

Certificate of Conformity

No. ESY 086470 0230 Rev. 00

Holder of Certificate: **Ginlong Technologies Co., Ltd.**

No.57 Jintong Road
Binhai Industrial Park, Xiangshan
315712 Ningbo, Zhejiang
PEOPLE'S REPUBLIC OF CHINA

Product: **PV inverter**
Grid-connected PV inverter

Model(s): **S6-GC3P15K03-LV-ND, S6-GC3P20K03-LV-ND,
S6-GC3P25K03-NV-ND, S6-GC3P30K03-NV-ND,
S6-GC3P33K03-NV-ND, S6-GC3P36K03-NV-ND**

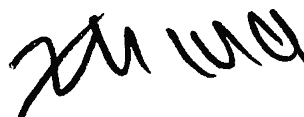
Parameters: See next pages

Applicable standards: VDE-AR-N 4105:2018
DIN VDE V 0124-100 (VDE V 0124-100):2020

This Certificate of Conformity confirms the compliance with the above listed standards on a voluntary basis. It refers only to the sample submitted to TÜV SÜD Product Service GmbH and does not certify the quality or safety of the serial products. It was issued according to TÜV SÜD Product Service certification program Photovoltaics and Grid Integration. For details see: www.tuvsud.com/ps-cert

Test report no.: 704092403746-00

Date, 2024-11-06



(Zhengdong Ma)

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Model	S6-GC3P15K03-LV-ND	S6-GC3P20K03-LV-ND
PV input parameters:		
Max. input voltage	DC 1100 V	
Mppt voltage range	DC 180, ..., 1000 V	
Max. input current	DC 3*40 A	
Isc PV (absolute maximum)	DC 3*50 A	
AC output parameters:		
Max. (Rated) apparent output Power	15000 VA	20000 VA
Nominal output voltage	3/PE ~ 220/230 V	
Nominal Frequency	50 Hz	
Max. (Rated) output current	AC 37.7 A	AC 50.2 A
Power factor range	-0.8, ..., 1, ..., +0.8	

Model	S6-GC3P25K03-NV-ND	S6-GC3P30K03-NV-ND
PV input parameters:		
Max. input voltage	DC 1100 V	
Mppt voltage range	DC 180, ..., 1000 V	
Max. input current	DC 3*40 A	
Isc PV (absolute maximum)	DC 3*50 A	
AC output parameters:		
Max. (Rated) apparent output Power	25000 VA	30000 VA
Nominal output voltage	3/N/PE ~ 230/400 V	
Nominal Frequency	50 Hz	
Max. (Rated) output current	AC 36.1 A	AC 43.3 A
Power factor range	-0.8, ..., 1, ..., +0.8	

Model	S6-GC3P33K03-NV-ND	S6-GC3P36K03-NV-ND
PV input parameters:		
Max. input voltage	DC 1100 V	
Mppt voltage range	DC 180, ..., 1000 V	
Max. input current	DC 3*40 A	
Isc PV (absolute maximum)	DC 3*50 A	
AC output parameters:		
Max. (Rated) apparent output Power	25000 VA	30000 VA
Nominal output voltage	3/N/PE ~ 230/400 V	
Nominal Frequency	50 Hz	
Max. (Rated) output current	AC 47.6 A	AC 52.0 A
Power factor range	-0.8, ..., 1, ..., +0.8	

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E.4 Unit certificate

Unit certificate	No. 704092403746-00	
Manufacturer	Ginlong Technologies Co., Ltd. No.57 Jintong Road, Binhai Industrial Park, Xiangshan, Ningbo, 315712, Zhejiang, P.R. China	
Power generation unit type	[Grid-connected PV inverter]: S6-GC3P15K03-LV-ND, S6-GC3P20K03-LV-ND, S6-GC3P25K03-NV-ND, S6-GC3P30K03-NV-ND, S6-GC3P33K03-NV-ND, S6-GC3P36K03-NV-ND Remark: certified on representative model S6-GC3P36K03-NV-ND of family design products, results of the measurement of S6-GC3P36K03-NV- ND can be transferred to the other models based on transferability rule of measurements in DIN VDE V 0124-100 (VDE V 0124-100):2020, additional tests of Flicker, harmonics, DCI, active and reactive power range, reactive power accuracy, voltage protection for 230V (L-L) were conducted on S6- GC3P20K03-LV-ND.	
<input checked="" type="checkbox"/> Inverter	<input type="checkbox"/> Asynchronous generator	<input type="checkbox"/> Synchronous generator
<input type="checkbox"/> Stirling generator	<input type="checkbox"/> Fuel cell	<input type="checkbox"/> others
Assessment values	Max. active power $P_{E_{max}}$	36 kW
	Max. apparent power $S_{E_{max}}$	36 kVA
	Rated voltage	3/N/PE ~ 230/400 V
Rated values	Rated current (AC) I_r	52.0 Aa.c.
Rated values	Max. current (AC) I_{max}	52.0 Aa.c.
Rated values	Initial short-circuit current I_k''	62.0 Aa.c.
Network connection rules	VDE-AR-N 4105:2018-11/Corrigendum 1:2020-10 Generators connected to the low-voltage distribution network - Technical requirements for the connection to and parallel operation with low-voltage distribution networks.	
Test requirement	DIN VDE V 0124-100 (VDE V 0124-100):2020-06 "Network integration of power generation system – Low voltage" Test requirements for power generation units intended for connection to and parallel operation on the low-voltage network.	
The above mentioned power generation unit meets the requirements of VDE-AR-N 4105.		

