



**BUREAU  
VERITAS**

# Certificate of compliance

**Applicant:** **Shenzhen Senergy Technology Co., Ltd.**  
Room 405, Building A, Co-talent Creative Park, No.2, LiuXianRoad, Block 68, Xin An Street, Bao' an District, ShenZhen  
P.R. China

**Product:** **Grid-tied Photovoltaic (PV) inverter**

**Model:** **SE 50KTL, SE 50KTL-Q3/EU-CSB, SE 50KTL-Q3/EU,**  
**SE 50KTL-S3/EU, SE 50KTL-D3/EU,**  
**SE 60KTL, SE 60KTL-Q3/EU-CSB, SE 60KTL-Q3/EU,**  
**SE 60KTL-S3/EU, SE 60KTL-D3/EU**

## Use in accordance with regulations:

Automatic disconnection device with three-phase mains surveillance in accordance with Engineering Recommendation G99/1 for photovoltaic systems with a three-phase parallel coupling via an inverter in the public mains supply. The automatic disconnection device is an integral part of the aforementioned inverter. This serves as a replacement for the disconnection device with isolating function that can access the distribution network provider at any time.

## Applied rules and standards:

### Engineering Recommendation G99 / Issue 1 Amendment 6, 09 March 2020

Requirements for the connection of generation equipment in parallel with public distribution networks on or after 27 April 2019  
for

Type B Power Generating Modules

At the time of issue of this certificate the safety concept of an aforementioned representative product corresponds to the valid safety specifications for the specified use in accordance with regulations.

\* A simulation study is not included.

**Report number:** 20TH0372\_G99/1-6\_0

**Certificate number:** U21-0017

**Certification scheme:** NSOP-0032-DEU-ZE-V01

**Date of issue:** 2021-01-15



**Certification body**

Thomas Lammel



Deutsche  
Akkreditierungsstelle  
D-ZE-12024-01-00

Certification body of Bureau Veritas Consumer Products Services Germany GmbH accredited according to DIN EN ISO/IEC 17065  
A partial representation of the certificate requires the written approval of Bureau Veritas Consumer Products Services Germany GmbH



**Annex to the G99/1 certificate of compliance No. U21-0017**

Extract from test report according to the Engineering Recommendation G99

Nr. 20TH0372\_G99/1-6\_0

**Type Approval and declaration of compliance with the requirements of Engineering Recommendation G99**

**Details of Power Generating Modules**

<b>Manufacturer / Reference:</b>	Shenzhen Senergy Technology Co., Ltd. Room 405, Building A, Co-talent Creative Park, No.2, LiuXianRoad, Block 68, Xin An Street, Bao' an District, ShenZhen P.R. China
<b>Technology Type:</b>	Photovoltaic inverter
<b>Software version:</b>	600101 or higher
<b>Measurement period:</b>	2020-03-02 - 2021-01-11

Unit / Type:	SE 50KTL	SE 50KTL-Q3/EU-CSB	SE 50KTL-Q3/EU
Input DC voltage range [V] .....	200-1100		
Full-Load MPP DC voltage range [V] ...:	540-850	540-800	540-800
Input DC current [A] .....	max. 33 / 33 / 22 / 22		
Nominal output AC voltage [V] .....	400, 3~ + N + PE; 50 Hz		
Max. output AC current [A] .....	83,0		
Nominal active output power [kW] .....	50,0		
Max. apparent output power [kVA] .....	55,0		

Unit / Type:	SE 50KTL-S3/EU	SE 50KTL-D3/EU
Input DC voltage range [V] .....	200-1100	
Full-Load MPP DC voltage range [V] ...:	540-800	
Input DC current [A] .....	max. 110	max. 55 / 55
Nominal output AC voltage [V] .....	400, 3~ + N + PE; 50 Hz	
Max. output AC current [A] .....	83,0	
Nominal active output power [kW] .....	50,0	
Max. apparent output power [kVA] .....	55,0	

Unit / Type:	SE 60KTL	SE 60KTL-Q3/EU-CSB	SE 60KTL-Q3/EU
Input DC voltage range [V] .....	200-1100		
Full-Load MPP DC voltage range [V] ...:	540-850	540-800	540-800
Input DC current [A] .....	max. 33 / 33 / 33 / 33		
Nominal output AC voltage [V] .....	400, 3~ + N + PE; 50 Hz		
Max. output AC current [A] .....	92,0		
Nominal active output power [kW] .....	60,0		
Max. apparent output power [kVA] .....	66,0		

Unit / Type:	SE 60KTL-S3/EU	SE 60KTL-D3/EU
Input DC voltage range [V] .....	200-1100	
Full-Load MPP DC voltage range [V] ...:	540-800	
Input DC current [A] .....	max. 132	max. 66 / 66
Nominal output AC voltage [V] .....	400, 3~ + N + PE; 50 Hz	
Max. output AC current [A] .....	92,0	
Nominal active output power [kW] .....	60,0	
Max. apparent output power [kVA] .....	66,0	



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**Annex to the G99/1 certificate of compliance No. U21-0017**

**Extract from test report according to the Engineering Recommendation G99**

**Nr. 20TH0372\_G99/1-6\_0**

**Type Approval and declaration of compliance with the requirements of Engineering Recommendation G99**

**Description of the structure of the power generation unit:**

The inverters convert DC voltage, generated by photovoltaic modules, into AC voltage.

The units are three-phases inverter.

The input and output are protected by Varistors to Earth. The unit is providing EMC filtering at the output toward mains. The unit does not provide galvanic separation from input to output (transformer). The output is switched off redundant by the high-power switching bridge and two relays. This assures that the opening of the output circuit will also operate in case of one error.

The above stated Generating Units are tested according the requirements in the Engineering Recommendation G99/1. Any modification that affects the stated tests must be named by the manufacturer/supplier of the product to ensure that the product meets all requirements of the Engineering Recommendation G99/1.