Inverter conversion device: MIN 2500TL-XH, MIN 3000TL-XH, MIN 3600TL-XH, MIN 4200TL-XH, MIN 4600TL-XH, MIN 5000TL-XH, MIN 6000TL-XH, MIN 2500TL-XA, MIN 3000TL-XA, MIN 3600TL-XA, MIN 4200TL-XA, MIN 4600TL-XA, MIN 5000TL-XA, MIN 6000TL-XA MIN 2500TL-XH2, MIN 3000TL-XH2, MIN 3600TL-XH2, MIN 4200TL-XH2, MIN 4600TL-XH2, MIN 5000TL-XH2, MIN 6000TL-XH2 Batteries and BMS – Battery Management System : Battery system: APX 5.0P-S0, APX 10.0P-S0, APX 15.0P-S0, APX 20.0P-S0, APX 25.0P-S0, APX 30.0P-S0 Battery pack: APX 5.0P-B1 High voltage control model: APX 55027-P0 Brands: GROWATT
Inverter Firmware Version……:	AL1.0
Number of phases……:	Single-phase
Nominal Power……:	2500W (MIN 2500TL-XH/XA/XH2), 3000W (MIN 3000TL-XH/XA/XH2),3600W (MIN 3600TL-XH/XA/XH2), 4200W (MIN 4200TL-XH/XA/XH2), 4600W (MIN 4600TL-XH/XA/XH2), 5000W (MIN 5000TL-XH/X1 /XH2), 6000W (MIN 6000TL-XH/XA/XH2)
Type……:	Bidirectional
CUS (useful capacity of the storage system)……:	4.5kWh ~ 27kWh
Psn (nominal discharge power):	See below table for details
Pcn (nominal charge power)…..:	See below table for details
Psmax (maximum discharge power)……:	See below table for details
Pcmax (maximum charge power)……:	See below table for details
BMS Firmware Version ……:	QAba Version WA1.0

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APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-230694

Battery		CUS (useful capacity of the storage system)	
Battery system	Manufacturer	Capacity of battery system (kWh)	Number of battery pack recommended by the manufacturer
APX 5.0P-S0	Shenzhen Growatt New Energy Co., Ltd.	4.5	1
APX 10.0P-S0		9.0	2
APX 15.0P-S0		13.5	3
APX 20.0P-S0		18.0	4
APX 25.0P-S0		22.5	5
APX 30.0P-S0		27.0	6
Note: 1, Batteries are not integrated within the inverter and shall be installed according to local regulation. 2. APX high voltage battery system is composed of a high voltage controller APX 55027-P0 plus 1 to 6 battery packs APX 5.0P-B1			

Battery system	APX 5.0P-S0	APX 10.0P-S0	APX 15.0P-S0	APX 20.0P-S0	APX 25.0P-S0	APX 30.0P-S0
Psn*	2.5kW	5.0kW	6.2kW	6.2kW	6.2kW	6.2kW
Pcn*	2.5kW	5.0kW	6.2kW	6.2kW	6.2kW	6.2kW
Psmax*	2.5kW	5.0kW	6.2kW	6.2kW	6.2kW	6.2kW
Pcmax*	2.5kW	5.0kW	6.2kW	6.2kW	6.2kW	6.2kW
* It could be limited by power of inverter, if the battery module used with inverter and has more power than inverter.						

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APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-230694

Model	MIN 2500TL-XH MIN 2500TL-XA	MIN 3000TL-XH MIN 3000TL-XA	MIN 3600TL-XH MIN 3600TL-XA	MIN 4200TL-XH MIN 4200TL-XA
Max.PV voltage	500 d.c.V (excluding XA series)		550 d.c.V (excluding XA series)	
PV voltage range	70-500 d.c.V (excluding XA series)		70-550 d.c.V (excluding XA series)	
PV Isc	16.9 d.c.A*2 (excluding XA series)			
Max.input current	13.5 d.c.A*2 (excluding XA series)			
Max. DC voltage	550 d.c.V			
DC voltage range	360-550 d.c.V			
Max. DC current	17 d.c.A			
Type of battery	Lithium battery			
Capacity of battery	5.12kWh~30.72kWh			
Nominal input / output power	2500/2500W	3000/3000W	3600/3600W	4200/4200W
Max. apparent power	2500VA	3000VA	3600VA	4200VA
Nominal output voltage	230 a.c.V			
Nominal input/output current	11.3/11.3 a.c.A	13.6/13.6 a.c.A	16/16 a.c.A	19/19 a.c.A
Nominal Frequency	50Hz			
Power factor range	0.8Leading – 0.8 lagging			
Safety level	Class I			
Ingress Protection	IP 65			
Operation Ambient Temperature	-25℃ - +60℃			
Software version	AL 1.0			

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APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-230694