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E.5 Test report "Network interactions " for generating units with an input current > 75 A

Extract from test report for unit certificate "Determination of electrical properties"		No. 704092403746-00
Generation unit manufacturer:	Ginlong Technologies Co., Ltd. No.57 Jintong Road, Binhai Industrial Park, Xiangshan, Ningbo, 315712, Zhejiang, P.R. China	
Manufacturer indications:	Type of system	Inverter for PV
	Max. active power $P_{E_{max}}$	15 kW (S6-GC3P15K03-LV-ND) 20 kW (S6-GC3P20K03-LV-ND) 25 kW (S6-GC3P25K03-NV-ND) 30 kW (S6-GC3P30K03-NV-ND) 33 kW (S6-GC3P33K03-NV-ND) 36 kW (S6-GC3P36K03-NV-ND)
	Rated voltage	3/N/PE AC 230/400 V
Period of measurement:	From 2024-05-10 to 2024-11-04	

Rapid voltage changes and flicker (DIN EN 61000-3-11) (S6-GC3P20K03-LV-ND)					
Phase		P_{st}	d(t) - 500ms [%]	dc [%]	dmax [%]
Limit		1.0	3.3%	3.3%	4%
1	L-N	0.21/0.20/0.20	0.00/0.00/0.00	0.04/0.03/0.03	0.28/0.29/0.20
2	L-N	0.21/0.21/0.20	0.00/0.00/0.00	0.04/0.03/0.03	0.28/0.28/0.20
3	L-N	0.21/0.21/0.20	0.00/0.00/0.00	0.04/0.03/0.03	0.27/0.28/0.20
4	L-N	0.21/0.21/0.20	0.00/0.00/0.00	0.04/0.03/0.03	0.28/0.28/0.20
5	L-N	0.21/0.21/0.20	0.00/0.00/0.00	0.04/0.03/0.03	0.28/0.28/0.20
6	L-N	0.21/0.21/0.20	0.00/0.00/0.00	0.04/0.03/0.03	0.28/0.28/0.20
7	L-N	0.21/0.21/0.20	0.00/0.00/0.00	0.04/0.03/0.03	0.27/0.29/0.20
8	L-N	0.21/0.21/0.20	0.00/0.00/0.00	0.04/0.03/0.03	0.27/0.28/0.20
9	L-N	0.21/0.21/0.20	0.00/0.00/0.00	0.03/0.03/0.03	0.28/0.28/0.20
10	L-N	0.21/0.21/0.20	0.00/0.00/0.00	0.04/0.04/0.03	0.27/0.28/0.20
11	L-N	0.21/0.21/0.20	0.00/0.00/0.00	0.04/0.03/0.03	0.27/0.28/0.20
12	L-N	0.21/0.21/0.20	0.00/0.00/0.00	0.04/0.03/0.03	0.27/0.28/0.20
P_{It} measured		0.21/0.21/0.20	P_{It} limit		0.65
		d(t) - 500ms [%]	dc [%]		dmax [%]
START		0.00/0.00/0.00	0.01/0.01/0.01		0.48/0.20/0.19
STOP		0.00/0.00/0.00	0.01/0.01/0.01		0.14/0.14/0.15
LIMIT		3.3%	3.3%		4%
Supplementary information:					

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Rapid voltage changes and flicker (DIN EN 61000-3-11) (S6-GC3P36K03-NV-ND)					
Phase		P _{st}	d(t) - 500ms [%]	dc [%]	dmax [%]
Limit		1.0	3.3%	3.3%	4%
1	L-N	0.03/0.03/0.03	0.00/0.00/0.00	0.01/0.20/0.01	0.27/0.37/0.27
2	L-N	0.03/0.03/0.03	0.00/0.00/0.00	0.01/0.20/0.01	0.27/0.36/0.27
3	L-N	0.03/0.03/0.03	0.00/0.00/0.00	0.01/0.19/0.01	0.28/0.35/0.27
4	L-N	0.03/0.03/0.03	0.00/0.00/0.00	0.02/0.21/0.01	0.27/0.37/0.27
5	L-N	0.03/0.03/0.03	0.00/0.00/0.00	0.01/0.19/0.01	0.28/0.35/0.27
6	L-N	0.03/0.03/0.03	0.00/0.00/0.00	0.02/0.20/0.01	0.27/0.37/0.27
7	L-N	0.03/0.03/0.03	0.00/0.00/0.00	0.01/0.19/0.01	0.27/0.36/0.27
8	L-N	0.03/0.03/0.03	0.00/0.00/0.00	0.01/0.19/0.01	0.27/0.36/0.27
9	L-N	0.03/0.03/0.03	0.00/0.00/0.00	0.02/0.21/0.01	0.27/0.37/0.27
10	L-N	0.03/0.03/0.03	0.00/0.00/0.00	0.02/0.19/0.01	0.28/0.36/0.27
11	L-N	0.03/0.03/0.03	0.00/0.00/0.00	0.01/0.19/0.01	0.27/0.36/0.27
12	L-N	0.03/0.03/0.03	0.00/0.00/0.00	0.02/0.21/0.01	0.27/0.37/0.27
P_{It} measured		0.03/0.03/0.03	P_{It} limit		0.65
		d(t) - 500ms [%]	dc [%]		dmax [%]
START		0.00/0.00/0.00	0.01/0.22/0.01		0.27/0.35/0.27
STOP		0.00/0.00/0.00	0.01/0.20/0.01		0.27/0.36/0.27
LIMIT		3.3%	3.3%		4%
Supplementary information:					

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Harmonics IEC 61000-3-12(>16 A and ≤75 A) (S6-GC3P20K03-LV-ND)													
L1													
Power P/Pn [%]	5	10	20	30	40	50	60	70	80	90	100	IEC 61000-3-12 limit	
Ordinal number	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	1 phase [%]	3 phase [%]
2	0.155	0.077	0.142	0.185	0.206	0.218	0.237	0.249	0.267	0.262	0.263	8%	8%
3	0.039	0.025	0.024	0.031	0.041	0.043	0.047	0.055	0.058	0.062	0.066	21.6%	Not stated
4	0.013	0.020	0.046	0.027	0.032	0.036	0.040	0.047	0.059	0.072	0.089	4%	4%
5	0.119	0.102	0.404	0.618	0.816	0.923	1.028	1.129	1.244	1.261	1.276	10.7%	10.7%
6	0.008	0.010	0.034	0.019	0.028	0.025	0.021	0.024	0.024	0.025	0.025	2.67%	2.67%
7	0.069	0.098	0.170	0.227	0.095	0.137	0.184	0.232	0.278	0.279	0.275	7.2%	7.2%
8	0.009	0.012	0.022	0.017	0.010	0.017	0.017	0.013	0.015	0.015	0.016	2%	2%
9	0.010	0.007	0.014	0.009	0.009	0.009	0.011	0.013	0.015	0.016	0.017	3.8%	Not stated
10	0.006	0.006	0.028	0.010	0.019	0.026	0.027	0.023	0.024	0.024	0.025	1.6%	1.6%
11	0.085	0.093	0.239	0.038	0.192	0.300	0.367	0.425	0.484	0.507	0.520	3.1%	3.1%
12	0.004	0.004	0.019	0.009	0.014	0.018	0.017	0.016	0.015	0.014	0.015	1.33%	1.33%
13	0.064	0.050	0.218	0.118	0.045	0.127	0.182	0.230	0.274	0.292	0.304	2%	2%
14	0.009	0.005	0.017	0.011	0.007	0.011	0.014	0.016	0.019	0.016	0.017	-	-
15	0.004	0.003	0.010	0.008	0.010	0.010	0.012	0.010	0.009	0.010	0.012	-	-
16	0.009	0.007	0.017	0.008	0.007	0.012	0.013	0.014	0.016	0.017	0.016	-	-
17	0.071	0.061	0.055	0.102	0.062	0.120	0.174	0.223	0.268	0.294	0.313	-	-
18	0.005	0.004	0.013	0.009	0.006	0.012	0.013	0.012	0.012	0.012	0.013	-	-
19	0.062	0.075	0.089	0.106	0.053	0.075	0.119	0.162	0.200	0.220	0.231	-	-
20	0.005	0.007	0.012	0.007	0.007	0.008	0.012	0.012	0.012	0.012	0.015	-	-

