

Certificado nº / *Certificate No.:* **HC23090101001-EG-BR-C001**Data de emissão / *Date of issue:* 2023-11-20Válido até / *Valid until:* Indefinidamente / *Indefinitely*

Requerente / Applicant:	Sungrow Power Supply Co., Ltd. No.1699, Xiyou Road, New & High Technology Industrial Development Zone, HeFei City, Anhui Province, P.R.China
Tipo de dispositivo / Device Type:	Inversor fotovoltaico on-grid / <i>Grid-connected PV inverter</i>
Modelo(s) / Model(s):	SG125HV
Marca Registrada / Trademark:	SUNGROW
Dados técnicos / Technical data:	Potência c.a. nominal / <i>Rated output power [kW]:</i> 125 Tensão c.a. nominal / <i>Rated output AC voltage:</i> 3~/PE, 600 V, 60 Hz (Para obter mais detalhes, consulte o anexo / <i>For further details see annex A.2 na / on p.2</i>)
Versão do software / Software version:	DSP_SG125KHV_V11_B; LCD_SG125KHV_V03_B_M
Padrão(ões) / diretriz(es) aplicada(s) / Applied standard(s) / guideline(s):	ABNT NBR 16149 , Sistemas fotovoltaicos (FV) – Características da interface de conexão com a rede elétrica de distribuição ABNT NBR 16150 , Sistemas fotovoltaicos (FV) — Características da interface de conexão com a rede elétrica de distribuição - Procedimento de ensaio de conformidade Portaria INMETRO nº 357:2014 , Portaria n.º 357, de 01 de agosto de 2014, ANEXO III - parte 2 IEC 62116:2008 (ABNT NBR IEC 62116:2012) , Test procedure of islanding prevention measures for utility-interconnected photovoltaic inverters
Esquema de certificação / Certification scheme:	CMPD-01
Relatório de teste nº: / Test report no.:	HC23090101001-EG-BR-001 (2023-11-17)

Este certificado confirma que a(s) unidade(s) geradora(s) mencionada(s) acima, com o software correspondente, atende(m) aos requisitos da(s) norma(s) / diretriz(es) mencionada(s) no momento da emissão do certificado. /

This certificate confirms that the above-mentioned generating unit(s) with corresponding software meet the requirements of the referenced standard(s) / guideline(s) at the time of issuance of the certificate.

This certificate relates to type testing and does not imply LYNS's endorsement, approval, certification or on-going control of the product(s), either in terms of performance, design, manufacture or materials used. This certificate and the results stated herein relate solely to the sample product(s) tested and to the specific tests undertaken.

The certificate will remain valid for the stated period providing no changes are made to the product, production method etc. This certificate is only valid when this is also found at <http://www.lyns-tci.com/en/certificate-search> or contact Lyns-tci Technology Guangdong Co., Ltd..

This certificate is for the exclusive use of LYNS's Client and is provided pursuant to the agreement between LYNS and its Client. LYNS's responsibility and liability are limited to the terms and conditions of the agreement. LYNS assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned using this verification.

The certificate is comprised of 2 pages (including Annex of 1 pages).

Dongguan, 2023-11-20



Dipl.-Ing. Weizhao Zheng
Head of certification body

Certification body Lyns-tci Technology Guangdong Co., Ltd. accredited according to ISO/IEC 17065 for product certification.

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A.1 Histórico de revisão do certificado / Revision history of the certificate

Nº de revisão / Rev. No.	Data / Date	Alterações / Changes
Rev. 0	2023-11-20	Emissão inicial / Initial issue

A.2 Dados técnicos da unidade geradora de energia / Technical data of the power generating unit

Modelo / Model	SG125HV
Conexões fotovoltaicas / DC input (PV)	
Tensão c.c. máxima / Max. DC input voltage [V]	1500
Faixa de operação do MPPT / MPPT voltage range [V]	860 ~ 1450
Corrente c.c. máxima / Max. Input DC current [A]	148
Conexão com a rede / AC connection	
Número de fases / No. of phases	<input type="checkbox"/> Monofásicos / Single-phase <input checked="" type="checkbox"/> Trifásicos / Three-phase
Tensão c.a. nominal / Rated output AC voltage [V]	600 V (tensão fase-fase / phase-to-phase voltage) + PE, 60Hz
Corrente c.a. máxima fornecida / Output AC current [A]	max. 120
Potência c.a. nominal / Nominal active output power [kW]	125
Potência aparente máxima / Max. apparent power [kVA]	125
Faixa de temperatura ambiente de operação / Operating temperature range	-25°C ~ +60°C
Grau de proteção (IP) / Degree of protection	IP65 (de acordo com / according to EN 60529)
Classe de proteção / Protection class	I (de acordo com / according to IEC 62109-1)
Tipo de transformador interno / Type of internal transformer	Sem transformador interno / No internal transformer (sem transformador / transformerless)
Versão do software / Software version	DSP_SG125KHV_V11_B; LCD_SG125KHV_V03_B_M
Fabricante / Manufacturer	<p>Sungrow Power Supply Co., Ltd. No.608 Changning Avenue, New & High Technology Industrial Development Zone, Hefei, Anhui 230088, P.R. China</p> <p>Sungrow Developers (India) Private Limited No.250/3, T-Begur Village, Kasaba Hobli, Nelamangala Taluk, Bengaluru (Bangalore) Rural, Karnataka,562123, India</p> <p>Sungrow Developers (Thailand) Co., Ltd. No. 22/4 Moo 10, Nong Kham Sub-District, Si Racha District, Chonburi Province, 20230, Thailand</p>
Laboratório de testes / Testing laboratory	<p>LYNS-TCI TECHNOLOGY GUANGDONG CO., LTD. Room 1201, Unit 2, Building 18, No. 7, Science and Technology Boulevard, Houjie Town, Dongguan City, Guangdong, 523960 P.R.C (Acreditado de acordo com / Accredited acc. ISO/IEC 17025: Acreditação A2LA nº / A2LA Accreditation no. 5200.02)</p>
Local do teste / Testing location	Igual ao anterior / Same as above
Data(s) de realização dos testes / Date(s) of performance of tests	2023-10-27 - 2023-11-13

4.3.3 Harmonic

The aim of this test is to determine relevant values for PGU continuous operation.

