Certificate of Conformity

Certificate Number: CN-PVES-250233

On the basis of the tests undertaken, the sample<s> of the below product have been found to comply with the requirements of the referenced specification<s>/standard<s> at the time the tests were carried out. It does not imply that Intertek has performed any surveillance or control of the manufacture(s). The manufacturer(s) 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:	PV Grid inverter/Hybrid Inverter
Ratings & Principle Characteristics:	See appendix of Certificate of Conformity
Model:	See appendix of Certificate of Conformity
Brand Name<s>:	GROWATT
Product Complies with:	EN 50549-1:2019+A1:2023, Requirements for generating plants to be connected in parallel with distribution networks Part 1: Connection to a LV distribution network - Generating plants up to and including type B EN 50549-10:2022, Requirements for generating plants to be connected in parallel with distribution networks - Part 10: Tests for conformity assessment of generating units Type approval for type A and B
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 No.<s>:	250506102GZU-001, June 3, 2025

According to Annex H of the standard EN 50549-1:2019, generating plants compliant with the clauses of this European Standard are considered to be compliant with the relevant Article of COMMISSION REGULATION (EU) 2016/631, provided that all settings as provided by the DSO and the responsible party are complied with.
Additional information in Appendix.

Signature

Certification Manager: Grady Ye
Date:06 June 2025

ACCREDIA
L'ENTE ITALIANO DI ACCREDITAMENTO

PRD N° 306B

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APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PVES-250233

Model:	MIN 2500TL-XE, MIN 3000TL-XE, MIN 3600TL-XE, MIN 4200TL-XE, MIN 4600TL-XE, MIN 5000TL-XE, MIN 6000TL-XE MIN 2500TL-XE2, MIN 3000TL-XE2, MIN 3600TL-XE2, MIN 4200TL-XE2, MIN 4600TL-XE2, MIN 5000TL-XE2, MIN 6000TL-XE2 MIN 2500TL-X, MIN 3000TL-X, MIN 3600TL-X, MIN 4200TL-X, MIN 4600TL-X, MIN 5000TL-X, MIN 6000TL-X MIN 2500TL-X2, MIN 3000TL-X2, MIN 3600TL-X2, MIN 4200TL-X2, MIN 4600TL-X2, MIN 5000TL-X2, MIN 6000TL-X2 MIN 2500TL-XH, MIN 3000TL-XH, MIN 3600TL-XH, MIN 4200TL-XH, MIN 4600TL-XH, MIN 5000TL-XH, MIN 6000TL-XH MIN 2500TL-XH2, MIN 3000TL-XH2, MIN 3600TL-XH2, MIN 4200TL-XH2, MIN 4600TL-XH2, MIN 5000TL-XH2, MIN 6000TL-XH2

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Model	MIN 2500TL-XE MIN 2500TL-X	MIN 3000TL-XE MIN 3000TL-X	MIN 3600TL-XE MIN 3600TL-X	MIN 4200TL-XE MIN 4200TL-X
Max.PV voltage	500 d.c.V		550 d.c.V	
PV voltage range	80-500 d.c.V (only for MIN 2500TL-X, MIN 3000TL-X) 70-500 d.c.V (only for MIN 2500TL-XE, MIN 3000TL-XE)		80-550 d.c.V (only for MIN 3600TL-X, MIN 4200TL-X) 70-550 d.c.V (only for MIN 3600TL-XE, MIN 4200TL-XE)	
PV Isc	16.9 d.c.A*2			
Max.input current	13.5 d.c.A*2			
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	50Hz			
Power factor range	0.8Leading – 0.8 lagging			
Safety level	Class I			
Ingress Protection	IP 65			
Operation Ambient Temperature	-25℃ - +60℃			
Software Version	For -XE series: AL 1.0 For -X series: AK 1.0			

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APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PVES-250233

Model	MIN 4600TL-XE MIN 4600TL-X	MIN 5000TL-XE MIN 5000TL-X	MIN 6000TL-XE MIN 6000TL-X
Max.PV voltage	550 d.c.V		
PV voltage range	80-550 d.c.V (only for MIN 4600TL-X, MIN 5000TL-X, MIN 6000TL-X) 70-550 d.c.V (only for MIN 4600TL-XE, MIN 5000TL-XE, MIN 6000TL-XE)		
PV Isc	16.9 d.c.A*2		
Max.input current	13.5 d.c.A*2		
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	50Hz		
Power factor range	0.8Leading – 0.8 lagging		
Safety level	Class I		
Ingress Protection	IP 65		
Operation Ambient Temperature	-25℃ - +60℃		
Software Version	For -XE series: AL 1.0 For -X series: AK 1.0		

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APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PVES-250233