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21	0.007	0.005	0.007	0.010	0.009	0.008	0.008	0.009	0.010	0.011	0.013	-	-
22	0.005	0.004	0.010	0.013	0.008	0.011	0.013	0.014	0.015	0.017	0.018	-	-
23	0.076	0.083	0.103	0.084	0.076	0.088	0.121	0.156	0.189	0.212	0.229	-	-
24	0.003	0.004	0.006	0.006	0.006	0.007	0.009	0.009	0.010	0.009	0.010	-	-
25	0.067	0.060	0.096	0.051	0.077	0.071	0.088	0.114	0.140	0.157	0.168	-	-
26	0.006	0.005	0.008	0.007	0.008	0.008	0.009	0.010	0.011	0.011	0.009	-	-
27	0.003	0.004	0.006	0.006	0.008	0.007	0.008	0.008	0.007	0.007	0.008	-	-
28	0.005	0.004	0.011	0.006	0.011	0.010	0.012	0.013	0.015	0.014	0.014	-	-
29	0.076	0.066	0.054	0.063	0.072	0.073	0.078	0.094	0.115	0.133	0.147	-	-
30	0.004	0.004	0.005	0.005	0.007	0.006	0.007	0.007	0.007	0.007	0.007	-	-
31	0.069	0.077	0.074	0.069	0.073	0.083	0.082	0.095	0.115	0.132	0.143	-	-
32	0.005	0.006	0.009	0.006	0.008	0.008	0.010	0.010	0.011	0.011	0.011	-	-
33	0.003	0.003	0.003	0.004	0.004	0.004	0.005	0.005	0.004	0.004	0.005	-	-
34	0.006	0.005	0.004	0.007	0.009	0.009	0.010	0.010	0.012	0.012	0.012	-	-
35	0.064	0.068	0.054	0.054	0.063	0.079	0.073	0.076	0.090	0.103	0.114	-	-
36	0.004	0.004	0.005	0.006	0.005	0.007	0.006	0.006	0.007	0.006	0.007	-	-
37	0.060	0.056	0.055	0.049	0.063	0.080	0.071	0.069	0.078	0.089	0.096	-	-
38	0.004	0.004	0.005	0.005	0.008	0.006	0.008	0.007	0.008	0.008	0.008	-	-
39	0.003	0.003	0.005	0.004	0.004	0.005	0.005	0.004	0.003	0.004	0.004	-	-
40	0.005	0.004	0.010	0.011	0.008	0.011	0.010	0.010	0.011	0.012	0.011	-	-
THC/lre f	0.307	0.277	0.608	0.729	0.893	1.043	1.188	1.332	1.491	1.533	1.565	23%	13%
PWHD	1.004	1.008	1.087	1.048	1.015	1.231	1.455	1.786	2.157	2.411	2.590	23%	22%

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L2													
Power P/Pn [%]	5	10	20	30	40	50	60	70	80	90	100	IEC 61000-3-12 limit	
Ordinal number	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	1 phase [%]	3 phase [%]
2	0.142	0.060	0.118	0.148	0.174	0.168	0.179	0.174	0.175	0.164	0.146	8%	8%
3	0.037	0.013	0.027	0.039	0.046	0.046	0.051	0.047	0.045	0.045	0.042	21.6%	Not stated
4	0.022	0.035	0.061	0.035	0.035	0.040	0.037	0.049	0.060	0.073	0.091	4%	4%
5	0.107	0.102	0.400	0.632	0.836	0.945	1.051	1.157	1.279	1.296	1.317	10.7%	10.7%
6	0.013	0.006	0.059	0.017	0.028	0.026	0.026	0.026	0.025	0.024	0.024	2.67%	2.67%
7	0.077	0.099	0.159	0.228	0.103	0.147	0.189	0.231	0.277	0.280	0.279	7.2%	7.2%
8	0.007	0.012	0.021	0.008	0.015	0.014	0.012	0.013	0.013	0.014	0.015	2%	2%
9	0.006	0.004	0.014	0.007	0.009	0.014	0.018	0.016	0.020	0.024	0.025	3.8%	Not stated
10	0.008	0.007	0.024	0.009	0.013	0.013	0.010	0.014	0.015	0.013	0.015	1.6%	1.6%
11	0.079	0.094	0.254	0.042	0.190	0.300	0.363	0.423	0.484	0.501	0.516	3.1%	3.1%
12	0.013	0.014	0.045	0.020	0.011	0.020	0.022	0.021	0.020	0.019	0.019	1.33%	1.33%
13	0.066	0.059	0.208	0.113	0.032	0.108	0.164	0.211	0.255	0.274	0.284	2%	2%
14	0.004	0.003	0.013	0.008	0.011	0.008	0.008	0.009	0.010	0.009	0.012	-	-
15	0.006	0.005	0.015	0.008	0.013	0.011	0.011	0.010	0.009	0.009	0.010	-	-
16	0.006	0.006	0.012	0.008	0.005	0.009	0.009	0.009	0.009	0.010	0.009	-	-
17	0.078	0.066	0.041	0.107	0.068	0.130	0.187	0.241	0.286	0.309	0.328	-	-
18	0.011	0.007	0.033	0.013	0.006	0.012	0.016	0.016	0.017	0.017	0.018	-	-
19	0.058	0.069	0.082	0.109	0.059	0.077	0.118	0.153	0.187	0.208	0.218	-	-
20	0.007	0.007	0.013	0.008	0.008	0.008	0.009	0.009	0.010	0.010	0.012	-	-