Test performed according to point 4.3.4 of the standard.

The reactive power setpoint is 0 VAR, the harmonics have been measured 10 minutes average values of line current, at least three records consisting of 3-phase measurements.

They have been verified limits stated on the standard on the SG125HV at different power levels, from 10%Pn to 100% Pn, in 10%Pn steps.

The arithmetic average is formed over the 10 minutes record for each harmonic, interharmonic and higher frequency component of the current.

The total distortion of the current harmonics (TDC) has been calculated according to standard:

$$TDC = \frac{\sqrt{\sum_{h=2}^{50} I_h^2}}{I_n} \cdot 100$$

See point 2.6 (Definitions) of this report.

The total distortion of the voltage harmonics (TDD) has been determined using the same procedure.

Used settings of the measurement device for harmonic measurement.

Measurement device	Date of measurement	Recording	Sampling frequency
DEWE-5000	23/06/2018 to 24/06/2018	--	10 kHz

- PGU operation mode; Q (VAr) Q setpoint = 0 VAr
- Voltage range (V) 600
- Voltage unbalance Same conditions as point 4.3.4 of this test report (*)
- Measured period (min) 13 min each active power level

(*) As the test procedure for both tests is similar, representing the inverter working in continuous operation in a wide range of power bins, it is considered that the voltage unbalance conditions will be similar at both tests.

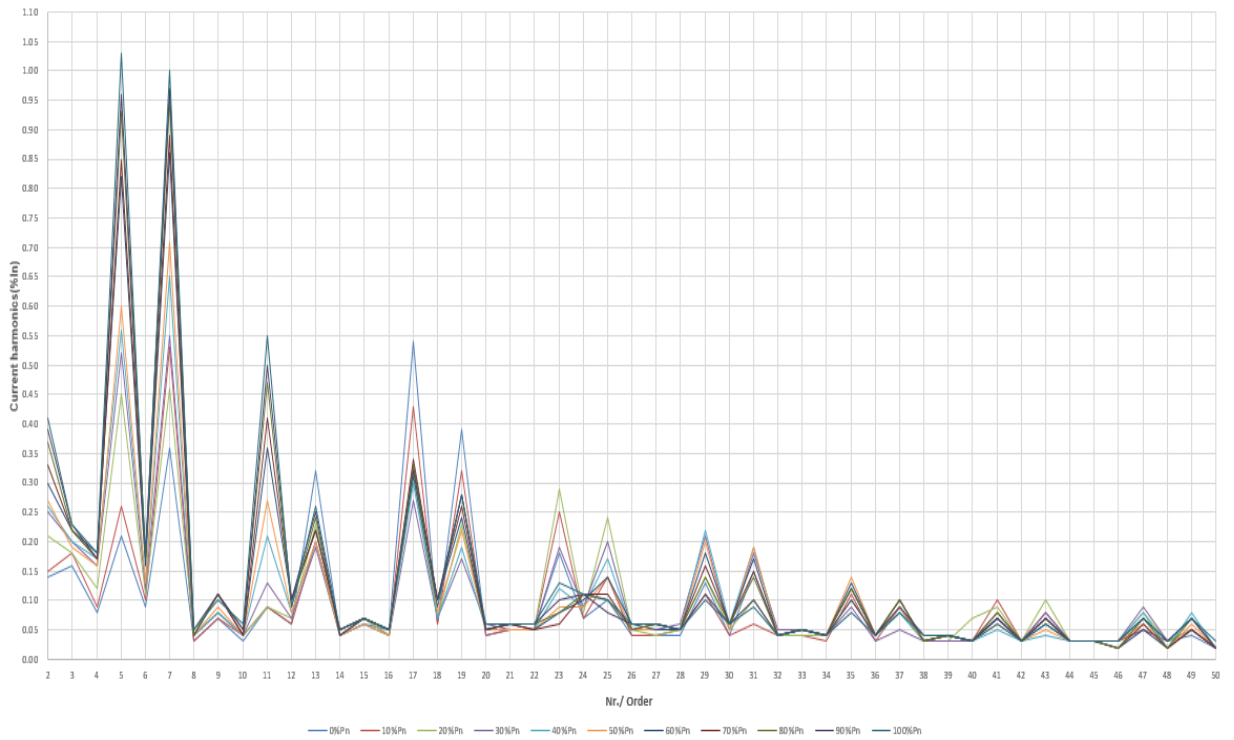
Number of records	
Power bin (%Pn)	SG125HV
0 %	1
10 %	1
20 %	1
30 %	1
40 %	1
50 %	1
60 %	1
70 %	1
80 %	1
90 %	1
100 %	1

