

Certificate of Conformity

No. ESY 086470 0167 Rev. 00

Holder of Certificate: **Ginlong Technologies Co., Ltd.**
No.57 Jintong Road
Binhai Industrial Park, Xiangshan
315712 Ningbo, Zhejiang
PEOPLE'S REPUBLIC OF CHINA

Product: **PV inverter**
Grid-connected PV inverter

This Certificate of Conformity confirms the compliance with the above listed standards on a voluntary basis. It refers only to the sample submitted to TÜV SÜD Product Service GmbH and does not certify the quality or safety of the serial products. It was issued according to TÜV SÜD Product Service certification program Photovoltaics and Grid Integration. For details see: www.tuvsud.com/ps-cert

Test report no.: 704092304817-00

Date, 2023-11-16



(Zhengdong Ma)

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Model(s): Solis-80K-5G-PRO,
 Solis-100K-5G-PRO,
 Solis-110K-5G-PRO

Parameters:

Technical Certifier (Zhengdong Ma) appointed by Certification Body TÜV SÜD Product Service GmbH performed assessment of the products listed in this certification in the place: Ridlerstraße 65, 80339 Munich, Germany.

Test requirement	<p>The certification complies with the requirements of the following documents for Type B PGM installations:</p> <p>EN 50549-2:2019 Wymagania dla instalacji wytwórczych przeznaczonych do równoległego przyłączenia do publicznych sieci dystrybucyjnych -- Część 2: Przyłączenie do sieci dystrybucyjnej SN -- Instalacje wytwórcze aż do typu B włącznie <i>(EN: Requirements for generating plants to be connected in parallel with distribution networks - Part 2: Connection to a MV distribution network - Generating plants up to and including Type B)</i></p> <p>RfG:2016 Rozporządzenie Komisji (UE) 2016/631 z dnia 14 kwietnia 2016 r. ustanawiające kodeks sieci dotyczący wymogów w zakresie przyłączenia jednostek wytwórczych do sieci (Dz.U. UE L 112/1 z 27.4.2016) <i>(EN: Commission Regulation (EU) 2016/631 of 14 April 2016 establishing a network code on requirements for the connection of generating units to the Network (OJ EU L 112/1 of 27.4.2016))</i></p> <p>NC RfG:2018 Wymogi Ogólnego Stosowania wynikające z rozporządzenia komisji UE 2016/631 z dnia 14 kwietnia 2016 r. ustanawiającego kodeks sieci dotyczący wymogów w zakresie przyłączenia jednostek wytwórczych do sieci (NC RfG, 2018) - zatwierdzone Decyzją Prezesa Urzędu Regulacji Energetyki DRE.WOSE.7128.550.2.2018.ZJ z dnia 2 stycznia 2019 r. <i>(EN: General applicability requirements resulting from EU commission regulation 2016/631 of of 14 April 2016 establishing a network code concerning the requirements for with regard to the connection of generating units to the grid (NC RfG-2018)- approved by the Decision of the President of the Energy Regulatory Office DRE.WOSE.7128.550.2.2018.ZJ dated 2 January 2019.)</i></p> <p>PTPiREE:2021 Warunki i procedury wykorzystania certyfikatów w procesie przyłączenia modułów wytwarzania energii do sieci elektroenergetycznych V1.2 <i>(EN: Conditions and procedures for the use of certificates in the process of connecting modules generation modules to the power grid V1.2)</i></p>
Type of certification programme	1(a) according to EN ISO/IEC 17067 Based on Photovoltaics and Grid Integration Certification Program (Revision 6, Dated 5 Dec 2021) for Poland Grid Code
Manufacturer & Address of manufacturing site	Ginlong technologies Co., Ltd. No.57 Jintong Road, Binhai Industrial Park, Xiangshan, 315712 Ningbo, Zhejiang, PEOPLE'S REPUBLIC OF CHINA
Software version	V44
Certificate expiry date	2028-11-13

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No. ESY 086470 0167 Rev. 00

Parameter:

Models	Solis-80K-5G-PRO	Solis-100K-5G-PRO	Solis-110K-5G-PRO
PV input parameters			
Max. input voltage d.c.	1100 V		
MPP voltage range d.c.	160-1000 V		
Max. input current d.c.	40A*3+32A*3	40A*4+32A*4	40A*4+32A*4
Isc PV (absolute maximum) d.c.	50A*6	50A*8	50A*8
AC output parameters			
Rated output power	80000 W	100000 W	110000 W
Max. AC output active power	88000 W	110000 W	121000 W
Max. AC output apparent power	88000 VA	110000 VA	121000 VA
Rated grid voltage a.c.	3/N/PE~, 230/400 V		
Rated grid frequency	50 Hz		
Max. continuous output current a.c.	133.7 A	167.1 A	183.8 A
Adjustable cos φ	-0.8...1...+0.8		

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Scope of assessment and results

Clause of RfG	Requirement	Type A	Type B	Type C	Type D	Assessment Result
Article 13.1 (a)	Frequency range	-	Y	-	-	Pass
Article 13.1 (b)	Rate of change of frequency withstand capability (RoCoF)	-	Y	-	-	Pass
Article 13.2	Limited frequency sensitive mode — overfrequency (LFSM-O)	-	Y	-	-	Pass
Article 13.4	Under frequency maximum power capability	-	Y	-	-	Pass
Article 13(6) Article 14.2(b)	Remote control of PGM	-	Y	-	-	Pass
Article 14.2(b)	Active power controllability and control range	-	Y	-	-	Pass
Article 13.7 Article 14(4)(a)	Capability of reconnection after an incidental disconnection due to a network disturbance	-	Y	-	-	Pass
Article 20(2)(a)	Reactive power capability	-	Y	-	-	Pass
Article 14.3 Article 20(3)(a)	Fault ride through capability	-	Y	-	-	Pass
Article 20(2)(b) Article 20(2)(c)	Fast acting reactive current injection	-	Y	-	-	Pass

Applicable standards:

EN 50549-2:2019
 RfG:2016
 NC RfG:2018
 PTPiREE:2021