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21	0.006	0.002	0.003	0.007	0.008	0.010	0.011	0.012	0.010	0.010	0.011	-	-
22	0.005	0.003	0.008	0.005	0.007	0.006	0.008	0.007	0.008	0.009	0.008	-	-
23	0.075	0.078	0.102	0.077	0.068	0.078	0.113	0.150	0.184	0.209	0.227	-	-
24	0.008	0.008	0.026	0.009	0.007	0.006	0.010	0.012	0.013	0.014	0.015	-	-
25	0.067	0.058	0.091	0.051	0.080	0.077	0.095	0.120	0.145	0.163	0.172	-	-
26	0.004	0.004	0.009	0.006	0.006	0.006	0.008	0.009	0.008	0.008	0.007	-	-
27	0.006	0.003	0.004	0.006	0.007	0.009	0.010	0.010	0.012	0.015	0.014	-	-
28	0.005	0.004	0.006	0.006	0.007	0.007	0.009	0.009	0.008	0.007	0.007	-	-
29	0.078	0.069	0.055	0.067	0.080	0.083	0.090	0.111	0.132	0.151	0.166	-	-
30	0.007	0.005	0.010	0.005	0.008	0.006	0.006	0.008	0.009	0.010	0.011	-	-
31	0.068	0.076	0.067	0.065	0.066	0.078	0.075	0.085	0.105	0.123	0.133	-	-
32	0.004	0.003	0.010	0.006	0.007	0.006	0.008	0.009	0.009	0.010	0.009	-	-
33	0.003	0.002	0.003	0.004	0.005	0.005	0.005	0.005	0.005	0.007	0.006	-	-
34	0.006	0.004	0.003	0.004	0.006	0.006	0.009	0.008	0.007	0.007	0.006	-	-
35	0.067	0.071	0.056	0.058	0.065	0.083	0.076	0.080	0.093	0.107	0.120	-	-
36	0.007	0.005	0.015	0.009	0.005	0.009	0.006	0.007	0.008	0.009	0.010	-	-
37	0.056	0.054	0.050	0.048	0.061	0.077	0.067	0.064	0.074	0.085	0.092	-	-
38	0.004	0.004	0.004	0.008	0.006	0.006	0.006	0.009	0.009	0.009	0.008	-	-
39	0.002	0.003	0.003	0.004	0.004	0.005	0.005	0.004	0.004	0.005	0.005	-	-
40	0.005	0.004	0.004	0.005	0.006	0.007	0.007	0.009	0.008	0.008	0.007	-	-
THC/lre f	0.298	0.275	0.601	0.734	0.906	1.054	1.197	1.342	1.505	1.545	1.581	23%	13%
PWHD	1.009	1.000	1.049	1.053	1.020	1.251	1.480	1.819	2.180	2.441	2.621	23%	22%

Certificate of Conformity

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L3													
Power P/Pn [%]	5	10	20	30	40	50	60	70	80	90	100	IEC 61000-3-12 limit	
Ordinal number	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	1 phase [%]	3 phase [%]
2	0.131	0.039	0.153	0.182	0.200	0.213	0.219	0.240	0.258	0.269	0.283	8%	8%
3	0.018	0.015	0.025	0.029	0.028	0.030	0.028	0.027	0.027	0.027	0.031	21.6%	Not stated
4	0.017	0.031	0.050	0.045	0.053	0.058	0.054	0.063	0.074	0.085	0.102	4%	4%
5	0.124	0.110	0.403	0.624	0.828	0.933	1.036	1.144	1.258	1.272	1.284	10.7%	10.7%
6	0.018	0.010	0.092	0.022	0.017	0.016	0.018	0.017	0.018	0.018	0.019	2.67%	2.67%
7	0.073	0.097	0.174	0.225	0.102	0.153	0.199	0.243	0.291	0.293	0.295	7.2%	7.2%
8	0.006	0.016	0.010	0.014	0.017	0.021	0.015	0.015	0.019	0.018	0.020	2%	2%
9	0.014	0.007	0.007	0.010	0.014	0.016	0.019	0.014	0.016	0.019	0.021	3.8%	Not stated
10	0.011	0.010	0.018	0.013	0.027	0.033	0.028	0.027	0.031	0.025	0.028	1.6%	1.6%
11	0.081	0.095	0.247	0.038	0.190	0.298	0.366	0.426	0.483	0.500	0.514	3.1%	3.1%
12	0.014	0.016	0.062	0.019	0.009	0.012	0.014	0.013	0.014	0.015	0.014	1.33%	1.33%
13	0.072	0.060	0.223	0.114	0.041	0.123	0.177	0.227	0.270	0.285	0.296	2%	2%
14	0.008	0.007	0.008	0.012	0.012	0.015	0.015	0.018	0.021	0.018	0.021	-	-
15	0.004	0.005	0.007	0.007	0.008	0.007	0.009	0.008	0.008	0.011	0.014	-	-
16	0.005	0.009	0.016	0.008	0.005	0.010	0.014	0.016	0.013	0.011	0.012	-	-
17	0.078	0.060	0.046	0.117	0.080	0.142	0.198	0.248	0.293	0.313	0.328	-	-
18	0.011	0.006	0.044	0.011	0.006	0.008	0.010	0.011	0.012	0.012	0.012	-	-
19	0.059	0.071	0.092	0.108	0.058	0.071	0.112	0.148	0.179	0.200	0.213	-	-
20	0.009	0.009	0.013	0.011	0.007	0.011	0.013	0.013	0.014	0.016	0.021	-	-