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4.3.3.1 Current harmonics

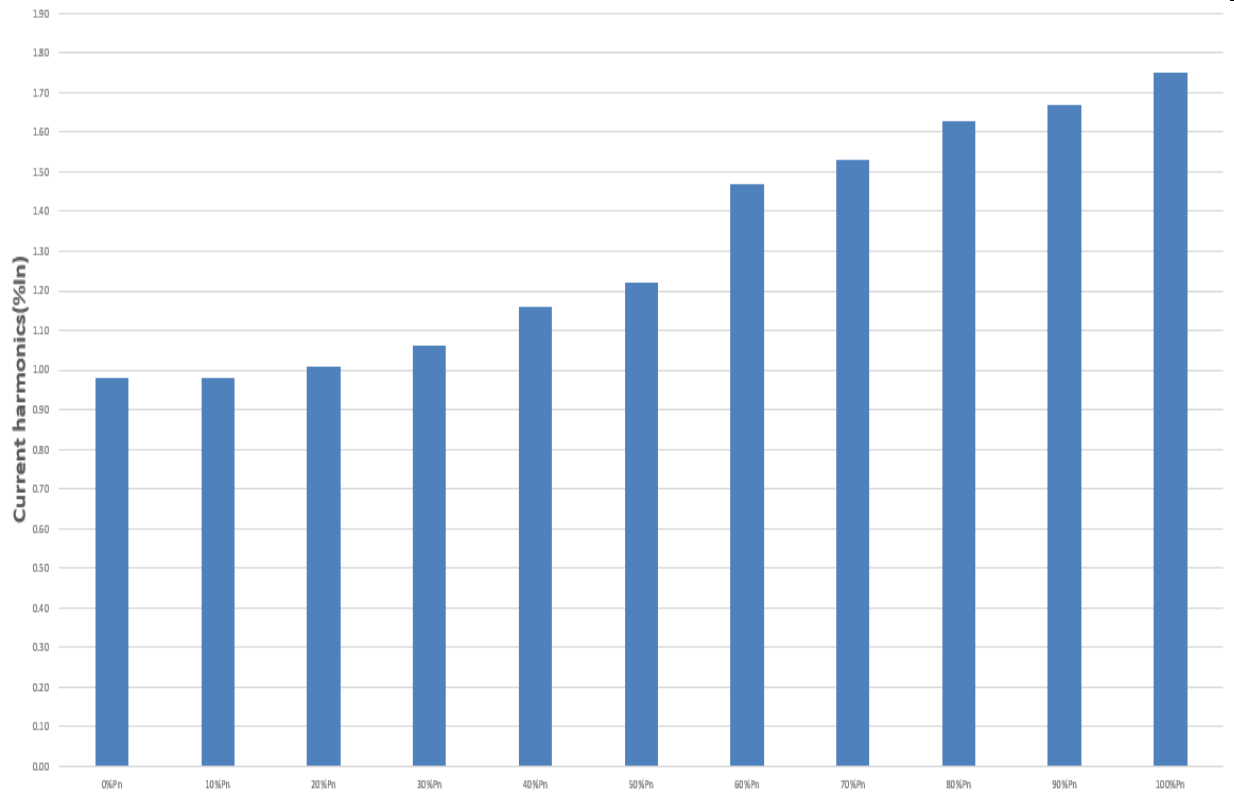
SG125HV												
P _n (%)	0	10	20	30	40	50	60	70	80	90	100	Max (%)
Nr./ Order	I _h (%)	I _h (%)	I _h (%)	I _h (%)	I _h (%)	I _h (%)	I _h (%)	I _h (%)	I _h (%)	I _h (%)	I _h (%)	
2	0.14	0.15	0.21	0.25	0.26	0.27	0.30	0.33	0.37	0.39	0.41	0.41
3	0.16	0.18	0.18	0.20	0.20	0.19	0.22	0.22	0.22	0.23	0.23	0.23
4	0.08	0.09	0.12	0.16	0.17	0.16	0.18	0.17	0.17	0.17	0.18	0.18
5	0.21	0.26	0.45	0.52	0.56	0.60	0.82	0.85	0.93	0.96	1.03	1.03
6	0.09	0.10	0.11	0.12	0.13	0.13	0.16	0.17	0.17	0.18	0.17	0.18
7	0.36	0.53	0.46	0.55	0.65	0.71	0.86	0.89	0.95	0.97	1.00	1.00
8	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05
9	0.07	0.07	0.08	0.08	0.08	0.09	0.11	0.11	0.11	0.11	0.10	0.11
10	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.06	0.06
11	0.09	0.09	0.09	0.13	0.21	0.27	0.36	0.41	0.47	0.50	0.55	0.55
12	0.06	0.06	0.07	0.07	0.08	0.08	0.10	0.10	0.09	0.10	0.09	0.10
13	0.32	0.20	0.23	0.19	0.20	0.20	0.22	0.22	0.24	0.25	0.26	0.32
14	0.04	0.05	0.04	0.04	0.04	0.04	0.05	0.05	0.04	0.04	0.05	0.05
15	0.06	0.07	0.07	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07
16	0.05	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05
17	0.54	0.43	0.31	0.27	0.30	0.32	0.33	0.34	0.33	0.32	0.31	0.54
18	0.06	0.06	0.07	0.07	0.07	0.08	0.10	0.10	0.10	0.10	0.09	0.10
19	0.39	0.32	0.23	0.17	0.19	0.22	0.24	0.26	0.28	0.28	0.28	0.39
20	0.04	0.04	0.05	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06
21	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06
22	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06
23	0.18	0.25	0.29	0.19	0.12	0.09	0.08	0.06	0.08	0.10	0.13	0.29
24	0.07	0.07	0.08	0.09	0.09	0.09	0.10	0.11	0.11	0.11	0.11	0.11
25	0.10	0.14	0.24	0.20	0.17	0.14	0.14	0.11	0.10	0.08	0.10	0.24
26	0.04	0.04	0.05	0.05	0.05	0.05	0.06	0.05	0.05	0.06	0.06	0.06
27	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06
28	0.04	0.05	0.05	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.06
29	0.13	0.11	0.14	0.21	0.22	0.20	0.18	0.16	0.14	0.11	0.10	0.22
30	0.04	0.04	0.05	0.05	0.06	0.05	0.06	0.06	0.06	0.06	0.06	0.06
31	0.15	0.06	0.10	0.18	0.19	0.19	0.17	0.15	0.14	0.10	0.09	0.19
32	0.04	0.04	0.04	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05
33	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
34	0.04	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
35	0.12	0.11	0.10	0.09	0.12	0.14	0.13	0.12	0.12	0.10	0.08	0.14
36	0.04	0.03	0.04	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
37	0.09	0.09	0.08	0.05	0.08	0.09	0.10	0.10	0.10	0.09	0.08	0.10
38	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04
39	0.04	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
40	0.03	0.03	0.07	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.07
41	0.07	0.10	0.09	0.07	0.05	0.06	0.07	0.08	0.08	0.07	0.06	0.10
42	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
43	0.07	0.08	0.10	0.08	0.04	0.05	0.06	0.07	0.07	0.07	0.06	0.10
44	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
45	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
46	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.03	0.03	0.03
47	0.05	0.05	0.08	0.09	0.08	0.06	0.05	0.06	0.07	0.07	0.07	0.09
48	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03
49	0.04	0.05	0.05	0.07	0.08	0.06	0.05	0.05	0.07	0.07	0.07	0.08
50	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03
TDC (%)	0.98	0.98	1.01	1.06	1.16	1.22	1.47	1.53	1.63	1.67	1.75	-