Model	MIN 4600TL-XH MIN 4600TL-XA	MIN 5000TL-XH MIN 5000TL-XA	MIN 6000TL-XH MIN 6000TL-XA
Max.PV voltage	550 d.c.V (excluding XA series)		
PV voltage range	70-550 d.c.V (excluding XA series)		
PV Isc	16.9 d.c.A*2 (excluding XA series)		
Max.input current	13.5 d.c.A*2 (excluding XA series)		
Max. DC voltage	550 d.c.V		
DC voltage range	360-550 d.c.V		
Max. DC current	17 d.c.A		
Type of battery	Lithium battery		
Capacity of battery	5.12kWh~30.72kWh		
Nominal input/output power	4600/4600W	5000/5000W	5000/6000W
Max. apparent power	4600VA	5000VA	6000VA
Nominal voltage	230 a.c.V		
Nominal input/output current	20.9/20.9 a.c.A	22.7/22.7 a.c.A	22.7/27.2 a.c.A
Nominal Frequency	50Hz		
Power factor range	0.8Leading – 0.8 lagging		
Safety level	Class I		
Ingress Protection	IP 65		
Operation Ambient Temperature	-25℃ - +60℃		
Software version	AL 1.0		

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APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-230694

Model	MIN 2500TL-XH2	MIN 3000TL-XH2	MIN 3600TL-XH2	MIN 4200TL-XH2
Max.PV voltage	500 d.c.V		550 d.c.V	
PV voltage range	40-500 d.c.V		40-550 d.c.V	
PV Isc	24 d.c.A*2			
Max.input current	16 d.c.A*2			
Max. DC voltage	500 d.c.V (only for MIN 2500TL-XH2, MIN 3000TL-XH2)		550 d.c.V (only for MIN 3600TL-XH2, MIN 4200TL-XH2	
DC voltage range	360-500 d.c.V (only for MIN 2500TL-XH2, MIN 3000TL-XH2)		360-550 d.c.V (only for MIN 3600TL-XH2, MIN 4200TL-XH2)	
Max. DC current	17 d.c.A (only for MIN 2500TL-XH2, MIN 3000TL-XH2, MIN 3600TL-XH2, MIN 4200TL-XH2)			
Max.output power	2500W	3000W	3600W	4200W
Max.apparent power	2500VA	3000VA	3600VA	4200VA
Nominal output voltage	230 a.c.V			
Max.output current	11.3 a.c.A	13.6 a.c.A	16 a.c.A	19 a.c.A
Nominal output Frequency	50/60Hz			
Power factor range	0.8Leading – 0.8 lagging			
Safety level	Class I			
Ingress Protection	IP 66			
Operation Ambient Temperature	-30℃ - +60℃			
Software version	AL 1.0			

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APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-230694

Model	MIN 4600TL-XH2	MIN 5000TL-XH2	MIN 6000TL-XH2
Max.PV voltage	550 d.c.V		
PV voltage range	40-550 d.c.V		
PV Isc	24 d.c.A*2		
Max.input current	16 d.c.A*2		
Max. DC voltage	550 d.c.V (only for MIN 4600TL-XH2, MIN 5000TL-XH2, MIN 6000TL-XH2)		
DC voltage range	360-550 d.c.V (only for MIN 4600TL-XH2, MIN 5000TL-XH2, MIN 6000TL-XH2)		
Max. DC current	17 d.c.A (only for MIN 4600TL-XH2, MIN 5000TL-XH2, MIN 6000TL-XH2)		
Max.output power	4600W	5000W	6000W
Max.apparent power	4600VA	5000VA	6000VA
Nominal output voltage	230 a.c.V		
Max.output current	20.9 a.c.A	22.7 a.c.A	27.2 a.c.A
Nominal output Frequency	50/60Hz		
Power factor range	0.8Leading – 0.8 lagging		
Safety level	Class I		
Ingress Protection	IP 66		
Operation Ambient Temperature	-30℃ - +60℃		
Software version	AL 1.0		

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APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-230694

Smarter AC interface:

Model	SYN 50-XH-10	SYN 50-XH-11	SYN 50-XH-12	SYN 50-XH-13
Nominal grid voltage	230Vac			
Range of grid voltage	180-270Vac			
Max. grid current	63A			
Max.continuous grid current	50A			
Nominal grid frequency	50Hz			
Range of grid frequency	45-65Hz			
Max. continuous inverter input current	26.1A			
Nominal backup voltage	230Vac, 50Hz			
Max. backup output current	26.1A			
Nominal generator voltage	--		230Vac, 50Hz	
Range of generator voltage	--		180-270Vac	
Max. continuous generator input current	--		50A	
Ingress protection	IP65			
Operation ambient temperature	-25℃ - +50℃			

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APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-230694

TYPE OF APPARATUS: Energy Storage system			
Number of phases: Single-phase			
DISCONNECTION DEVICE	INTERFACE PROTECTION DEVICE	DEVICE FOR CONVERSION	ROTATING GENERATOR DEVICE
☒	☒	☒	
Static converters in systems with capacity up to 11.08 kW. The devices are capable to limit I_{dc} to 0.5% of the rated grid current. Having examined the ISO 9001 certificate of the manufacturer No.: 02421Q32012223R0M, issued by: SHENZHEN UNIVERSAL CERTIFICATION CENTRE Co., Ltd.			

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