Certificate of Conformity

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21	0.005	0.004	0.008	0.016	0.015	0.016	0.016	0.017	0.017	0.019	0.018	-	-
22	0.005	0.005	0.008	0.013	0.007	0.010	0.012	0.013	0.016	0.020	0.019	-	-
23	0.079	0.082	0.107	0.085	0.080	0.088	0.121	0.158	0.193	0.217	0.235	-	-
24	0.008	0.009	0.029	0.007	0.006	0.005	0.008	0.009	0.009	0.010	0.011	-	-
25	0.069	0.058	0.096	0.059	0.087	0.083	0.101	0.125	0.149	0.167	0.177	-	-
26	0.008	0.007	0.006	0.005	0.009	0.009	0.010	0.013	0.014	0.014	0.012	-	-
27	0.008	0.005	0.006	0.005	0.007	0.007	0.008	0.009	0.008	0.012	0.011	-	-
28	0.008	0.004	0.009	0.005	0.007	0.007	0.008	0.009	0.011	0.011	0.011	-	-
29	0.076	0.066	0.056	0.061	0.071	0.072	0.078	0.098	0.119	0.137	0.151	-	-
30	0.007	0.007	0.011	0.005	0.005	0.006	0.006	0.006	0.007	0.008	0.008	-	-
31	0.073	0.079	0.073	0.067	0.068	0.079	0.077	0.088	0.106	0.124	0.136	-	-
32	0.004	0.006	0.013	0.009	0.011	0.011	0.012	0.014	0.016	0.016	0.016	-	-
33	0.004	0.003	0.004	0.004	0.005	0.005	0.006	0.006	0.005	0.006	0.007	-	-
34	0.006	0.006	0.004	0.006	0.007	0.006	0.008	0.008	0.010	0.011	0.010	-	-
35	0.066	0.069	0.052	0.054	0.063	0.079	0.074	0.079	0.092	0.106	0.119	-	-
36	0.007	0.006	0.015	0.009	0.004	0.006	0.005	0.005	0.005	0.007	0.007	-	-
37	0.060	0.055	0.052	0.048	0.062	0.077	0.069	0.064	0.073	0.084	0.093	-	-
38	0.004	0.006	0.004	0.010	0.007	0.010	0.009	0.011	0.013	0.013	0.013	-	-
39	0.004	0.005	0.005	0.005	0.004	0.006	0.006	0.006	0.005	0.007	0.007	-	-
40	0.005	0.003	0.010	0.008	0.007	0.006	0.007	0.007	0.007	0.009	0.008	-	-
THC/lre f	0.303	0.275	0.626	0.737	0.906	1.056	1.197	1.349	1.506	1.545	1.577	23%	13%
PWHD	1.035	1.006	1.112	1.085	1.053	1.268	1.507	1.836	2.190	2.441	2.622	23%	22%

Certificate of Conformity

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Harmonics IEC 61000-3-12(>16 A and ≤75 A) (S6-GC3P36K03-NV-ND)													
L1													
Power P/Pn [%]	5	10	20	30	40	50	60	70	80	90	100	IEC 61000-3-12 limit	
Ordinal number	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	1 phase [%]	3 phase [%]
2	0.025	0.026	0.036	0.034	0.038	0.044	0.052	0.065	0.081	0.111	0.140	8%	8%
3	0.038	0.048	0.050	0.039	0.031	0.036	0.041	0.060	0.069	0.066	0.071	21.6%	Not stated
4	0.017	0.024	0.021	0.016	0.028	0.030	0.035	0.045	0.052	0.064	0.061	4%	4%
5	0.095	0.269	0.397	0.170	0.269	0.407	0.537	0.788	0.899	0.924	0.811	10.7%	10.7%
6	0.007	0.008	0.011	0.019	0.020	0.019	0.023	0.023	0.027	0.030	0.033	2.67%	2.67%
7	0.113	0.425	0.324	0.205	0.310	0.360	0.373	0.443	0.442	0.409	0.248	7.2%	7.2%
8	0.005	0.006	0.008	0.012	0.016	0.018	0.021	0.023	0.025	0.032	0.034	2%	2%
9	0.013	0.020	0.014	0.016	0.029	0.033	0.038	0.037	0.042	0.036	0.057	3.8%	Not stated
10	0.006	0.013	0.018	0.022	0.025	0.030	0.034	0.035	0.040	0.052	0.067	1.6%	1.6%
11	0.079	0.139	0.107	0.154	0.148	0.149	0.134	0.163	0.164	0.162	0.112	3.1%	3.1%
12	0.008	0.011	0.009	0.007	0.008	0.008	0.010	0.015	0.016	0.017	0.020	1.33%	1.33%
13	0.096	0.267	0.208	0.191	0.218	0.219	0.212	0.251	0.266	0.263	0.191	2%	2%
14	0.015	0.011	0.010	0.008	0.008	0.012	0.017	0.017	0.020	0.024	0.043	-	-
15	0.027	0.019	0.025	0.008	0.015	0.017	0.027	0.020	0.022	0.029	0.041	-	-
16	0.008	0.007	0.006	0.010	0.009	0.013	0.010	0.008	0.009	0.015	0.037	-	-
17	0.114	0.120	0.170	0.147	0.197	0.182	0.178	0.207	0.205	0.186	0.134	-	-
18	0.016	0.014	0.014	0.013	0.018	0.023	0.027	0.029	0.031	0.036	0.031	-	-
19	0.127	0.209	0.208	0.188	0.222	0.215	0.235	0.236	0.253	0.254	0.173	-	-
20	0.010	0.007	0.010	0.012	0.011	0.014	0.014	0.020	0.016	0.020	0.040	-	-

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21	0.033	0.030	0.036	0.036	0.040	0.050	0.060	0.055	0.069	0.086	0.092	-	-
22	0.012	0.012	0.007	0.006	0.007	0.008	0.011	0.009	0.009	0.015	0.059	-	-
23	0.144	0.031	0.094	0.123	0.133	0.138	0.157	0.147	0.158	0.159	0.124	-	-
24	0.013	0.015	0.010	0.011	0.014	0.015	0.018	0.021	0.026	0.030	0.037	-	-
25	0.117	0.087	0.057	0.099	0.137	0.150	0.178	0.141	0.176	0.209	0.167	-	-
26	0.014	0.011	0.014	0.020	0.026	0.027	0.025	0.039	0.034	0.028	0.040	-	-
27	0.049	0.056	0.060	0.063	0.057	0.055	0.047	0.078	0.066	0.048	0.044	-	-
28	0.008	0.009	0.017	0.025	0.029	0.030	0.029	0.043	0.042	0.038	0.034	-	-
29	0.115	0.036	0.046	0.071	0.095	0.113	0.132	0.114	0.142	0.168	0.173	-	-
30	0.013	0.016	0.012	0.020	0.023	0.027	0.033	0.036	0.043	0.052	0.044	-	-
31	0.131	0.064	0.020	0.023	0.048	0.070	0.090	0.043	0.080	0.133	0.142	-	-
32	0.009	0.014	0.010	0.016	0.021	0.028	0.032	0.048	0.051	0.054	0.020	-	-
33	0.013	0.018	0.047	0.042	0.039	0.040	0.041	0.065	0.066	0.070	0.071	-	-
34	0.011	0.008	0.014	0.013	0.019	0.021	0.021	0.034	0.035	0.035	0.046	-	-
35	0.064	0.059	0.024	0.029	0.028	0.032	0.047	0.018	0.039	0.073	0.121	-	-
36	0.016	0.015	0.013	0.014	0.014	0.012	0.010	0.016	0.012	0.013	0.031	-	-
37	0.103	0.103	0.061	0.042	0.029	0.024	0.030	0.032	0.014	0.052	0.127	-	-
38	0.016	0.009	0.013	0.021	0.027	0.032	0.037	0.039	0.046	0.056	0.035	-	-
39	0.022	0.009	0.034	0.050	0.053	0.059	0.063	0.079	0.089	0.088	0.032	-	-
40	0.010	0.012	0.010	0.017	0.021	0.026	0.029	0.036	0.043	0.052	0.014	-	-
THC/lre f	0.395	0.664	0.651	0.488	0.629	0.728	0.832	1.054	1.161	1.186	1.009	23%	13%
PWHD	1.726	1.464	1.462	1.510	1.817	1.884	2.101	2.070	2.295	2.533	2.345	23%	22%

