



**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.C

PRODUCT TYPE:	Photovoltaic Inverter					
MODEL:	SUN2000-8KTL-M0	SUN2000-10KTL-M0	SUN2000-12KTL-M0	SUN2000-15KTL-M0	SUN2000-17KTL-M0	SUN2000-20KTL-M0
NOMINAL POWER:	8 kW	10 kW	12 kW	15 kW	17 kW	20 kW

FIRMWARE VERSION:

V100R001 and above

PHASE NUMBER:

three-phase

NOTE:

The device is able to limit the I_{dc} to 0.5% of the nominal current.

The device is for plants of each power.

The inverters of Huawei 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

After reviewing the ISO 9001 Manufacturer's No. FM 669363, issued by bsi, the ISO 9001 Manufacturer's No. 064-17-Q-1267-R1-M, issued by Beijing Standard Certification Centre, reviewing the test-reports with No. 19TH0316-CEI 0-21_0, 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)05083256EA issued by the laboratory of Huawei Technologies 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:

U19-0343

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2019-06-05

Certification body

Holger Schaffer

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

Table Interface Protection System (SPI)

Extract of the test report

No. 19TH0316-CEI 0-21_0

Interface Protection System (SPI)

Manufacturer:	Huawei Technologies Co., Ltd. Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129 P.R.C					
Model:	SUN2000-8KTL-M0	SUN2000-10KTL-M0	SUN2000-12KTL-M0	SUN2000-15KTL-M0	SUN2000-17KTL-M0	SUN2000-20KTL-M0
Nominal Power:	8 kW	10 kW	12 kW	15 kW	17 kW	20 kW
Firmware version:	V100R001					
Number of phases (single-phase/three-phase):	Three-phase					

Temperature -25 °C		Intervention thresholds		Time of intervention		Reset Ratio		Time of relapse	
		Detected [V]	Requested [V] ± 1%	Detected [ms]	Requested [ms]	Detected	Requested	Detected [ms]	Requested [ms]
Voltage Threshold	Min	196,9	195,5	413	400 ± 20 ms	N/A	1,03 ≤ r ≤ 1,05	N/A	40 ≤ tr ≤ 100
	Max	263,7	264,5	219	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] ± 1%	Detected [ms]	Requested [ms]	Detected	Requested	Detected [ms]	Requested [ms]
Voltage Threshold	Min	196,8	195,5	416	400 ± 20 ms	N/A	1,03 ≤ r ≤ 1,05	N/A	40 ≤ tr ≤ 100
	Max	263,2	264,5	212	200 ± 20 ms	N/A	0,95 ≥ r ≥ 0,97	N/A	40 ≤ tr ≤ 100

Temperature +60 °C		Intervention thresholds		Time of intervention		Reset Ratio		Time of relapse	
		Detected [V]	Requested [V] ± 1%	Detected [ms]	Requested [ms]	Detected	Requested	Detected [ms]	Requested [ms]
Voltage Threshold	Min	196,9	195,5	416	400 ± 20 ms	N/A	1,03 ≤ r ≤ 1,05	N/A	40 ≤ tr ≤ 100
	Max	263,8	264,5	216	200 ± 20 ms	N/A	0,95 ≥ r ≥ 0,97	N/A	40 ≤ tr ≤ 100

Note:

- ≤ 1 % 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

Table Interface Protection System (SPI)

Extract of the test report

No. 19TH0316-CEI 0-21_0

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

Temperature -25 °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	49,48	49,5	119	100 ± 20 ms	N/A	1,001 ≤ r ≤ 1,003	N/A	40 ≤ tr ≤ 100
	Max	50,49	50,5	116	100 ± 20 ms	N/A	0,997 ≥ r ≥ 0,999	N/A	40 ≤ tr ≤ 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	119	100 ± 20 ms	N/A	1,001 ≤ r ≤ 1,003	N/A	40 ≤ tr ≤ 100
	Max	50,50	50,5	119	100 ± 20 ms	N/A	0,997 ≥ r ≥ 0,999	N/A	40 ≤ tr ≤ 100

Temperature +60 °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	116	100 ± 20 ms	N/A	1,001 ≤ r ≤ 1,003	N/A	40 ≤ tr ≤ 100
	Max	50,51	50,5	118	100 ± 20 ms	N/A	0,997 ≥ r ≥ 0,999	N/A	40 ≤ tr ≤ 100

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

Temperature -25 °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	99	100 ± 20 ms	N/A	1,001 ≤ r ≤ 1,003	N/A	40 ≤ tr ≤ 100
	Max	51,49	51,5	120	100 ± 20 ms	N/A	0,997 ≥ r ≥ 0,999	N/A	40 ≤ tr ≤ 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	120	100 ± 20 ms	N/A	1,001 ≤ r ≤ 1,003	N/A	40 ≤ tr ≤ 100
	Max	51,50	51,5	119	100 ± 20 ms	N/A	0,997 ≥ r ≥ 0,999	N/A	40 ≤ tr ≤ 100

Temperature +60 °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	117	100 ± 20 ms	N/A	1,001 ≤ r ≤ 1,003	N/A	40 ≤ tr ≤ 100
	Max	51,49	51,5	114	100 ± 20 ms	N/A	0,997 ≥ r ≥ 0,999	N/A	40 ≤ tr ≤ 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