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

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℃ to +60℃, 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℃ to +60℃, 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℃ to +60℃, 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℃ to +60℃, Class I, IP65

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℃ to +60℃, 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℃ to +60℃, 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℃ to +60℃, 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℃ to +60℃, 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℃ to +60℃, Class I, IP65

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℃ to +60℃, 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℃ to +60℃, 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℃ to +60℃, 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