Certificate of Conformity

No. ESY 086470 0230 Rev. 00

L2													
Power P/Pn [%]	5	10	20	30	40	50	60	70	80	90	100	IEC 61000-3-12 limit	
Ordinal number	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	1 phase [%]	3 phase [%]
2	0.016	0.022	0.025	0.026	0.035	0.043	0.052	0.068	0.079	0.109	0.118	8%	8%
3	0.049	0.061	0.038	0.032	0.032	0.044	0.064	0.080	0.085	0.079	0.101	21.6%	Not stated
4	0.028	0.033	0.040	0.037	0.051	0.058	0.066	0.087	0.100	0.115	0.098	4%	4%
5	0.099	0.270	0.340	0.139	0.234	0.350	0.470	0.691	0.806	0.841	0.737	10.7%	10.7%
6	0.016	0.018	0.017	0.013	0.014	0.017	0.023	0.034	0.038	0.039	0.031	2.67%	2.67%
7	0.095	0.363	0.264	0.202	0.273	0.322	0.352	0.426	0.424	0.388	0.281	7.2%	7.2%
8	0.014	0.013	0.007	0.013	0.015	0.016	0.018	0.016	0.019	0.023	0.032	2%	2%
9	0.022	0.041	0.020	0.020	0.010	0.020	0.027	0.017	0.013	0.017	0.040	3.8%	Not stated
10	0.005	0.005	0.012	0.017	0.022	0.026	0.031	0.033	0.035	0.045	0.049	1.6%	1.6%
11	0.073	0.146	0.116	0.130	0.125	0.118	0.107	0.130	0.128	0.122	0.076	3.1%	3.1%
12	0.015	0.012	0.012	0.008	0.009	0.011	0.010	0.012	0.014	0.015	0.021	1.33%	1.33%
13	0.106	0.252	0.214	0.169	0.190	0.206	0.198	0.226	0.240	0.236	0.194	2%	2%
14	0.006	0.005	0.008	0.008	0.011	0.018	0.023	0.025	0.026	0.038	0.055	-	-
15	0.023	0.022	0.021	0.026	0.019	0.013	0.028	0.022	0.015	0.011	0.039	-	-
16	0.011	0.008	0.008	0.016	0.023	0.036	0.042	0.034	0.039	0.054	0.068	-	-
17	0.089	0.111	0.176	0.165	0.190	0.188	0.191	0.199	0.189	0.166	0.089	-	-
18	0.010	0.015	0.012	0.009	0.011	0.015	0.016	0.016	0.016	0.020	0.019	-	-
19	0.127	0.196	0.175	0.172	0.187	0.187	0.186	0.200	0.205	0.188	0.139	-	-
20	0.012	0.017	0.020	0.020	0.022	0.024	0.023	0.034	0.030	0.027	0.019	-	-

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21	0.027	0.033	0.043	0.020	0.021	0.034	0.045	0.036	0.049	0.060	0.071	-	-
22	0.012	0.017	0.013	0.014	0.012	0.010	0.009	0.017	0.011	0.017	0.042	-	-
23	0.117	0.048	0.126	0.160	0.169	0.193	0.208	0.203	0.219	0.218	0.149	-	-
24	0.015	0.011	0.009	0.009	0.012	0.012	0.015	0.017	0.019	0.022	0.029	-	-
25	0.142	0.110	0.093	0.131	0.153	0.166	0.182	0.175	0.198	0.212	0.158	-	-
26	0.011	0.010	0.009	0.013	0.016	0.019	0.022	0.030	0.033	0.035	0.058	-	-
27	0.029	0.038	0.033	0.032	0.039	0.034	0.029	0.037	0.028	0.017	0.055	-	-
28	0.015	0.015	0.007	0.010	0.013	0.015	0.019	0.020	0.024	0.039	0.083	-	-
29	0.124	0.064	0.070	0.090	0.106	0.127	0.144	0.127	0.156	0.183	0.161	-	-
30	0.006	0.018	0.007	0.012	0.013	0.015	0.018	0.024	0.026	0.027	0.025	-	-
31	0.119	0.041	0.038	0.052	0.072	0.085	0.099	0.075	0.100	0.128	0.117	-	-
32	0.010	0.016	0.017	0.029	0.038	0.048	0.056	0.066	0.075	0.085	0.031	-	-
33	0.021	0.027	0.037	0.026	0.027	0.024	0.024	0.032	0.032	0.036	0.059	-	-
34	0.009	0.012	0.022	0.029	0.036	0.039	0.041	0.061	0.061	0.053	0.018	-	-
35	0.072	0.041	0.040	0.046	0.058	0.074	0.097	0.076	0.111	0.165	0.190	-	-
36	0.018	0.012	0.009	0.010	0.011	0.010	0.010	0.014	0.013	0.015	0.028	-	-
37	0.107	0.074	0.061	0.049	0.060	0.074	0.089	0.074	0.094	0.133	0.145	-	-
38	0.011	0.012	0.008	0.009	0.013	0.018	0.022	0.021	0.030	0.039	0.020	-	-
39	0.022	0.027	0.022	0.030	0.035	0.040	0.043	0.047	0.051	0.051	0.013	-	-
40	0.018	0.021	0.009	0.012	0.014	0.016	0.014	0.024	0.025	0.023	0.049	-	-
THC/ire f	0.386	0.618	0.595	0.481	0.586	0.688	0.788	0.977	1.084	1.116	0.957	23%	13%
PWHD	1.700	1.389	1.506	1.652	1.881	2.063	2.253	2.195	2.445	2.700	2.420	23%	22%