Model	MIN 2500TL-XE2 MIN 2500TL-X2	MIN 3000TL-XE2 MIN 3000TL-X2	MIN 3600TL-XE2 MIN 3600TL-X2	MIN 4200TL-XE2 MIN 4200TL-X2
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.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	50Hz			
Power factor range	0.8Leading – 0.8 lagging			
Safety level	Class I			
Ingress Protection	IP 66			
Operation Ambient Temperature	-30℃ - +60℃			
Software Version	For -XE2 series: AL 1.0 For -X2 series: AK 1.0			

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APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PVES-250233

Model	MIN 4600TL-XE2 MIN 4600TL-X2	MIN 5000TL-XE2 MIN 5000TL-X2	MIN 6000TL-XE2 MIN 6000TL-X2
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.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	50Hz		
Power factor range	0.8Leading – 0.8 lagging		
Safety level	Class I		
Ingress Protection	IP 66		
Operation Ambient Temperature	-30℃ - +60℃		
Software Version	For -XE2 series: AL 1.0 For -X2 series: AK 1.0		

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APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PVES-250233

Model	MIN 2500TL-XH	MIN 3000TL-XH	MIN 3600TL-XH	MIN 4200TL-XH
Max.PV voltage	500 d.c.V		550 d.c.V	
PV voltage range	70-500 d.c.V		70-550 d.c.V	
PV Isc	16.9 d.c.A*2			
Max.input current	13.5 d.c.A*2			
Max. DC voltage	500 d.c.V		550 d.c.V	
DC voltage range	360-500 d.c.V		360-550 d.c.V	
Max. DC current	17 d.c.A			
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	50Hz			
Power factor range	0.8Leading – 0.8 lagging			
Safety level	Class I			
Ingress Protection	IP 65			
Operation Ambient Temperature	-25℃ - +60℃			

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APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PVES-250233

Model	MIN 4600TL-XH	MIN 5000TL-XH	MIN 6000TL-XH
Max.PV voltage	550 d.c.V		
PV voltage range	70-550 d.c.V		
PV Isc	16.9 d.c.A*2		
Max.input current	13.5 d.c.A*2		
Max. DC voltage	550 d.c.V		
DC voltage range	360-550 d.c.V		
Max. DC current	17 d.c.A		
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	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		550 d.c.V	
DC voltage range	360-500 d.c.V		360-550 d.c.V	
Max. DC current	17 d.c.A			
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	50Hz			
Power factor range	0.8Leading – 0.8 lagging			
Safety level	Class I			
Ingress Protection	IP 66			
Operation Ambient Temperature	-30℃ - +60℃			

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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		
DC voltage range	360-550 d.c.V		
Max. DC current	17 d.c.A		
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	50Hz		
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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Interface protection settings according to EN 50549-1			
Parameter	Max. disconnection time	Min. operate time	Trip value
Undervoltage threshold stage 1 [27 <]	100s	0.1s (0.1 s steps)	Trip value Config. from 0.2 to 1 Un (0.01 Un steps)
Undervoltage threshold stage 2 [27 <<]	5s	0.1s (0.05 s steps)	Trip value Config. from 0.2 to 1 Un (0.01 Un steps)
Overvoltage threshold stage 1 [59 >]	100s	0.1s (0.1 s steps)	Trip value Config. from 1.0 to 1.2 Un (0.01 Un steps)
Overvoltage threshold stage 2 [59>>]	5s	0.1s (0.05 s steps)	Trip value Config. from 1.0 to 1.3 Un (0.01 Un steps)
Overvoltage 10 min mean protection	Trip time Config≤ 3s not adjustable Time delay setting = 0 ms		Trip value Config. from 1.0 to 1.15Un (0.01 Un steps)
Underfrequency threshold stage 1 [81 <]	100s	0.1s (0.1s steps)	Trip value Config. from 47.0 to 50.0Hz (0.1Hz steps)
Underfrequency threshold stage 2 [81 <<]	5s	0.1s (0.05 s steps)	Trip value Config. from 47.0 to 50.0Hz (0.1Hz steps)
Overfrequency threshold stage 1 [81 >]	100s	0.1s (0.1s steps)	Trip value Config. from 50.0 to 52.0Hz (0.1Hz steps)
Overfrequency threshold stage 2 [81 >>]	5s	0.1s (0.05 s steps)	Trip value Config. from 50.0 to 52.0Hz (0.1Hz steps)
Starting to and reconnection settings for voltage		50%-120% adjustable, 85%Un≤ U≤1.10Un default	
Starting to generate electrical power		47Hz – 52Hz adjustable, 49.5Hz≤ U≤50.1Hz default	
Reconnection settings for frequency		47Hz – 52Hz adjustable, 49.5Hz≤ U≤50.2Hz default	
Observation time		10s-60s adjustable, 60s default	
Active power increase gradient		6%-3000%/min adjustable, 10%/min default	
Permanent DC injection		0.5% of rated inverter output	
Loss of mains according t0 EN 62116		Within 2s	

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