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SG125HV
Current Harmonics



Total Distortion Current Harmonic



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4.3.3.2 Voltage harmonics

Measurements of voltage harmonics at continuous operation are done according to IEC 61000-4-7:2002

SG125HV												
P _n (%)	0	10	20	30	40	50	60	70	80	90	100	Max (%)
Nr./ Order	U _h (%)	U _h (%)	U _h (%)	U _h (%)	U _h (%)	U _h (%)	U _h (%)	U _h (%)	U _h (%)	U _h (%)	U _h (%)	
2	0.191	0.026	0.022	0.015	0.024	0.026	0.021	0.025	0.030	0.041	0.028	0.191
3	0.134	0.029	0.023	0.023	0.033	0.027	0.053	0.029	0.027	0.026	0.021	0.134
4	0.175	0.073	0.070	0.063	0.055	0.058	0.450	0.046	0.044	0.045	0.034	0.450
5	1.222	0.359	0.357	0.359	0.376	0.406	0.044	0.517	0.580	0.579	0.434	1.222
6	0.180	0.057	0.048	0.042	0.048	0.040	0.302	0.046	0.048	0.058	0.049	0.302
7	0.677	0.240	0.232	0.230	0.230	0.260	0.033	0.332	0.344	0.169	0.340	0.677
8	0.125	0.040	0.038	0.037	0.038	0.032	0.005	0.035	0.040	0.055	0.038	0.125
9	0.088	0.003	0.012	0.004	0.009	0.011	0.035	0.018	0.019	0.015	0.016	0.088
10	0.132	0.025	0.046	0.025	0.022	0.045	0.147	0.017	0.016	0.027	0.013	0.147
11	0.864	0.240	0.229	0.186	0.103	0.060	0.029	0.258	0.269	0.058	0.117	0.864
12	0.100	0.041	0.032	0.031	0.037	0.039	0.182	0.037	0.034	0.039	0.029	0.182
13	0.587	0.169	0.152	0.112	0.080	0.113	0.010	0.201	0.128	0.150	0.024	0.587
14	0.042	0.016	0.016	0.013	0.012	0.015	0.001	0.013	0.005	0.009	0.004	0.042
15	0.014	0.004	0.008	0.005	0.005	0.004	0.004	0.001	0.006	0.005	0.006	0.014
16	0.011	0.006	0.013	0.009	0.005	0.010	0.030	0.004	0.008	0.003	0.009	0.030
17	0.061	0.019	0.018	0.020	0.017	0.022	0.002	0.035	0.009	0.019	0.022	0.061
18	0.004	0.000	0.000	0.001	0.002	0.002	0.018	0.003	0.003	0.001	0.002	0.018
19	0.045	0.013	0.013	0.010	0.002	0.010	0.003	0.012	0.011	0.007	0.016	0.045
20	0.015	0.004	0.009	0.007	0.003	0.002	0.002	0.002	0.002	0.006	0.008	0.015
21	0.003	0.001	0.000	0.001	0.001	0.001	0.006	0.001	0.002	0.002	0.003	0.006
22	0.014	0.002	0.002	0.006	0.006	0.003	0.015	0.007	0.006	0.002	0.004	0.015
23	0.025	0.007	0.003	0.004	0.007	0.015	0.001	0.005	0.010	0.007	0.010	0.025
24	0.006	0.001	0.001	0.002	0.002	0.003	0.005	0.001	0.001	0.001	0.003	0.006
25	0.014	0.001	0.003	0.008	0.011	0.014	0.011	0.009	0.006	0.004	0.010	0.014
26	0.019	0.006	0.003	0.008	0.007	0.004	0.001	0.004	0.003	0.009	0.004	0.019
27	0.002	0.001	0.001	0.003	0.001	0.002	0.002	0.001	0.002	0.001	0.003	0.003
28	0.017	0.006	0.007	0.007	0.001	0.007	0.010	0.008	0.008	0.002	0.003	0.017
29	0.014	0.011	0.011	0.012	0.005	0.011	0.003	0.014	0.005	0.008	0.005	0.014
30	0.007	0.002	0.001	0.002	0.004	0.004	0.008	0.003	0.002	0.004	0.002	0.008
31	0.024	0.017	0.017	0.013	0.010	0.013	0.001	0.002	0.009	0.007	0.013	0.024
32	0.016	0.003	0.003	0.004	0.004	0.007	0.002	0.005	0.003	0.002	0.003	0.016
33	0.004	0.001	0.001	0.002	0.001	0.000	0.002	0.001	0.001	0.001	0.001	0.004
34	0.016	0.004	0.002	0.003	0.005	0.004	0.002	0.002	0.003	0.001	0.003	0.016
35	0.009	0.005	0.004	0.003	0.004	0.005	0.001	0.005	0.001	0.001	0.002	0.009
36	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.000	0.001	0.001	0.001	0.002
37	0.010	0.001	0.003	0.003	0.001	0.001	0.001	0.001	0.003	0.005	0.002	0.010
38	0.010	0.001	0.002	0.003	0.003	0.001	0.002	0.002	0.001	0.002	0.002	0.010
39	0.003	0.000	0.000	0.000	0.000	0.001	0.003	0.001	0.001	0.001	0.001	0.003
40	0.003	0.001	0.001	0.000	0.001	0.001	0.001	0.001	0.002	0.001	0.002	0.003
41	0.010	0.004	0.004	0.003	0.000	0.001	0.001	0.002	0.002	0.003	0.003	0.010
42	0.000	0.000	0.001	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.000	0.001
43	0.003	0.002	0.003	0.003	0.003	0.001	0.001	0.001	0.002	0.001	0.002	0.003
44	0.005	0.002	0.002	0.001	0.001	0.001	0.001	0.002	0.001	0.002	0.002	0.005
45	0.005	0.001	0.001	0.001	0.001	0.001	0.002	0.000	0.001	0.001	0.001	0.005
46	0.004	0.001	0.002	0.001	0.002	0.001	0.001	0.001	0.000	0.001	0.001	0.004
47	0.007	0.000	0.002	0.003	0.002	0.000	0.001	0.001	0.000	0.001	0.001	0.007
48	0.001	0.000	0.001	0.000	0.001	0.001	0.001	0.001	0.000	0.001	0.001	0.001
49	0.002	0.002	0.003	0.002	0.000	0.001	0.001	0.002	0.001	0.001	0.001	0.003
50	0.006	0.002	0.003	0.001	0.001	0.001		0.001	0.001	0.002	0.001	0.006
TDD (%)	1.795	0.537	0.521	0.490	0.472	0.512	0.599	0.704	0.744	0.635	0.572	1.866

