



**CEI-021 CONFORMITY DECLARATION**

**Device type that the declaration is referring to**

Builder	HUAWEI TECHNOLOGIES Co. LTD, Administration Building, Headquarters, 518129 Bantian, Longgang District, Shenzhen, China					
Device Type	Dispositivo di conversione statica					
Model	SUN2000L-2KTL	SUN2000L-3KTL	SUN2000L-3.68KTL	SUN2000L-4KTL	SUN2000L-4.6KTL	SUN2000L-5KTL
Firmware version	V100R001	V100R001	V100R001	V100R001	V100R001	V100R001
Number of phases	single-phase					
Nominal power	2 KW	3 KW	3.68 KW	4 KW	4.6 KW	5 KW

**Details about the testing laboratory and the test documentation**

Test report nr **U18-0226**  
 Extended by: **Bureau Veritas**  
 Accreditation

**Declaration of conformity to prescriptions** **CEI 0-21:2012-06**  
**CEI 0-21; V1:2012-12 Edition December 2012**  
**CEI 0-21; V2:2013-12 Edition December 2013**  
**CEI 0-21:2014-09**  
**CEI 0-21; V1:2014-12 Edition December 2014**  
**CEI 0-21:2016-07**  
**CEI 0-21:2017-07 Edition July 2017**

With the following declaration, done within the scope of art. 46 and 47 of presidential decree nr. 445 from 28th december 2000, in the know of the responsibility and the criminal sanctions foreseen for false testimony and false statements in art. 76 of said decree, the subscriber, Linghongdong, resident of China, with passport nr. E49753305, acting as legal representative of the company HUAWEI TECHNOLOGIES Co. LTD, with headquarter in Shenzhen, fiscal number 440301103097413, registered in the Chamber of Commerce of Shenzhen Market Supervision Administration.

**DECLARES**

that the inverter of own manufacture indicated under point "Device type that the declaration is referring to " are conform to the prescriptions included in the Norm **CEI 0-21:2012-06** **CEI 0-21; V1:2012-12 Edition December 2012**  
**CEI 0-21; V2:2013-12 Edition December 2013** **CEI 0-21:2014-09** **CEI 0-21; V1:2014-12 Edition December 2014**  
**CEI 0-21:2016-07** **CEI 0-21:2017-07 Edition July 2017**

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Signature of the declarant

*Ling Hong Dong*

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INFORMATIVE NOTE IN THE SENSE OF ART. 13 of LAW 196/2003: The data reported above are provided for the legal provisions in force with the sole purpose of the administrative procedure they have been requested for and can be used only for that object.





**BUREAU  
VERITAS**

# Declaration of conformity

## to the requirements of the Standard CEI 0-21

**CERTIFICATION ORGANIZATION:** Bureau Veritas Consumer Products Services Germany GmbH  
Accreditation DAkkS, D-ZE-12024-01-00, Rif. DIN EN ISO/IEC 17065  
Data validity: 15-October-2020

**STANDARD / GUIDE:** CEI 0-21: 2012-06  
CEI 0-21; V1: 2012-12 Edition December 2012  
CEI 0-21; V2: 2013-12 Edition December 2013  
CEI 0-21: 2014-09  
CEI 0-21; V1: 2014-12 Edition December 2014  
CEI 0-21: 2016-07  
CEI 0-21; V1: 2017-07 Edition July 2017  
Technical reference rule for the connection of active and passive users to the LV electricity distribution networks of companies

**TYPE OF SYSTEM DECLARED:**

INTERFACE DEVICE	PROTECTION INTERFACE	STATIC ELECTRONIC INVERTER	ROTATING GENERATION MACHINE
X	X	X	

**MANUFACTURER:** Huawei Technologies Co., Ltd.  
Administration Building, Headquarters of Huawei Technologies Co., Ltd.,  
Bantian, Longgang District, Shenzhen, 518129  
P.R. China

PRODUCT TYPE:	Photovoltaic and Inverters for storage systems (comply with Annex B bis)					
MODEL:	SUN2000L-2KTL	SUN2000L-3KTL	SUN2000L-3.68KTL	SUN2000L-4KTL	SUN2000L-4.6KTL	SUN2000L-5KTL
NOMINAL POWER:	2 kW	3 kW	3,68 kW	4 kW	4,6 kW	5 kW

**FIRMWARE VERSION:** V100R001 and above  
**PHASE NUMBER:** single-phase

**NOTE:**  
The device is able to limit the  $I_{do}$  to 0,5% of the nominal current.  
The device is for systems up to 11,08kW  
The inverters of (Huawei Technologies Co., Ltd.) have a maximum apparent power limit. In the case where a system should be able to reach in every working condition a determined power factor, it is necessary to set the maximum active power in such a way, that you can reach at any time the cos-phi wanted.

