



## **Certificate of Conformity**

No. ESY 114387 0106 Rev. 00

Holder of Certificate:	Huawei Digital Power Technologies Co., Ltd. Office 01, 39th Floor, Block A Antuoshan Headquarters Towers 33 Antuoshan 6th Road, Futian District 518043 Shenzhen PEOPLE'S REPUBLIC OF CHINA
Product:	Converter (Hybrid Inverter)
Model(s):	SUN2000-12K-MB0, SUN2000-15K-MB0, SUN2000-17K-MB0, SUN2000-20K-MB0, SUN2000-25K-MB0
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.:** 64290233089401

Date, 2023-07-28

adji

(Billy Qiu)





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

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.	
Huawei Digital Power Technologies Co.,Ltd.	
Office 01, 39th Floor, Block A Antuoshan Headquarters Towers	
33 Antuoshan 6th Road, Futian District 518043 Shenzhen	
PEOPLE'S REPUBLIC OF CHINA	
Inverter: Three-phase inverter	
Network analyzer/ SmartLogger /Current transformer	
See page 3-4	
nverter: V200R023	
Network analyzer: V1.01	
SmartLogger: V300R023	
64.290.23.30894.01	
Testing lab:	
TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch	
D-PL-19065-01-01	
DAkkS	
ation 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	SUN2000-	SUN2000-	SUN2000-	SUN2000-	SUN2000-
	12K-MB0	15K-MB0	17K-MB0	20K-MB0	25K-MB0
Battery input/output parameters Eattery type Li-ion					
Rated voltage	600 Vd.c.				
Battery voltage range	600-980 Vd.c.				
Maximum charge/discharge current	26.25 Ad.c./26.25 Ad.c.				
Maximum charge power					25000 W
Maximum discharge power	13200 W	16500 W	18700 W	22000 W	25000 W
Maximum charge power from grid to battery	13200 W	15000 W	15000 W	15000 W	15000 W
PV terminal parameters					
Maximum DC input voltage	1100 Vd.c.				
Rated input voltage	600 Vd.c.				
MPPT Range	200~1000 Vd.c.				
MPPT Range (full load)	370~800 Vd.c.	410~800 Vd.c.	440~800 Vd.c.	480~800 Vd.c.	530~800 Vd.c.
Maximum Input Current	2*30 Ad.c.				
Isc PV	2*40 Ad.c.				
Maximum Input Power	18000 W	22500 W	25500 W	30000 W	37500 W
	Grid termi	nal parameter	s		
Rated AC voltage	230/400 Va.c., 3W+N+PE				
Maximum continuous input current	19.1 Aa.c. 21.7 Aa.c.				
Maximum continuous input power	13200 W	15000 W	15000 W	15000 W	15000 W
Rated AC output current	17.3 Aa.c.	21.7 Aa.c.	24.5 Aa.c.	28.9 Aa.c.	36.1 Aa.c.
Maximum AC output current	20.2 Aa.c.	25.2 Aa.c.	28.6 Aa.c.	33.6 Aa.c.	42.0 Aa.c.
Rated AC output active power	12000 W	15000 W	17000 W	20000 W	25000 W
Maximum continuous output apparent power	13200 VA	16500 VA	18700 VA	22000 VA	27500 VA
Rated AC frequency	50 Hz				
Power factor	0.8 under-excited to 0.8 over-excited				





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Network analyzer Parameters(Meter):

Model	Huawei DTSU666-H		
Electrical parameter			
Voltage connect type	230/400 Va.c. 3W+N+PE		
Rated Frequency	50 Hz		
Current specification	250A/50mA		
Energy consumption	≤1.5W/6VA		
Туре	Through transformer		
Precision parameter			
Maximum error limit percentage of various instruments	±2.0		
Precision class	Active Power class 1		
Communications			
Communication type	RS485 ModBus RTU Protocol		
Refresh time	≤1s		

#### SmartLogger Parameters:

Model	SmartLogger 1000A	SmartLogger 1000	SmartLogger 2000	SmartLogger 3000A	SmartLogger 3000B
Communication interface compatibility	RS485, ETH, MBUS (optional) 4G				
Speed of the communication interface	1200/2400/4800/9600/19200/115200 bps(Default 9600 bps)				

#### **Current transformer Parameters:**

Model	CTF24-5K-250
Rated primary current	250 Aa.c.
Rated transformation ratio	5000:1
Rated load	20Ω
Rated Frequency	50 Hz
Accuracy	± 0.75%, class 1.0, accounting for 1% to 120% of the rated primary current

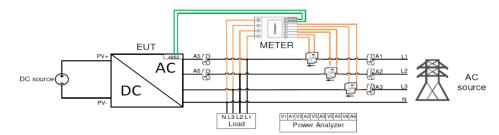




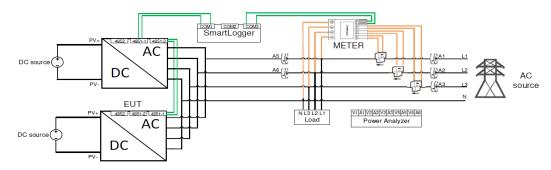
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#### Electrical schematic diagram:

 The following figure shows the operating diagram of single generator. Power analyzer(Meter) communicates with the inverter through RS485, receives the grid connection point current collected by the CT current sensor, remote 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. Different from working with a single generator, add the SmartLogger as a parallel communication tool for inverters and use the RS485 communication port as a mean to remotely control power output.



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 2.

#### 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.