

Certificate of Conformity

No. ESY 001965 0030 Rev. 00

Holder of Certificate: **Shenzhen Senergy Technology Co., Ltd.**

Room 405, Building A
Co-talent Creative Park
No.2, LiuXian Road, Block 68, Xin'an Street
Bao'an District
518101 Shenzhen
PEOPLE'S REPUBLIC OF CHINA

Product: **Converter**
(Grid-Tied Solar Inverter)

Model(s): **SE 17KTL-D3, SE 20KTL-D3, SE 22KTL-D3,
SE 25KTL-D3, SE 28KTL-D3, SE 30KTL-D3,
SE 17KTL-D3/EU, SE 20KTL-D3/EU,
SE 22KTL-D3/EU, SE 25KTL-D3/EU,
SE 28KTL-D3/EU, SE 30KTL-D3/EU,
SE 30KTL-D3/EU-CSB**

Parameters: See Page 3-4

Applicable standards: EN 50549-1:2019/AC:2019
RfG:2016
NC RfG:2018
PTPIREE:2021

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.: 64290223036001

Date, 2022-05-31



(Billy Qiu)

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Technical Certifier (Billy Qiu) 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.

<p>Test requirement</p>	<p>The certification complies with the requirements of the following documents for Type A PGM installations:</p> <p>EN 50549-1:2019/AC:2019 Wymagania dla instalacji wytwórczych przeznaczonych do równoległego przyłączenia do publicznych sieci dystrybucyjnych -- Część 1: Przyłączanie do sieci dystrybucyjnej nN -- Instalacje wytwórcze aż do typu B włącznie <i>(EN: 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)</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>
<p>Type of certification programme</p>	<p>1(a) according to EN ISO/IEC 17067</p> <p>Based on Photovoltaics and Grid Integration Certification Program (Revision 6, Dated 5 Dec 2021) for Poland Grid Code</p>
<p>Manufacturer & Address of manufacturing site</p>	<p>Shenzhen Senergy Technology Co., Ltd. Room 405, Building A, Co-talent Creative Park, No.2, LiuXian Road, Block 68, Xin'an Street, Bao'an District, 518101 Shenzhen, PEOPLE'S REPUBLIC OF CHINA</p>
<p>Software version</p>	<p>3001</p>
<p>Certificate expiry date</p>	<p>2027-05-24</p>

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Parameters:

Model	SE 17KTL-D3	SE 20KTL-D3	SE 22KTL-D3
PV input rating			
Max. input power	28000 VA		
Rated input voltage	620 Vd.c.		
Max. input voltage	1000 Vd.c.		
MPPT voltage range	180-960 Vd.c.		
MPPT voltage range (full load)	480-800 Vd.c.		
Max. input current	27/27 Ad.c.		
PV short circuit current	30/30 Ad.c.		
Grid output rating			
Rated output apparent power	17000 VA	20000 VA	22000 VA
Maximum output apparent power	18700 VA	22000 VA	24200 VA
Rated output voltage	230/400 Va.c., 3W+N+PE		
Rated output current	24.6 Aa.c.	29.0 Aa.c.	32.0 Aa.c.
Max. output current	28.3 Aa.c.	33.5 Aa.c.	35.0 Aa.c.
Rated output frequency	50 Hz		
Power factor	0.8 Leading ~ 0.8 Lagging		

Model	SE 25KTL-D3	SE 28KTL-D3	SE 30KTL-D3
PV input rating			
Max. input power	42000 VA		
Rated input voltage	620 Vd.c.		
Max. input voltage	1000 Vd.c.		
MPPT voltage range	180-960 Vd.c.		
MPPT voltage range (full load)	480-800 Vd.c.		
Max. input current	40.5/40.5 Ad.c.		
PV short circuit current	45/45 Ad.c.		
Grid output rating			
Rated output apparent power	25000 VA	28000 VA	30000 VA
Maximum output apparent power	27500 VA	30800 VA	33000 VA
Rated output voltage	230/400 Va.c., 3W+N+PE		
Rated output current	36.2 Aa.c.	40.5 Aa.c.	43.5 Aa.c.
Max. output current	40.0 Aa.c.	45.0 Aa.c.	48.0 Aa.c.
Rated output frequency	50 Hz		
Power factor	0.8 Leading ~ 0.8 Lagging		

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Model	SE 17KTL-D3/EU	SE 20KTL-D3/EU	SE 22KTL-D3/EU
PV input rating			
Max. input power	28000 VA		
Rated input voltage	620 Vd.c.		
Max. input voltage	1000 Vd.c.		
MPPT voltage range	180-960 Vd.c.		
MPPT voltage range (full load)	480-800 Vd.c.		
Max. input current	27/27 Ad.c.		
PV short circuit current	30/30 Ad.c.		
Grid output rating			
Rated output apparent power	17000 VA	20000 VA	22000 VA
Maximum output apparent power	18700 VA	22000 VA	24200 VA
Rated output voltage	230/400 Va.c., 3W+N+PE		
Rated output current	24.6 Aa.c.	29.0 Aa.c.	32.0 Aa.c.
Max. output current	28.3 Aa.c.	33.5 Aa.c.	35.0 Aa.c.
Rated output frequency	50 Hz		
Power factor	0.8 Leading ~ 0.8 Lagging		

Model	SE 25KTL-D3/EU	SE 28KTL-D3/EU	SE 30KTL-D3/EU, SE 30KTL-D3/EU-CSB
PV input rating			
Max. input power	42000 VA		
Rated input voltage	620 Vd.c.		
Max. input voltage	1000 Vd.c.		
MPPT voltage range	180-960 Vd.c.		
MPPT voltage range (full load)	480-800 Vd.c.		
Max. input current	40.5/40.5 Ad.c.		
PV short circuit current	45/45 Ad.c.		
Grid output rating			
Rated output apparent power	25000 VA	28000 VA	30000 VA
Maximum output apparent power	27500 VA	30800 VA	33000 VA
Rated output voltage	230/400 Va.c., 3W+N+PE		
Rated output current	36.2 Aa.c.	40.5 Aa.c.	43.5 Aa.c.
Max. output current	40.0 Aa.c.	45.0 Aa.c.	48.0 Aa.c.
Rated output frequency	50 Hz		
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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)	Ability to withstand the frequency of change of frequency (RoCoF)	Y	-	-	-	Pass
Article 13.2	Limited frequency sensitive mode — overfrequency (LFSM-O)	Y	-	-	-	Pass
Article 13.4 & 13.5	Maximum power capability reduction with falling frequency	Y	-	-	-	Pass
Article 13.6	Remote ceasing active power	Y	-	-	-	Pass
Article 13.7 & 14.4	Automatic connection to the network	Y	-	-	-	Pass