BDEW-FGW-TR3

4.3.3.3 Interharmonics at continuous operation

Test performed according to point 4.3.4 of the standard.

Measurements of interharmonics at continuous operation are done according to IEC 61000-4-7:2002.

SG125HV												
P _n (%)	0	10	20	30	40	50	60	70	80	90	100	Max (%)
Nr./ Order	I _h (%)	I _h (%)	I _h (%)	I _h (%)	I _h (%)	I _h (%)	I _h (%)	I _h (%)	I _h (%)	I _h (%)	I _h (%)	
75	0.05	0.07	0.07	0.07	0.09	0.08	0.08	0.09	0.09	0.09	0.1	0.41
125	0.04	0.04	0.04	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.23
175	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.18
225	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	1.03
275	0.03	0.03	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.18
325	0.03	0.03	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	1.00
375	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.05
425	0.03	0.03	0.03	0.04	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.11
475	0.03	0.03	0.04	0.04	0.04	0.04	0.05	0.06	0.06	0.06	0.05	0.06
525	0.03	0.03	0.04	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.55
575	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.04	0.10
625	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.32
675	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05
725	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.04	0.07
775	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05
825	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.54
875	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.10
925	0.04	0.04	0.04	0.05	0.04	0.04	0.06	0.06	0.06	0.05	0.06	0.39
975	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.06	0.06	0.06	0.06
1025	0.04	0.04	0.04	0.04	0.05	0.04	0.05	0.05	0.05	0.06	0.06	0.06
1075	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06
1125	0.04	0.04	0.04	0.04	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.29
1175	0.04	0.04	0.04	0.05	0.05	0.05	0.06	0.06	0.06	0.07	0.07	0.11
1225	0.04	0.04	0.05	0.05	0.05	0.06	0.06	0.07	0.07	0.07	0.07	0.24
1275	0.04	0.04	0.04	0.05	0.05	0.05	0.06	0.06	0.06	0.07	0.07	0.06
1325	0.04	0.04	0.04	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.07	0.06
1375	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06
1425	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.06	0.06	0.06	0.22
1475	0.03	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06
1525	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.19
1575	0.03	0.03	0.04	0.04	0.04	0.04	0.05	0.04	0.05	0.05	0.05	0.05
1625	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05
1675	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.04
1725	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.14
1775	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.04
1825	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.10
1875	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.05	0.04
1925	0.03	0.03	0.03	0.03	0.04	0.03	0.03	0.03	0.04	0.04	0.04	0.04
1975	0.03	0.03	0.04	0.03	0.03	0.04	0.03	0.03	0.03	0.04	0.04	0.07

BDEW-FGW-TR3

4.3.3.4 Higher frequency components

Test performed according to point 4.3.4 of the standard.

Measurements of Higher frequency are done according to IEC 61000-4-7:2002.

SG125HV												
P _n (%)	0	10	20	30	40	50	60	70	80	90	100	Max (%)
F (kHz)	I _h (%)	I _h (%)	I _h (%)	I _h (%)	I _h (%)	I _h (%)	I _h (%)	I _h (%)	I _h (%)	I _h (%)	I _h (%)	
2.1	0.12	0.15	0.15	0.12	0.10	0.11	0.12	0.13	0.12	0.12	0.15	0.15
2.3	0.09	0.09	0.11	0.12	0.11	0.09	0.08	0.09	0.10	0.09	0.09	0.11
2.5	0.08	0.08	0.08	0.10	0.10	0.09	0.08	0.09	0.10	0.08	0.08	0.08
2.7	0.08	0.09	0.08	0.08	0.10	0.11	0.09	0.08	0.09	0.08	0.09	0.08
2.9	0.09	0.08	0.08	0.08	0.09	0.09	0.08	0.08	0.08	0.09	0.08	0.08
3.1	0.10	0.10	0.10	0.09	0.10	0.10	0.09	0.09	0.10	0.10	0.10	0.10
3.3	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
3.5	0.07	0.07	0.07	0.07	0.08	0.08	0.07	0.08	0.08	0.07	0.07	0.07
3.7	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.07	0.07	0.07
3.9	0.11	0.11	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10
4.1	0.11	0.11	0.11	0.12	0.12	0.13	0.13	0.13	0.13	0.11	0.11	0.11
4.3	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.08
4.5	0.09	0.10	0.09	0.15	0.20	0.12	0.11	0.10	0.11	0.09	0.10	0.09
4.7	0.13	0.12	0.53	1.05	1.08	1.09	1.02	1.03	0.95	0.13	0.12	0.53
4.9	0.18	0.54	1.07	0.24	0.12	0.13	0.15	0.16	0.56	0.18	0.54	1.07
5.1	1.18	0.97	0.21	0.12	0.12	0.12	0.12	0.13	0.14	1.18	0.97	0.21
5.3	0.18	0.14	0.16	0.14	0.13	0.14	0.14	0.14	0.15	0.18	0.14	0.16
5.5	0.19	0.18	0.16	0.13	0.15	0.15	0.15	0.15	0.16	0.19	0.18	0.16
5.7	0.17	0.16	0.13	0.14	0.14	0.15	0.14	0.15	0.15	0.17	0.16	0.13
5.9	0.14	0.13	0.14	0.13	0.13	0.13	0.13	0.14	0.14	0.14	0.13	0.14
6.1	0.14	0.14	0.13	0.14	0.14	0.14	0.13	0.13	0.14	0.14	0.14	0.13
6.3	0.18	0.17	0.18	0.19	0.19	0.19	0.19	0.20	0.20	0.18	0.17	0.18
6.5	0.14	0.13	0.14	0.14	0.15	0.16	0.16	0.16	0.17	0.14	0.13	0.14
6.7	0.10	0.09	0.11	0.11	0.12	0.13	0.13	0.14	0.15	0.10	0.09	0.11
6.9	0.09	0.09	0.10	0.10	0.10	0.11	0.11	0.11	0.12	0.09	0.09	0.10
7.1	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
7.3	0.10	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.11
7.5	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
7.7	0.12	0.12	0.13	0.13	0.13	0.14	0.14	0.14	0.15	0.12	0.12	0.13
7.9	0.26	0.25	0.27	0.28	0.29	0.29	0.30	0.31	0.32	0.26	0.25	0.27
8.1	0.11	0.11	0.13	0.13	0.14	0.14	0.14	0.15	0.15	0.11	0.11	0.13
8.3	0.09	0.09	0.09	0.10	0.10	0.09	0.10	0.10	0.10	0.09	0.09	0.09
8.5	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.06	0.06	0.06
8.7	0.04	0.04	0.05	0.04	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.05
8.9	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03



