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

STANDARD / GUIDE: **CEI 0-21: 2019-04**
Technical reference rule for the connection of active and passive users to the LV electricity distribution networks of companies

TYPE OF SYSTEM DECLEARED:

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:	**SOLAR INVERTER**					
MODEL:	**SUN2000-8KTL-M0** **SUN2000-8KTL-M2**	**SUN2000-10KTL-M0** **SUN2000-10KTL-M2**	**SUN2000-12KTL-M0** **SUN2000-12KTL-M2**	**SUN2000-15KTL-M0** **SUN2000-15KTL-M2**	**SUN2000-17KTL-M0** **SUN2000-17KTL-M2**	**SUN2000-20KTL-M0** **SUN2000-20KTL-M2**
NOMINAL POWER:	**8 kW**	**10 kW**	**12 kW**	**15 kW**	**17 kW**	**20 kW**

FIRMWARE VERSION: **V100R001**

PHASE NUMBER: **three-phase**

NOTE:
The device is able to limit the Idc to 0.5% of the nominal current.
The device is for plants of each power.
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

After verifying the ISO 9001 of the Manufacturer with No. FM 669363, issued by BSI and No. 064-17-Q-1267-R1-M issued by Beijing Standard Certification Centre. Verifying the test reports according to CEI 0-21 with No. 19TH0316-CEI 0-21_2, issued by the laboratory Bureau Veritas Consumer Products Services Germany GmbH and verifying the EMC test report with No. SYBH(E)05083256EA, issued laboratory Huawei Technolgies accredited by CNAS (No. L0310), the listed products are conform with the requirements according to CEI 0-21: 2019-04.

Certificate number: **U20-0628** **Certification Program:** **NSOP-0032-DEU-ZE-V01**

Data of issue: **2020-08-05**

Certification body

Thomas Lammel

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

A partial representation of the certificate requires the written approval of Bureau Veritas Consumer Products Services Germany GmbH

Table Interface Protection System (SPI)

Extract of the test report **No.** 19TH0316-CEI 0-21_2

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 SUN2000-8KTL-M2	SUN2000-10KTL-M0 SUN2000-10KTL-M2	SUN2000-12KTL-M0 SUN2000-12KTL-M2	SUN2000-15KTL-M0 SUN2000-15KTL-M2	SUN2000-17KTL-M0 SUN2000-17KTL-M2	SUN2000-20KTL-M0 SUN2000-20KTL-M2
Nominal Power:	SUN2000-8KTL-M0 SUN2000-8KTL-M2	SUN2000-10KTL-M0 SUN2000-10KTL-M2	SUN2000-12KTL-M0 SUN2000-12KTL-M2	SUN2000-15KTL-M0 SUN2000-15KTL-M2	SUN2000-17KTL-M0 SUN2000-17KTL-M2	SUN2000-20KTL-M0 SUN2000-20KTL-M2
Firmware version:	V100R001					
Number of phases (single-phase/ three-phase):	Three-phase					

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	1498	1500 ± 20	N/A	1,03 ≤ r ≤ 1,05	N/A	40 ≤tr ≤ 100
	Max	263,2	264,5	212	200 ± 20	N/A	0,95 ≥ r ≥ 0,97	N/A	40 ≤tr ≤ 100

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	1495	1500 ± 20	N/A	1,03 ≤ r ≤ 1,05	N/A	40 ≤tr ≤ 100
	Max	263,7	264,5	219	200 ± 20	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	1492	1500 ± 20	N/A	1,03 ≤ r ≤ 1,05	N/A	40 ≤tr ≤ 100
	Max	263,9	264,5	216	200 ± 20	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_2

Frequency 49,8Hz … 50,2Hz

Temperature Ambient		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	49,79	49,8	89	100 ± 20 ms	N/A	1,001 ≤ r ≤ 1,003	N/A	40 ≤tr ≤ 100
	Max	50,20	50,2	94	100 ± 20 ms	N/A	0,997 ≥ r ≥ 0,999	N/A	40 ≤tr ≤ 100

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	49,79	49,8	97	100 ± 20 ms	N/A	1,001 ≤ r ≤ 1,003	N/A	40 ≤tr ≤ 100
	Max	50,20	50,2	85	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	49,79	49,8	90	100 ± 20 ms	N/A	1,001 ≤ r ≤ 1,003	N/A	40 ≤tr ≤ 100
	Max	50,20	50,2	87	100 ± 20 ms	N/A	0,997 ≥ r ≥ 0,999	N/A	40 ≤tr ≤ 100

Frequency 47,5Hz … 51,5Hz

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 -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 +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