**LABORATORY THAT HAS DONE THE TESTING:**  
Bureau Veritas Consumer Products Services Germany GmbH  
Accreditation DAkkS, D-PL-12024-03-03, Rif. DIN EN ISO/IEC 17025  
Valid Laboratory Accreditation Data: 11-JUNE-2019

After reviewing the ISO 9001 Manufacturer's No. FM 889358, issued by BSI Assurance UK Limited, reviewing the test-reports with No. 17TH0333-CEI 0-21\_1, issued by the laboratory Bureau Veritas Consumer Products Services Germany GmbH and reviewing the manufacturer's CE declaration of conformity with the relevant test report No. SYBH(E)03303887EA issued by the laboratory Huawei Technologies Co., Ltd. with recognized accreditation by a CNAS (No. L0310). The indicated product is declared to comply with the provisions of CEI 0-21: 2012-06, CEI 0-21; V1: 2012-12, CEI 0-21; V2: 2013-12, CEI 0-21: 2014-09, CEI 0-21; V1: 2014-12, CEI 0-21: 2016-07, CEI 0-21; V1: 2017-07.

**Certificate number:** U18-0226  
**Data of issue:** 2018-04-19



Certification body Bureau Veritas Consumer Products Services Germany GmbH  
Accreditation to DIN EN ISO/IEC 17065



Annex Declaration of conformity with the requirements of the Standard CEI 0-21 No. U18-0226

**Table Interface Protection System (SPI)**

Extract of the test report No. 17TH0333-CEI 0-21\_1

**Inverter for storage systems (comply with Annex B bis)**

<b>Manufacturer:</b>	Huawei Technologies Co., Ltd. Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129 P.R. China					
<b>Model:</b>	SUN2000L-2KTL,	SUN2000L-3KTL	SUN2000L-3.68KTL	SUN2000L-4KTL	SUN2000L-4.6KTL	SUN2000L-5KTL
<b>Nominal Power:</b>	2 kW	3 kW	3,68 kW	4 kW	4,6 kW	5 kW
<b>Firmware version:</b>	V100R001					
<b>Number of phases (single-phase/three-phase):</b>	monofase					

The inverters listed above may be installed with the following batteries:

<b>Manufacturer:</b>	LG Chem	LG Chem
<b>Accumulator Model / Battery Model:</b>	RESU 7H(Type-R)	RESU 10H(Type-R)
<b>Capacity of each battery module (kWh):</b>	7	9,8
<b>Number(s) of battery modules recommended by the manufacturer:</b>	1	1

**Note:**

The batteries are not integrated into the inverter and must be installed according to the local regulations.

**Interface Protection System (SPI)**

Temperature -10 °C		Intervention thresholds		Time of intervention		Reset Ratio		Time of relapse	
		Detected [V]	Requested [V] ± 5%	Detected [ms]	Requested [ms]	Detected	Requested	Detected [ms]	Requested [ms]
Voltage Threshold	Min	194,7	195,5	414	400 ± 20 ms	N/A	1,03 ≤ r ≤ 1,05	N/A	40 ≤ tr ≤ 100
	Max	264,3	264,5	218	200 ± 20 ms	N/A	0,95 ≥ r ≥ 0,97	N/A	40 ≤ tr ≤ 100
Temperature Ambient		Intervention thresholds		Time of intervention		Reset Ratio		Time of relapse	
		Detected [V]	Requested [V] ± 5%	Detected [ms]	Requested [ms]	Detected [V]	requested [V] ± 5%	Detected [ms]	Requested [ms]
Voltage Threshold	Min	195,0	195,5	411	400 ± 20 ms	N/A	1,03 ≤ r ≤ 1,05	N/A	40 ≤ tr ≤ 100
	Max	264,9	264,5	218	200 ± 20 ms	N/A	0,95 ≥ r ≥ 0,97	N/A	40 ≤ tr ≤ 100
Temperature +55 °C		Intervention thresholds		Time of intervention		Reset Ratio		Time of relapse	
		Detected [V]	Requested [V] ± 5%	Detected [ms]	Requested [ms]	Detected [V]	requested [V] ± 5%	Detected [ms]	Requested [ms]
Voltage Threshold	Min	195,2	195,5	419	400 ± 20 ms	N/A	1,03 ≤ r ≤ 1,05	N/A	40 ≤ tr ≤ 100
	Max	264,9	264,5	218	200 ± 20 ms	N/A	0,95 ≥ r ≥ 0,97	N/A	40 ≤ tr ≤ 100