C E R T I F I C A T E
of Conformity

EC Council Directive 2014/30/EU
Electromagnetic Compatibility

Registration No.: AE 50390325 0001

Report No.: 50102942 001

Holder: Sungrow Power Supply Co., Ltd.
No.1699 Xiyou Rd., New & High
Technology Industrial
Development Zone,
Hefei 230088
P. R. China

Product: PV-Inverter
(Grid-connected PV Inverter)

Identification: SG125HV
Serial No.: n.a.
Remark: Refer to test report 50102942 001 for details.

Tested acc. to: EN 61000-6-2:2005
EN 61000-6-4:2007+A1
IEC 61000-6-2:2005
IEC 61000-6-4:2006+A1

This certificate of conformity is based on an evaluation of a sample of the above mentioned product. Technical Report and documentation are at the Licence Holder's disposal. This is to certify that the tested sample is in conformity with all provisions of Annex III of Council Directive 2014/30/EU. This certificate does not imply assessment of the production of the product and does not permit the use of a TÜV Rheinland mark of conformity. The holder of the certificate is authorized to use this certificate in connection with the EC declaration of conformity according to the a.m. Directive.

Date 22.11.2017



Certification Body

Xinhua Lu
Xinhua Lu

TÜV Rheinland LGA Products GmbH - Tillystraße 90431 Nürnberg

CE The CE marking may only be used if all relevant and effective EC Directives are complied with. **CE**

C E R T I F I C A T E
of Conformity



Registration No.: AK 50393743 0001

Report No.: 50110654 001

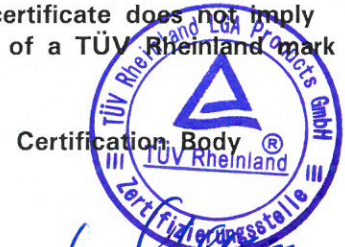
Holder: **Sungrow Power Supply Co., Ltd.**
No.1699 Xiyou Rd., New & High
Technology Industrial
Development Zone,
Hefei 230088
P. R. China

Product: PV-Inverter
(Grid-connected PV Inverter)

Identification: Type Designation : SG125HV
Serial Number : Engineering Sample
Firmware Version : DSP_SG125KHV_V11_A
LCD_SG125KHV_V03_A_M
Remark(s) : Refer to test report 50110654 001
for details.

Tested acc. to: IEC 61727:2004
IEC 62116:2014
IEC 61000-3-11:2000
IEC 61000-3-12:2011

The certificate of conformity refers to the above mentioned product. This is to certify that the specimen is in conformity with the assessment requirement mentioned above. This certificate does not imply assessment of the production of the product and does not permit the use of a TÜV Rheinland mark of conformity.



Date 20.11.2017


Weichun Li

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg

Zertifikat

Certificate



Zertifikat Nr. *Certificate No.*
R 50410536

Blatt *Sheet*
0001

Ihr Zeichen *Client Reference*
Daniel Du

Unser Zeichen *Our Reference*
01-QJL-50103757 003

Ausstellungsdatum *Date of Issue*
14.06.2018 (day/mo/yr)

Genehmigungsinhaber *License Holder*
Sungrow Power Supply Co., Ltd.
No.1699 Xiyou Rd., New & High
Technology Industrial
Development Zone,
Hefei 230088
P. R. China

Fertigungsstätte *Manufacturing Plant*
Sungrow Power Supply Co., Ltd.
No.1699 Xiyou Rd., New & High
Technology Industrial
Development Zone,
Hefei 230088
P. R. China

Prüfzeichen *Test Mark*



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Sicherheit
Regelmäßige
Produktions-
überwachung

www.tuv.com
ID 1419059220

Geprüft nach *Tested acc. to*

IEC 62109-1:2010
IEC 62109-2:2011
EN 62109-1:2010
EN 62109-2:2011

Zertifiziertes Produkt (Geräteidentifikation)
Certified Product (Product Identification)

Lizenzentgelte - Einheit
License Fee - Unit

PV-Wechselrichter (Grid-Connected PV Inverter)

