

# Test Verification of Conformity

Verification Number: 180820107GZU-001

On the basis of the referenced test reports, samples tested of the below product have been found to comply with the standards harmonized with the directives listed on this verification at the time the tests were carried out. Other standards and Directives may be relevant to the product. This verification is part of the full test reports and should be read in conjunction with them.

Once compliance with all product relevant **CE** mark directives are verified, including any relevant e.g. risk assessment and production control, the manufacturer may indicate compliance by signing a Declaration of Conformity themselves and applying the mark to products identical to the tested samples.

Applicant Name & Address:	SHENZHEN GROWATT NEW ENERGY TECHNOLOGY CO., LTD 1st East & 3rd Floor of Building A, Building B, Jiayu Industrial Park, #28, GuangHui Road, LongTeng Community, Shiyan Street, Baoan District, Shenzhen, P.R.China
Product Description:	PV Grid inverter
Ratings & Principle Characteristics:	See Appendix: Test Verification of Conformity
Models/Type References:	SPH 4000TL3 BH, SPH 5000TL3 BH, SPH 6000TL3 BH, SPH 7000TL3 BH, SPH 8000TL3 BH, SPH 10000TL3 BH, SPA 4000TL3 BH, SPA 5000TL3 BH, SPA 6000TL3 BH, SPA 7000TL3 BH, SPA 8000TL3 BH, SPA 10000TL3 BH
Brand Name:	Growatt (logo)
Standard(s)/Directives:	See Appendix: Test Verification of Conformity
Verification Issuing Office Name & Address:	Intertek Testing Services Shenzhen Ltd. Guangzhou Branch Block E, No.7-2 Guang Dong Software Science Park, Caipin Road, Guangzhou Science City, GETDD, Guangzhou, China
Test Report Numbers:	180820107GZU-001, 180820107GZU-002, 180820107GZU-003

Additional information in Appendix



**Signature**

**Name: Tommy Zhong**

**Position: Technical Manager**

**Date: 25 Jul 2019**



This Verification is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Verification. Only the Client is authorized to permit copying or distribution of this Verification. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test/inspection results referenced in this Verification are relevant only to the sample tested/inspected. This Verification by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

## APPENDIX: Test Verification of Conformity

This is an Appendix to Test Verification of Conformity Number: 180820107GZU-001

### Ratings & Principle Characteristics:

SPH 4000 TL3 BH  
 PV Input: 160-1000Vdc, Max 1000Vdc  
 Isc: 2 x 15A, Max 2 x 12A  
 battery voltage:160-550Vdc, Max charging / discharging current: 25A  
 Continuous charging / discharging power : 4000W  
 Output/input: 3W/N/PE, 230/400Vac, 50/60Hz, Max 6.1A 4000W, 4000VA  
 Power factor: 0.8leading ~ 0.8lagging  
 Stand-alone output: 3W/N/PE, 230/400Vac, 50/60Hz, Max.6.1A,4000W,4000VA  
 -25°C to +60°C, Class I, IP65

SPH 5000 TL3 BH  
 PV Input: 160-1000Vdc, Max 1000Vdc  
 Isc: 2 x 15A, Max 2 x 12A  
 battery voltage:160-550Vdc, Max charging / discharging current: 25A  
 Continuous charging / discharging power : 5000W  
 Output/input: 3W/N/PE, 230/400Vac, 50/60Hz, Max 7.6A 5000W, 5000VA  
 Power factor: 0.8leading ~ 0.8lagging  
 Stand-alone output: 3W/N/PE, 230/400Vac, 50/60Hz, Max.7.6A,5000W,5000VA  
 -25°C to +60°C, Class I, IP65

SPH 6000 TL3 BH  
 PV Input: 160-1000Vdc, Max 1000Vdc  
 Isc: 2 x 15A, Max 2 x 12A  
 battery voltage:160-550Vdc, Max charging / discharging current: 25A  
 Continuous charging / discharging power : 6000W  
 Output/input: 3W/N/PE, 230/400Vac, 50/60Hz, Max 9.1A 6000W, 6000VA  
 Power factor: 0.8leading ~ 0.8lagging  
 Stand-alone output: 3W/N/PE, 230/400Vac, 50/60Hz, Max.9.1A,6000W,6000VA  
 -25°C to +60°C, Class I, IP65

SPH 7000 TL3 BH  
 PV Input: 160-1000Vdc, Max 1000Vdc  
 Isc: 2 x 15A, Max 2 x 12A  
 battery voltage:160-550Vdc, Max charging / discharging current: 25A  
 Continuous charging / discharging power : 7000W  
 Output/input: 3W/N/PE, 230/400Vac, 50/60Hz, Max 10.6A 7000W, 7000VA  
 Power factor: 0.8leading ~ 0.8lagging  
 Stand-alone output: 3W/N/PE, 230/400Vac, 50/60Hz, Max.10.6A,7000W,7000VA  
 -25°C to +60°C, Class I, IP65

This Verification is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Verification. Only the Client is authorized to permit copying or distribution of this Verification. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test/inspection results referenced in this Verification are relevant only to the sample tested/inspected. This Verification by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

## APPENDIX: Test Verification of Conformity

This is an Appendix to Test Verification of Conformity Number: 180820107GZU-001

### Ratings & Principle Characteristics:

SPH 8000 TL3 BH  
 PV Input: 160-1000Vdc, Max 1000Vdc  
 Isc: 2 x 15A, Max 2 x 12A  
 battery voltage:160-550Vdc, Max charging / discharging current: 25A  
 Continuous charging / discharging power : 8000W  
 Output/input: 3W/N/PE, 230/400Vac, 50/60Hz, Max 12.1A 8000W, 8000VA  
 Power factor: 0.8leading ~ 0.8lagging  
 Stand-alone output: 3W/N/PE, 230/400Vac, 50/60Hz, Max.12.1A,8000W,8000VA  
 -25°C to +60°C, Class I, IP65

SPH 10000 TL3 BH  
 PV Input: 160-1000Vdc, Max 1000Vdc  
 Isc: 2 x 15A, Max 2 x 12A  
 battery voltage:160-550Vdc, Max charging / discharging current: 25A  
 Continuous charging / discharging power : 10000W  
 Output/input: 3W/N/PE, 230/400Vac, 50/60Hz, Max 15.2A 10000W, 10000VA  
 Power factor: 0.8leading ~ 0.8lagging  
 Stand-alone output: 3W/N/PE, 230/400Vac, 50/60Hz, Max.15.2A,10000W,10000VA  
 -25°C to +60°C, Class I, IP65

SPA 4000 TL3 BH  
 battery voltage:160-550Vdc, Max charging / discharging current: 25A  
 Output/input: 3W/N/PE, 230/400Vac, 50/60Hz, Max 6.1A 4000W, 4000VA  
 Power factor: 0.8leading ~ 0.8lagging  
 Stand-alone output: 3W/N/PE, 230/400Vac, 50/60Hz, Max.6.1A,4000W,4000VA  
 -25°C to +60°C, Class I, IP65

SPA 5000 TL3 BH  
 battery voltage:160-550Vdc, Max charging / discharging current: 25A  
 Output/input: 3W/N/PE, 230/400Vac, 50/60Hz, Max 7.6A 5000W, 5000VA  
 Power factor: 0.8leading ~ 0.8lagging  
 Stand-alone output: 3W/N/PE, 230/400Vac, 50/60Hz, Max.7.6A,5000W,5000VA  
 -25°C to +60°C, Class I, IP65

SPA 6000 TL3 BH  
 battery voltage:160-550Vdc, Max charging / discharging current: 25A  
 Output/input: 3W/N/PE, 230/400Vac, 50/60Hz, Max 9.1A 6000W, 6000VA  
 Power factor: 0.8leading ~ 0.8lagging  
 Stand-alone output: 3W/N/PE, 230/400Vac, 50/60Hz, Max.9.1A,6000W,6000VA  
 -25°C to +60°C, Class I, IP65

This Verification is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Verification. Only the Client is authorized to permit copying or distribution of this Verification. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test/inspection results referenced in this Verification are relevant only to the sample tested/inspected. This Verification by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

## APPENDIX: Test Verification of Conformity

This is an Appendix to Test Verification of Conformity Number: 180820107GZU-001

### Ratings & Principle Characteristics:

SPA 7000 TL3 BH  
 battery voltage:160-550Vdc, Max charging / discharging current: 25A  
 Output/input: 3W/N/PE, 230/400Vac, 50/60Hz, Max 10.6A 7000W, 7000VA  
 Power factor: 0.8leading ~ 0.8lagging  
 Stand-alone output: 3W/N/PE, 230/400Vac, 50/60Hz, Max.10.6A,7000W,7000VA  
 -25°C to +60°C, Class I, IP65

SPA 8000 TL3 BH  
 battery voltage:160-550Vdc, Max charging / discharging current: 25A  
 Output/input: 3W/N/PE, 230/400Vac, 50/60Hz, Max 12.1A 8000W, 8000VA  
 Power factor: 0.8leading ~ 0.8lagging  
 Stand-alone output: 3W/N/PE, 230/400Vac, 50/60Hz, Max.12.1A,8000W,8000VA  
 -25°C to +60°C, Class I, IP65

SPA 10000 TL3 BH  
 battery voltage:160-550Vdc, Max charging / discharging current: 25A  
 Output/input: 3W/N/PE, 230/400Vac, 50/60Hz, Max 15.2A 10000W, 10000VA  
 Power factor: 0.8leading ~ 0.8lagging  
 Stand-alone output: 3W/N/PE, 230/400Vac, 50/60Hz, Max.15.2A,10000W,10000VA  
 -25°C to +60°C, Class I, IP65

### Standard(s)/Directive(s):

IEC/EN 62109-1: 2010 Safety of power converters for use in photovoltaic power systems – Part 1: General requirements  
 IEC/EN 62109-2: 2011 Safety of power converters for use in photovoltaic power systems – Part 2: Particular requirements for inverters  
 EN 62477-1:2012 + A11:2014 + A1:2017: Safety requirements for power electronic converter systems and equipment– Part 1: General  
 Low Voltage Directive 2014/35/EU

This Verification is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Verification. Only the Client is authorized to permit copying or distribution of this Verification. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test/inspection results referenced in this Verification are relevant only to the sample tested/inspected. This Verification by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.