Certificate of Conformity

No. **ESY 086470 0230 Rev. 00**

L3													
Power P/Pn [%]	5	10	20	30	40	50	60	70	80	90	100	IEC 61000-3-12 limit	
Ordinal number	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	[%]	1 phase [%]	3 phase [%]
2	0.027	0.021	0.024	0.032	0.038	0.041	0.044	0.048	0.052	0.059	0.064	8%	8%
3	0.026	0.032	0.016	0.018	0.011	0.026	0.040	0.045	0.042	0.038	0.050	21.6%	Not stated
4	0.015	0.021	0.025	0.032	0.045	0.057	0.068	0.094	0.108	0.126	0.112	4%	4%
5	0.102	0.287	0.403	0.151	0.243	0.363	0.481	0.701	0.802	0.833	0.731	10.7%	10.7%
6	0.010	0.013	0.018	0.014	0.014	0.014	0.019	0.030	0.035	0.037	0.035	2.67%	2.67%
7	0.100	0.409	0.277	0.220	0.302	0.345	0.366	0.445	0.458	0.428	0.296	7.2%	7.2%
8	0.014	0.012	0.011	0.010	0.014	0.016	0.022	0.024	0.028	0.034	0.038	2%	2%
9	0.010	0.028	0.025	0.020	0.035	0.042	0.035	0.043	0.047	0.048	0.025	3.8%	Not stated
10	0.008	0.012	0.013	0.014	0.023	0.025	0.025	0.031	0.028	0.039	0.047	1.6%	1.6%
11	0.055	0.142	0.108	0.178	0.165	0.174	0.163	0.180	0.177	0.169	0.133	3.1%	3.1%
12	0.007	0.004	0.007	0.005	0.006	0.006	0.006	0.011	0.009	0.008	0.008	1.33%	1.33%
13	0.095	0.254	0.227	0.181	0.191	0.188	0.195	0.196	0.201	0.195	0.171	2%	2%
14	0.011	0.009	0.008	0.009	0.008	0.007	0.007	0.016	0.013	0.015	0.024	-	-
15	0.017	0.013	0.006	0.021	0.011	0.008	0.007	0.013	0.022	0.030	0.014	-	-
16	0.014	0.005	0.010	0.013	0.018	0.024	0.033	0.032	0.036	0.050	0.060	-	-
17	0.104	0.108	0.203	0.161	0.210	0.215	0.211	0.236	0.240	0.223	0.156	-	-
18	0.008	0.006	0.006	0.007	0.010	0.011	0.015	0.017	0.018	0.022	0.014	-	-
19	0.116	0.213	0.163	0.152	0.181	0.189	0.206	0.189	0.213	0.222	0.197	-	-
20	0.021	0.016	0.012	0.009	0.013	0.012	0.011	0.018	0.015	0.010	0.028	-	-

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21	0.012	0.018	0.013	0.017	0.021	0.021	0.015	0.028	0.028	0.029	0.024	-	-
22	0.010	0.019	0.011	0.012	0.012	0.012	0.010	0.014	0.008	0.011	0.039	-	-
23	0.128	0.063	0.089	0.157	0.175	0.191	0.212	0.208	0.230	0.242	0.218	-	-
24	0.006	0.009	0.006	0.007	0.008	0.010	0.010	0.015	0.018	0.021	0.013	-	-
25	0.160	0.058	0.043	0.071	0.090	0.109	0.122	0.083	0.106	0.129	0.137	-	-
26	0.011	0.010	0.018	0.027	0.033	0.039	0.043	0.058	0.062	0.061	0.021	-	-
27	0.020	0.022	0.028	0.032	0.020	0.022	0.021	0.045	0.043	0.040	0.018	-	-
28	0.019	0.016	0.017	0.017	0.018	0.018	0.018	0.025	0.029	0.037	0.065	-	-
29	0.154	0.080	0.040	0.057	0.079	0.104	0.134	0.096	0.141	0.188	0.222	-	-
30	0.014	0.009	0.011	0.010	0.014	0.015	0.017	0.014	0.020	0.028	0.022	-	-
31	0.123	0.035	0.036	0.042	0.057	0.071	0.081	0.050	0.063	0.097	0.147	-	-
32	0.014	0.014	0.012	0.016	0.024	0.030	0.037	0.037	0.045	0.054	0.027	-	-
33	0.013	0.010	0.017	0.018	0.015	0.018	0.019	0.033	0.036	0.036	0.020	-	-
34	0.014	0.011	0.010	0.018	0.020	0.024	0.026	0.039	0.039	0.031	0.037	-	-
35	0.064	0.068	0.053	0.059	0.063	0.076	0.093	0.072	0.095	0.145	0.238	-	-
36	0.010	0.013	0.010	0.009	0.009	0.009	0.007	0.011	0.008	0.013	0.012	-	-
37	0.117	0.112	0.081	0.072	0.070	0.071	0.072	0.097	0.097	0.088	0.060	-	-
38	0.021	0.017	0.012	0.019	0.025	0.031	0.040	0.039	0.053	0.070	0.038	-	-
39	0.018	0.022	0.020	0.021	0.019	0.019	0.021	0.032	0.038	0.038	0.025	-	-
40	0.022	0.025	0.015	0.020	0.025	0.026	0.027	0.030	0.032	0.033	0.039	-	-
THC/lre f	0.402	0.656	0.631	0.487	0.600	0.700	0.798	0.981	1.084	1.116	0.987	23%	13%
PWHD	1.841	1.487	1.403	1.482	1.751	1.923	2.118	2.040	2.306	2.578	2.729	23%	22%

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E.6 Certificate of the network and system protection

Certificate of NS protection	No. 704092403746-00		
Manufacturer	Ginlong Technologies Co., Ltd. No.57 Jintong Road, Binhai Industrial Park, Xiangshan, Ningbo, 315712, Zhejiang, P.R. China		
Type of NS protection			
Central NS protection	<input type="checkbox"/>		
Integrated NS protection	<input checked="" type="checkbox"/>	Assigned to power generation unit type	S6-GC3P15K03-LV-ND, S6-GC3P20K03-LV-ND, S6-GC3P25K03-NV-ND, S6-GC3P30K03-NV-ND, S6-GC3P33K03-NV-ND, S6-GC3P36K03-NV-ND
Network connection rules	VDE-AR-N 4105:2018-11/Corrigendum 1:2020-10 Generators connected to the low-voltage distribution network - Technical requirements for the connection to and parallel operation with low-voltage distribution networks.		
Test requirement	DIN VDE V 0124-100 (VDE V 0124-100):2020-06 “Network integration of power generation system – Low voltage” Test requirements for power generation units intended for connection to and parallel operation on the low-voltage network.		
The network and system protection mentioned above meets the requirements of VDE-AR-N 4105.			