Type Designation : SG125HV
Vmax PV [Vd.c.] : 1500
Isc PV [Ad.c.] : 240
Full MPP Voltage Range [Vd.c.] : 860-1250
Max. Input Current [Ad.c.] : 148
Overvoltage Category (OVC) : II for PV

8

Rated Output Voltage [Va.c.] : 3~ 600
Rated Output Frequency [Hz] : 50/60
Rated Output Power [kW] : 125
Max. Output Current [Aa.c.] : 120
Power Factor : [-0.80, 0.80]
Overvoltage Category (OVC) : III for AC Mains

continued on page 0002

8

ANLAGE (Appendix): 1.0

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde und es bestätigt die Konformität des Produktes mit den oben genannten Standards und Prüfgrundlagen. Zusätzliche Anforderungen in Ländern, in denen das Produkt in Verkehr gebracht werden soll, müssen zusätzlich betrachtet werden. Die Herstellung des zertifizierten Produktes wird überwacht.
This certificate is based on our Testing and Certification Regulation and states the conformity of the product with the standards and testing requirements as indicated above. Any additional requirements in countries where the product is going to be marketed have to be considered additionally. The manufacturing of the certified product is subject to surveillance.

TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg

Tel.: +49 221 806-1371 e-mail: cert-validity@de.tuv.com
Fax: +49 221 806-3935 http://www.tuv.com/safety



Weichun Li

Zertifikat

Certificate



Zertifikat Nr. *Certificate No.*
R 50410536

Blatt *Sheet*
0002

Ihr Zeichen *Client Reference*
Daniel Du

Unser Zeichen *Our Reference*
01-QJL-50103757 003

Ausstellungsdatum *Date of Issue*
14.06.2018 (day/mo/yr)

Genehmigungsinhaber *License Holder*
Sungrow Power Supply Co., Ltd.
No.1699 Xiyou Rd., New & High
Technology Industrial
Development Zone,
Hefei 230088
P. R. China

Fertigungsstätte *Manufacturing Plant*
Sungrow Power Supply Co., Ltd.
No.1699 Xiyou Rd., New & High
Technology Industrial
Development Zone,
Hefei 230088
P. R. China

Prüfzeichen *Test Mark*



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ID 1419059220

Geprüft nach *Tested acc. to*

IEC 62109-1:2010
IEC 62109-2:2011
EN 62109-1:2010
EN 62109-2:2011

Zertifiziertes Produkt (Geräteidentifikation)
Certified Product (Product Identification)

Lizenzentgelte - Einheit
License Fee - Unit

PV-Wechselrichter (Grid-Connected PV Inverter)

as page 0001 continuation

Protective Class : Class I
Ingress Protection (IP) : IP 65
Pollution Degree (PD) : PD 3
Operating Temperature [°C] : -25 to 60 (> 50 derating)
Altitude [m] : 4000
Type of Inverter : Non-isolated

Remark(s) :

The installation has to be carried out according to the attached installation instruction.
Any additional requirements in countries where the product is going to be marketed have to be considered additionally.

ANLAGE (Appendix) : 1.0

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde und es bestätigt die Konformität des Produktes mit den oben genannten Standards und Prüfgrundlagen. Zusätzliche Anforderungen in Ländern, in denen das Produkt in Verkehr gebracht werden soll, müssen zusätzlich betrachtet werden. Die Herstellung des zertifizierten Produktes wird überwacht.
This certificate is based on our Testing and Certification Regulation and states the conformity of the product with the standards and testing requirements as indicated above. Any additional requirements in countries where the product is going to be marketed have to be considered additionally. The manufacturing of the certified product is subject to surveillance.

TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg

Tel.: +49 221 806-1371 e-mail: cert-validity@de.tuv.com
Fax: +49 221 806-3935 http://www.tuv.com/safety



Weichun Li

Zertifikat

Certificate



Zertifikat Nr. *Certificate No.*
R 50410536

Blatt *Sheet*
0005

<i>Ihr Zeichen Client Reference</i>	<i>Unser Zeichen Our Reference</i>	<i>Ausstellungsdatum Date of Issue</i>	<i>Date of Issue</i>
Daniel Du	01-DJW-50103757 006	22.01.2020	(day/mo/yr)

Genehmigungsinhaber *License Holder*
Sungrow Power Supply Co., Ltd.
No.1699 Xiyou Rd., New & High
Technology Industrial
Development Zone,
Hefei 230088
P. R. China

Fertigungsstätte *Manufacturing Plant*
Sungrow Power Supply Co., Ltd.
No.1699 Xiyou Rd., New & High
Technology Industrial
Development Zone,
Hefei 230088
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Prüfzeichen *Test Mark*



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IEC 62109-1:2010
IEC 62109-2:2011
EN 62109-1:2010
EN 62109-2:2011

Zertifiziertes Produkt (Geräteidentifikation)
Certified Product (Product Identification)

Lizenzentgelte - Einheit
License Fee - Unit

PV-Wechselrichter (Grid-Connected PV Inverter)

as page 0004 continuation

Changes:

change the operating temperature range from "-25~60" to
"-30~60" for SG125HV and SG125HV-20.

ANLAGE (Appendix): 1.1

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde und es bestätigt die Konformität des Produktes mit den oben genannten Standards und Prüfgrundlagen. Zusätzliche Anforderungen in Ländern, in denen das Produkt in Verkehr gebracht werden soll, müssen zusätzlich betrachtet werden. Die Herstellung des zertifizierten Produktes wird überwacht.

This certificate is based on our Testing and Certification Regulation and states the conformity of the product with the standards and testing requirements as indicated above. Any additional requirements in countries where the product is going to be marketed have to be considered additionally. The manufacturing of the certified product is subject to surveillance.

TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg

Tel.: +49 221 806-1371 e-mail: cert-validity@de.tuv.com
Fax: +49 221 806-3935 http://www.tuv.com/safety



Weichun Li

Zertifikat

Certificate



Zertifikat Nr. *Certificate No.*
R 50410536

Blatt *Sheet*
0003

Ihr Zeichen *Client Reference*
Daniel Du

Unser Zeichen *Our Reference*
01-DJW-50103757 005

Ausstellungsdatum *Date of Issue*
29.11.2018
(day/mo/yr)

Genehmigungsinhaber *License Holder*
Sungrow Power Supply Co., Ltd.
No.1699 Xiyou Rd., New & High
Technology Industrial
Development Zone,
Hefei 230088
P. R. China

Fertigungsstätte *Manufacturing Plant*
Sungrow Power Supply Co., Ltd.
No.1699 Xiyou Rd., New & High
Technology Industrial
Development Zone,
Hefei 230088
P. R. China

Prüfzeichen *Test Mark*



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Geprüft nach *Tested acc. to*

IEC 62109-1:2010
IEC 62109-2:2011
EN 62109-1:2010
EN 62109-2:2011

Zertifiziertes Produkt (Geräteidentifikation)
Certified Product (Product Identification)

Lizenzentgelte - Einheit
License Fee - Unit

PV-Wechselrichter (Grid-Connected PV Inverter)

as page 0001 continuation
Addition

Type Designation	: SG125HV-20	1
Vmax PV [Vd.c.]	: 1500	
Isc PV [Ad.c.]	: 250	
Full load MPP Voltage Range [Vd.c.]	: 860-1250	
MPP Voltage Range [Vd.c.]	: 860-1450	
Max. Input Current [Ad.c.]	: 148	
Overvoltage Category (OVC)	: II for PV	
Rated Output Voltage [Va.c.]	: 3~ 600	
Rated Output Frequency [Hz]	: 50/60	
Rated Output Power [kW]	: 125	
Max. Output Current [Aa.c.]	: 120	
Power Factor	: [-0.80, 0.80]	
Overvoltage Category (OVC)	: III for AC Mains	

1

ANLAGE (Appendix): 1.1

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde und es bestätigt die Konformität des Produktes mit den oben genannten Standards und Prüfgrundlagen. Zusätzliche Anforderungen in Ländern, in denen das Produkt in Verkehr gebracht werden soll, müssen zusätzlich betrachtet werden. Die Herstellung des zertifizierten Produktes wird überwacht.
This certificate is based on our Testing and Certification Regulation and states the conformity of the product with the standards and testing requirements as indicated above. Any additional requirements in countries where the product is going to be marketed have to be considered additionally. The manufacturing of the certified product is subject to surveillance.

TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg

Tel.: +49 221 806-1371 e-mail: cert-validity@de.tuv.com
Fax: +49 221 806-3935 http://www.tuv.com/safety



Weichun Li

Zertifikat

Certificate



Zertifikat Nr. *Certificate No.*
R 50410536

Blatt *Sheet*
0004

Ihr Zeichen *Client Reference*
Daniel Du

Unser Zeichen *Our Reference*
01-DJW-50103757 005

Ausstellungsdatum *Date of Issue*
29.11.2018 (day/mo/yr)

Genehmigungsinhaber *License Holder*

Sungrow Power Supply Co., Ltd.
No.1699 Xiyou Rd., New & High
Technology Industrial
Development Zone,
Hefei 230088
P. R. China

Fertigungsstätte *Manufacturing Plant*

Sungrow Power Supply Co., Ltd.
No.1699 Xiyou Rd., New & High
Technology Industrial
Development Zone,
Hefei 230088
P. R. China

Prüfzeichen *Test Mark*



Bauart geprüft
Sicherheit
Regelmäßige
Produktions-
überwachung

www.tuv.com
ID 1419059220

Geprüft nach *Tested acc. to*

IEC 62109-1:2010
IEC 62109-2:2011
EN 62109-1:2010
EN 62109-2:2011

**Zertifiziertes Produkt (Geräteidentifikation)
*Certified Product (Product Identification)***

**Lizenzentgelte - Einheit
*License Fee - Unit***

PV-Wechselrichter (Grid-Connected PV Inverter)

as page 0001 continuation

Change

Old Isc PV [Ad.c.] : 240
Old Full MPP Voltage Range [Vd.c.] : 860-1250
To
New Isc PV [Ad.c.] : 250
New Full Load MPP Voltage Range [Vd.c.] : 860-1250

Addition

MPP Voltage Range [Vd.c.] : 860-1450

Remark(s) :

The installation has to be carried out according to the attached installation instruction.
Any additional requirements in countries where the product is going to be marketed have to be considered additionally.

ANLAGE (Appendix): 1.1

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde und es bestätigt die Konformität des Produktes mit den oben genannten Standards und Prüfgrundlagen. Zusätzliche Anforderungen in Ländern, in denen das Produkt in Verkehr gebracht werden soll, müssen zusätzlich betrachtet werden. Die Herstellung des zertifizierten Produktes wird überwacht.
This certificate is based on our Testing and Certification Regulation and states the conformity of the product with the standards and testing requirements as indicated above. Any additional requirements in countries where the product is going to be marketed have to be considered additionally. The manufacturing of the certified product is subject to surveillance.

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Weichun Li

C E R T I F I C A T E
of Conformity



Registration No.: AK 50427199 0001

Report No.: 50216566 001

Holder: Sungrow Power Supply Co., Ltd.
No.1699 Xiyou Rd., New & High
Technology Industrial
Development Zone,
Hefei 230088
P. R. China

Product: PV-Inverter
(Grid-connected PV Inverter)

Identification:

Type Designation	: SG125HV-20
Serial Number	: Engineering Sample
Firmware Version	: DSP_SG125KHV-20_V11_A LCD_SG125KHV-20_V03_A_M
Remark(s)	: Refer to test report 50206944 001 for details.

Tested acc. to: EN 50530:2010+A1

The certificate of conformity refers to the above mentioned product. This is to certify that the specimen is in conformity with the assessment requirement mentioned above. This certificate does not imply assessment of the production of the product and does not permit the use of a TÜV Rheinland mark of conformity.



Date 10.01.2019


Weichun Li

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg