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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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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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

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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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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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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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