



**BUREAU
VERITAS**

Declaration of conformity

to the requirements of the Standard CEI 0-21

**CERTIFICATION
ORGANIZATION:**
STANDARD / GUIDE:

Bureau Veritas Consumer Products Services Germany GmbH
Accreditation DAKKS, D-ZE-12024-01-00, Rif. DIN EN ISO/IEC 17065

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 DECLARED:

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

Note:

* internal SPI function is used for inverters GW4K-DT, GW5K-DT, GW6K-DT, GW8K-DT and GW10K-DT.

MANUFACTURER:

JIANGSU GOODWE POWER SUPPLY TECHNOLOGY CO., LTD
No.90 ZiJin Rd., New District,
Suzhou, 215011,
China

PRODUCT TYPE:	Photovoltaic Inverter						
MODEL:	GW4K-DT	GW5K-DT	GW6K-DT	GW8K-DT	GW10KT-DT	GW12KT-DT	GW15KT-DT
NOMINAL POWER:	4000W	5000W	6000W	8000W	10000W	12000W	15000W

FIRMWARE VERSION:

V1.00.00.01 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 JIANGSU GOODWE POWER SUPPLY TECHNOLOGY 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. CN12/20507, issued by SGS and verifying the test reports according to CEI 0-21 with No. ZEM-ESH-P19122303, issued by the laboratory Bureau Veritas Consumer Products Services Germany GmbH and verifying the EMC test report with No. (2019) GJSXW-WT0731, issued laboratory Audix Technology accredited by CNAS (No. L1000), the listed product(s) are conform to the requirements according to CEI 0-21: 2019-04.

Certificate number: U20-0233

Certification program: NSOP-0032-DEU-ZE-V01

Data of issue: 2020-04-06

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. ZEM-ESH-P19122303

Interface Protection System (SPI)

Manufacturer:	JIANGSU GOODWE POWER SUPPLY TECHNOLOGY CO., LTD No.90 ZiJin Rd., New District, Suzhou, 215011, China						
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Model:	GW4K-DT	GW5K-DT	GW6K-DT	GW8K-DT	GW10KT-DT	GW12KT-DT	GW15KT-DT
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Nominal Power:	4000W	5000W	6000W	8000W	10000W	12000W	15000W
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Firmware version:	V1.00.00.01						
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Number of phases:	three-phase						
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Phase 1

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	195,0	195,5	1500	1500 ± 20	N/A	1,03 ≤ r ≤ 1,05	N/A	40 ≤ tr ≤ 100
	Max	265,9	264,5	218	200 ± 20	N/A	0,95 ≥ r ≥ 0,97	N/A	40 ≤ tr ≤ 100

Temperature -20 °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	195,0	195,5	1505	1500 ± 20	N/A	1,03 ≤ r ≤ 1,05	N/A	40 ≤ tr ≤ 100
	Max	265,9	264,5	186	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	194,8	195,5	1490	1500 ± 20	N/A	1,03 ≤ r ≤ 1,05	N/A	40 ≤ tr ≤ 100
	Max	265,3	264,5	212	200 ± 20	N/A	0,95 ≥ r ≥ 0,97	N/A	40 ≤ tr ≤ 100

Phase 2

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	195,0	195,5	1490	1500 ± 20	N/A	1,03 ≤ r ≤ 1,05	N/A	40 ≤ tr ≤ 100
	Max	265,9	264,5	219	200 ± 20	N/A	0,95 ≥ r ≥ 0,97	N/A	40 ≤ tr ≤ 100

Temperature -20 °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	195,0	195,5	1495	1500 ± 20	N/A	1,03 ≤ r ≤ 1,05	N/A	40 ≤ tr ≤ 100
	Max	265,9	264,5	189	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	194,8	195,5	1485	1500 ± 20	N/A	1,03 ≤ r ≤ 1,05	N/A	40 ≤ tr ≤ 100
	Max	265,3	264,5	210	200 ± 20	N/A	0,95 ≥ r ≥ 0,97	N/A	40 ≤ tr ≤ 100

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Allegato Dichiarazione di conformità alle prescrizioni alla Norma CEI 0-21 No. U20-0233

Table Interface Protection System (SPI)

Extract of the test report

No. ZEM-ESH-P19122303

Phase 3

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	195,0	195,5	1495	1500 ± 20	N/A	1,03 ≤ r ≤ 1,05	N/A	40 ≤ tr ≤ 100
	Max	265,9	264,5	217	200 ± 20	N/A	0,95 ≥ r ≥ 0,97	N/A	40 ≤ tr ≤ 100
Temperature -20 °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	195,0	195,5	1500	1500 ± 20	N/A	1,03 ≤ r ≤ 1,05	N/A	40 ≤ tr ≤ 100
	Max	265,9	264,5	188	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	194,8	195,5	1485	1500 ± 20	N/A	1,03 ≤ r ≤ 1,05	N/A	40 ≤ tr ≤ 100
	Max	265,3	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. ZEM-ESH-P19122303

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	49,80	49,8	107,5	100 ± 20 ms	N/A	1,001 ≤ r ≤ 1,003	N/A	40 ≤ tr ≤ 100
	Max	50,20	50,2	91	100 ± 20 ms	N/A	0,997 ≥ r ≥ 0,999	N/A	40 ≤ tr ≤ 100

Temperature -20 °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	49,80	49,8	109	100 ± 20 ms	N/A	1,001 ≤ r ≤ 1,003	N/A	40 ≤ tr ≤ 100
	Max	50,20	50,2	98	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	49,80	49,8	106	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	47,40	47,5	102	100 ± 20 ms	N/A	1,001 ≤ r ≤ 1,003	N/A	40 ≤ tr ≤ 100
	Max	51,40	51,5	91,5	100 ± 20 ms	N/A	0,997 ≥ r ≥ 0,999	N/A	40 ≤ tr ≤ 100

Temperature -20 °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	47,40	47,5	87,5	100 ± 20 ms	N/A	1,001 ≤ r ≤ 1,003	N/A	40 ≤ tr ≤ 100
	Max	51,40	51,5	98	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	47,40	47,5	109	100 ± 20 ms	N/A	1,001 ≤ r ≤ 1,003	N/A	40 ≤ tr ≤ 100
	Max	51,40	51,5	100	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