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E.7 Requirement for the test report for the NS protection

Extract from test report for NS protection "Determination of electrical properties"		No. 704092403746-00
NS protection test report		
Type of NS system:	Integrated NS protection	Other Manufacturer indications
Software version:	A1	
Manufacturer:	Ginlong Technologies Co., Ltd. No.57 Jintong Road, Binhai Industrial Park, Xiangshan, Ningbo, 315712, Zhejiang, P.R. China	
Measuring period:	From 2024-05-10 to 2024-11-04	

Protection function	Inverter(s) (S6-GC3P20K03-LV-ND)		
	Setting value	Tripping value	Break time NS protection *
Rise-in-voltage protection $U >>$	$1.25 * U_n$	L1-L2: 288.1 V L2-L3: 288.0 V L3-L1: 287.9 V	L1-L2: 121 ms L2-L3: 119 ms L3-L1: 123 ms
Rise-in-voltage protection $U >$	$1.10 * U_n$	$1.10 * U_n$	ms**
Voltage drop protection $U <$	$0.8 * U_n$	L1-L2: 184.2 V L2-L3: 184.7 V L3-L1: 184.4 V	L1-L2: 3025 ms L2-L3: 3022 ms L3-L1: 3026 ms
Voltage drop protection $U <<$	$0.45 * U_n$	L1-L2: 103.2 V L2-L3: 104.1 V L3-L1: 103.1 V	L1-L2: 315 ms L2-L3: 322 ms L3-L1: 318 ms

*: The tripping time includes the period from the limit value violation U/f until the tripping signal to the interface switch.

When planning the power generation system, the response time of the interface switch shall be added to the maximum time value obtained as indicated above.

The disconnection time (sum of tripping time of the NS protection plus response time of the interface switch) shall not exceed 200 ms.

** : Verification disconnection time of moving 10-min-average value.

Disconnecting time as below:

- 549 s (L1-L2) / 548 s (L2-L3) / 522 s (L3-L1) (from 600s@ U_n to 112% U_n)
- Continuous operation (L1-L2/L2-L3/L3-L1) (from 600s@ U_n to 108% U_n)
- 344 s (L1-L2) / 288 s (L2-L3) / 280 s (L3-L1) (from 600s@106% U_n to 114% U_n)

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Protection function	Inverter(s) (S6-GC3P36K03-NV-ND)		
	Setting value	Tripping value	Break time NS protection *
Rise-in-voltage protection $U >>$	$1.25 \cdot U_n$	L1-N/L2-N/L3-N: 287.2 V / 287.3 V / 287.3 V L1-N: 287.4 V L2-N: 286.7 V L3-N: 287.4 V L1-L2: 497.1 V L2-L3: 499.7 V L3-L1: 499.5 V	L1-N/L2-N/L3-N: 34 ms L1-N: 33 ms L2-N: 38 ms L3-N: 36 ms L1-L2: 126 ms L2-L3: 125 ms L3-L1: 123 ms
Rise-in-voltage protection $U >$	$1.10 \cdot U_n$	$1.10 \cdot U_n$	ms**
Voltage drop protection $U <$	$0.8 \cdot U_n$	L1-N/L2-N/L3-N: 185.3 V / 185.2 V / 184.9 V L1-N: 184.5 V L2-N: 184.5 V L3-N: 184.4 V L1-L2: 318.5 V L2-L3: 317.3 V L3-L1: 316.9 V	L1-N/L2-N/L3-N: 3083 ms L1-N: 3096 ms L2-N: 3093 ms L3-N: 3094 ms L1-L2: 3021 ms L2-L3: 3022 ms L3-L1: 3023 ms
Voltage drop protection $U <<$	$0.45 \cdot U_n$	L1-N/L2-N/L3-N: 102.2 V / 102.2 V / 102.3 V L1-N: 104.3 V L2-N: 102.2 V L3-N: 103.4 V L1-L2: 176.7 V L2-L3: 177.4 V L3-L1: 177.3 V	L1-N/L2-N/L3-N: 350 ms L1-N: 347 ms L2-N: 350 ms L3-N: 357 ms L1-L2: 322 ms L2-L3: 319 ms L3-L1: 316 ms
Frequency decrease protection $f <$	47.5 Hz	47.50 Hz	188 ms
Frequency increase protection $f >$	51.5 Hz	51.50 Hz	177 ms
<p>*: The tripping time includes the period from the limit value violation U/f until the tripping signal to the interface switch. When planning the power generation system, the response time of the interface switch shall be added to the maximum time value obtained as indicated above. The disconnection time (sum of tripping time of the NS protection plus response time of the interface switch) shall not exceed 200 ms.</p> <p>** : Verification disconnection time of moving 10-min-average value.</p> <p>Disconnecting time as below:</p> <ol style="list-style-type: none"> 4. 521 s (L1-N) / 547 s (L2-N) / 521 s (L3-N) (from 600s@U_n to 112%U_n) 5. Continuous operation (L1-N/L2-N/L3-N) (from 600s@U_n to 108%U_n) 6. 299 s (L1-N) / 328 s (L2-N) / 285 s (L3-N) (from 600s@106%U_n to 114%U_n) 			

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<input checked="" type="checkbox"/> as integrated NS protection	
Assigned to power generation unit type	Grid-connected PV inverter: S6-GC3P15K03-LV-ND, S6-GC3P20K03-LV-ND, S6-GC3P25K03-NV-ND, S6-GC3P30K03-NV-ND, S6-GC3P33K03-NV-ND, S6-GC3P36K03-NV-ND.
Integrated interface switch type	Series-connected relays for both the neutral conductor and the line conductor; Power relay type: HF186F/12-HTF
Response time of interface switch for integrated NS protection	The response time of the interface switch: Operate time: Max. 20 ms Release time: Max. 10 ms
Verification of the entire functional chain "integrated NS protection – interface switch" has resulted in successful disconnection.	<input checked="" type="checkbox"/>