**Note:**

- ≤ 5 % for the voltage thresholds
- ≤ 3 % ± 20 ms for the times of intervention
- variation of the error during the repetition of the tests
- ≤ 2 % for the tensions
- ≤ 1 % ± 20 ms for the times of intervention



Annex Declaration of conformity with the requirements of the Standard CEI 0-21 No. U18-0226

**Table Interface Protection System (SPI)**

Extract of the test report

No. 17TH0333-CEI 0-21\_1

**Frequency 49,5Hz ... 50,5Hz**

Temperature -10 °C		Intervention thresholds		Time of intervention		Reset Ratio		Time of relapse	
		Detected [Hz]	Requested [Hz] ± 20 mHz	Detected [ms]	Requested [ms]	Detected	Requested	Detected [ms]	Requested [ms]
Frequency Threshold	Min	49,49	49,5	118	100 ± 20 ms	N/A	$1,001 \leq r \leq 1,003$	N/A	$40 \leq tr \leq 100$
	Max	50,50	50,5	119	100 ± 20 ms	N/A	$0,997 \geq r \geq 0,999$	N/A	$40 \leq tr \leq 100$

Temperature Ambient		Intervention thresholds		Time of intervention		Reset Ratio		Time of relapse	
		Detected [Hz]	Requested [Hz] ± 20 mHz	Detected [ms]	Requested [ms]	Detected [Hz]	Requested [Hz] ± 20 mHz	Detected [ms]	Requested [ms]
Frequency Threshold	Min	49,49	49,5	118	100 ± 20 ms	N/A	$1,001 \leq r \leq 1,003$	N/A	$40 \leq tr \leq 100$
	Max	50,50	50,5	112	100 ± 20 ms	N/A	$0,997 \geq r \geq 0,999$	N/A	$40 \leq tr \leq 100$

Temperature +55 °C		Intervention thresholds		Time of intervention		Reset Ratio		Time of relapse	
		Detected [Hz]	Requested [Hz] ± 20 mHz	Detected [ms]	Requested [ms]	Detected [Hz]	Requested [Hz] ± 20 mHz	Detected [ms]	Requested [ms]
Frequency Threshold	Min	49,49	49,5	119	100 ± 20 ms	N/A	$1,001 \leq r \leq 1,003$	N/A	$40 \leq tr \leq 100$
	Max	50,50	50,5	118	100 ± 20 ms	N/A	$0,997 \geq r \geq 0,999$	N/A	$40 \leq tr \leq 100$

**Frequency 47,5Hz ... 51,5Hz**

Temperature -10 °C		Intervention thresholds		Time of intervention		Reset Ratio		Time of relapse	
		Detected [Hz]	Requested [Hz] ± 20 mHz	Detected [ms]	Requested [ms]	Detected [Hz]	Requested [Hz] ± 20 mHz	Detected [ms]	Requested [ms]
Frequency Threshold	Min	47,49	47,5	118	100 ± 20 ms	N/A	$1,001 \leq r \leq 1,003$	N/A	$40 \leq tr \leq 100$
	Max	51,50	51,5	115	100 ± 20 ms	N/A	$0,997 \geq r \geq 0,999$	N/A	$40 \leq tr \leq 100$

Temperature Ambient		Intervention thresholds		Time of intervention		Reset Ratio		Time of relapse	
		Detected [Hz]	Requested [Hz] ± 20 mHz	Detected [ms]	Requested [ms]	Detected [Hz]	Requested [Hz] ± 20 mHz	Detected [ms]	Requested [ms]
Frequency Threshold	Min	47,49	47,5	117	100 ± 20 ms	N/A	$1,001 \leq r \leq 1,003$	N/A	$40 \leq tr \leq 100$
	Max	51,50	51,5	118	100 ± 20 ms	N/A	$0,997 \geq r \geq 0,999$	N/A	$40 \leq tr \leq 100$

Temperature +55 °C		Intervention thresholds		Time of intervention		Reset Ratio		Time of relapse	
		Detected [Hz]	Requested [Hz] ± 20 mHz	Detected [ms]	Requested [ms]	Detected [Hz]	Requested [Hz] ± 20 mHz	Detected [ms]	Requested [ms]
Frequency Threshold	Min	47,49	47,5	119	100 ± 20 ms	N/A	$1,001 \leq r \leq 1,003$	N/A	$40 \leq tr \leq 100$
	Max	51,50	51,5	114	100 ± 20 ms	N/A	$0,997 \geq r \geq 0,999$	N/A	$40 \leq tr \leq 100$

**Nota:**

- ± 20 mHz for the frequency thresholds
- ≤ 3 % ± 20 ms for the times of intervention
- variation of the error during the repetition of the tests
- ≤ 1 % ± 20 ms for the times of intervention