ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

DAkkS Deutsche Akkreditierungsstelle D-ZE-11321-01-00

TÜV SÜD Product Service

Certificate of Conformity

No. ESY 041829 5061 Rev. 00

Holder of Certificate: **Huawei Technologies Co., Ltd.**
Administration Building
Headquarters of Huawei Technologies Co., Ltd.
Bantian, Longgang District
518129 Shenzhen
PEOPLE'S REPUBLIC OF CHINA

Product: **Converter (Smart PCS)**

Model(s): **LUNA2000-100KTL-M1**

Parameters: See page 3-4

Applicable standards: UNE 217001:2020
RD 244:2019

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.: 64290233002201

Date, 2023-06-30

(Billy Qiu)

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Certification Body TÜV SÜD Product Service GmbH performed assessment of the products listed below:

Test requirement	The certification complies with the requirements of the following documents: **UNE 217001:2020**, Tests for systems that avoid energy discharge to the distribution network. **Royal Decree 244:2019**, of April 5, which regulates the administrative, technical and economic conditions of self-consumption of electrical energy.
Manufacturer	Huawei Technologies Co., Ltd. Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, Guangdong, 518129,China
Product types used in power generation system	Inverter: Smart PCS Network analyzer/ SmartLogger /Current transformer
Model and Technical Data	See page 3-4
Software version	Inverter: V100R023C00 Network analyzer: V1.01 SmartLogger: V300R023C10
Test Report	64.290.23.30022.01
Issued by	Testing lab: TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch
Accreditation No.	D-PL-19065-01-01
Accreditation body ref.	DAkkS
Reference of the certification body	
Certification Body	TÜV SÜD Product Service GmbH
	DAKKS accreditation certificate D-ZE-11321-01-00 according to DIN EN ISO/IEC 17065:2013

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Inverter Parameters:

Model	LUNA2000-100KTL-M1
DC parameter	
Rated DC voltage	645 Vd.c.
Maximum DC voltage	1100 Vd.c.
Full-load voltage range	570~750 Vd.c.
Operating DC voltage range	570~1100 Vd.c.
Maximum DC input/output current	215.8 Ad.c.
Grid parameter	
Rated input/output voltage	3/PE, 400 Va.c.
Rated input/output frequency	50 Hz
Rated input/output current	144.3 Aa.c.
Maximum continuous input/output current	173.2 Aa.c.
Rated input/output active power	100000 W
Maximum input/output active power	120000 W
Maximum input/output apparent power	120000 VA
Power factor	0 inductive(under-excited) to 1 to 0 capacitive(over-excited)

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Network analyzer Parameters(Meter):

Model	DTSU666-HW
Electrical parameter	
Voltage connect type	400 Va.c., 3W
Rated Frequency	50 Hz
Current specification	250A/50mA
Energy consumption	≤ 1.5W/6VA
Type	Through transformer
Precision parameter	
Maximum error limit percentage of various instruments	± 1.0%
Precision class	Active Power class 1
Communications	
Communication type	RS485 ModBus RTU Protocol
Refresh time	≤ 1s

SmartLogger Parameters:

Model	SmartLogger 3000A03EU
Communication interface compatibility	RS485, ETH, MBUS (optional) 4G
Speed of the communication interface	4800/9600/19200/115200 bps(Default 9600 bps)

Current transformer Parameters:

Model	SCT24L-5K-250
Rated primary current	250 Aa.c.
Rated transformation ratio	5000:1
Rated load	20 Ω
Rated Frequency	50 Hz
Accuracy	± 0.75%, class 1.0, accounting for 1% to 120% of the rated primary current

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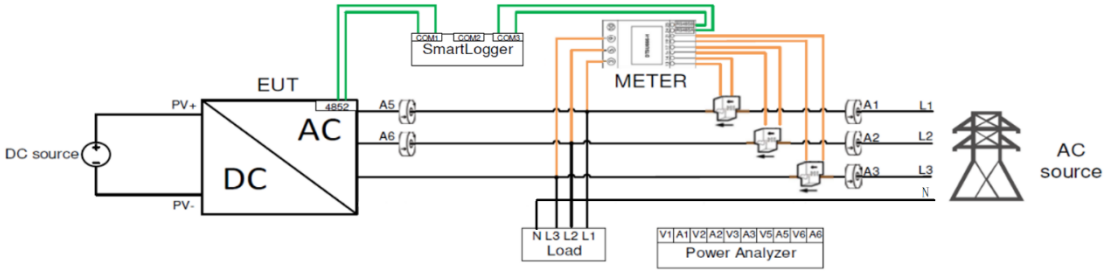
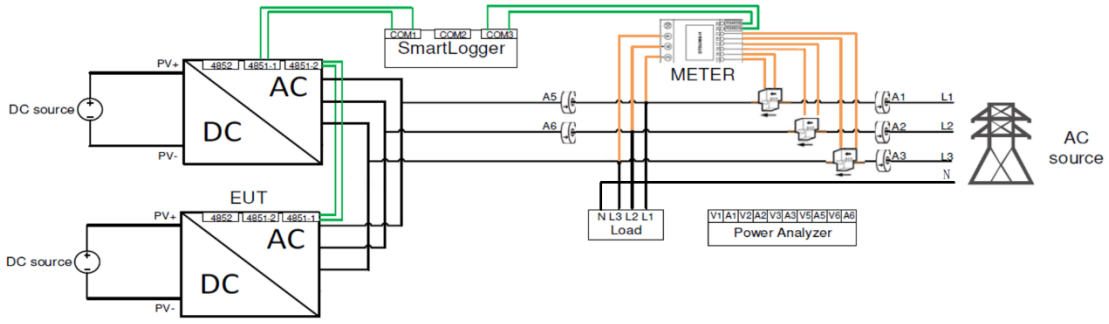
Electrical schematic diagram:

1. The following figure shows the operating diagram of single generator. Meter receives the grid connection point current collected by the CT current sensor and collects the grid connection point voltage, transmits data to the SmartLogger through RS485. SmartLogger communicates with the Inverter through RS485, by connecting RS485-2 port of the inverter COM terminal, remotely control inverter output active power to prevent energy from being injected into the grid.



2. The following figure shows the operating diagram of two generators working in parallel. The way to control power output of parallel operation is the same as single generator operation, except that the SmartLogger would connect to the RS485-1 port of the inverter COM terminal.



3. According to the test results of test clause “Determining the maximum number of generators”, the maximum number of generators that can be included in the system is 28.

Note:

Note 1: Variant models of network analyzer (without control) and current and voltage transformer can be included in the certified solution, provided that they comply with:

- Same connection scheme (single-phase or three-phase)
- Same measurement tolerance
- Same or shorter refresh time
- Same type of communication
- If additional current or voltage transformers are required, the accuracy of the components shall be the same or higher.

Note 2: All the tests conducted to obtain this certificate have been passed by acting on the generation system to regulate the power generated. No cut-off or current limiting element is required to be installed redundantly to the tested solution.

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