Certificate UK-G83 issue 2

The results of the G83/2 tests are summarized in this certificate.
Omnik New Energy Co., Ltd declares that the units installed in UK market and set for G83/2 operations are characterized by the following features:
- The internal specification and parameters are set to be compliant with: Engineering Recommendation G83 issue 2, 2014.
- All units have internal parameters setting.
- These parameters cannot be changed by user, an installer or by any person other than the manufacturer.
- All units are tested before shipping according to: Engineering Recommendation G83 issue 2, 2014.

SSEG Type reference number	PHOTO-VOLTAIC Inverter
SSEG Type	Omniksol-10k-TL2, Omniksol-9k-TL2, Omniksol-8k-TL2, Omniksol-6k-TL2, Omniksol-5k-TL2,
System Supplier name	Omnik New Energy Co.,Ltd.
Address	CN-215213 2ed Floor NO 80 XinZe Road Suzhou China

Tel	+86 512 6956 8216	**Fax**	+86 512 6295 6682
E:mail	service@omnik-solar.com	**Web site**	www.omnik-solar.com

Maximum rated capacity	**Connection Option**	
	8.2	kW three phase (Omniksol-10k-TL2)
	8.1	kW three phase (Omniksol-9k-TL2)
	8	kW three phase (Omniksol-8k-TL2)
	6	kW three phase (Omniksol-6k-TL2)
	5	kW three phase (Omniksol-5k-TL2)
	NA	kW two phases in three phase system
	NA	kW two phases split phase system

SSEG manufacturer/supplier declaration

I certify on behalf of the company named above as a manufacturer/supplier of Small Scale Embedded Generators, that all products manufactured/supplied by the company with the above SSEG Type reference number will be manufactured and tested to ensure that they perform as stated in this Type Verification Test Report, prior to shipment to site and that no site modifications are required to ensure that the product meets all the requirements of G83/2.

Signed	2015-8-5	**On behalf of**	Omnik New Energy Co.,Ltd

Omnik New Energy

TYPEVERIFICATIONTESTSHEET

Omniksol-10k-TL2

Power Quality.Harmonics.

The requirement is specified in section 5.4.1, test procedure in Annex A or B 1.4.1

L1

SSEG rating per phase (rpp)			2. 75054	**kW**	**NV=MV*3.68/rpp**	
Harmonic	**At45-55%of rated output**		**100%of rated output**		1.254	
	Measured Value(MV) inAmps	Normalised Value(NV)in Amps	Measured Value(MV)in Amps	Normalised Value(NV)in Amps	LimitinBSEN 61000-3-2in Amps	Higherlimitfor oddharmonics 21andabove
2	0.0094	0.0126	0.0316	0.0423	1.080	
3	0.0148	0.0199	0.0135	0.0181	2.300	
4	0.0297	0.0398	0.0217	0.0290	0.430	
5	0.0538	0.0719	0.0563	0.0753	1.140	
6	0.0074	0.0099	0.0086	0.0115	0.300	
7	0.0394	0.0527	0.0409	0.0548	0.770	
8	0.0355	0.0476	0.0265	0.0354	0.230	
9	0.0123	0.0164	0.0120	0.0161	0.400	
10	0.0261	0.0349	0.0186	0.0249	0.184	
11	0.0628	0.0840	0.0501	0.0670	0.450	
12	0.0029	0.0039	0.0019	0.0026	0.153	
13	0.0501	0.0670	0.0515	0.0688	0.210	
14	0.0181	0.0242	0.0081	0.0109	0.131	
15	0.0078	0.0105	0.0075	0.0100	0.150	
16	0.0134	0.0179	0.0060	0.0081	0.115	
17	0.0381	0.0510	0.0456	0.0610	0.132	
18	0.0010	0.0013	0.0037	0.0049	0.102	
19	0.0314	0.0421	0.0521	0.0697	0.118	
20	0.0105	0.0140	0.0093	0.0124	0.092	
21	0.0044	0.0059	0.0034	0.0045	0.107	0.160
22	0.0078	0.0104	0.0089	0.0119	0.084	
23	0.0158	0.0211	0.0328	0.0438	0.098	0.147
24	0.0004	0.0005	0.0025	0.0033	0.077	
25	0.0143	0.0192	0.0364	0.0487	0.090	0.135
26	0.0094	0.0126	0.0079	0.0106	0.071	
27	0.0016	0.0022	0.0024	0.0032	0.083	0.124
28	0.0069	0.0092	0.0068	0.0091	0.066	
29	0.0073	0.0098	0.0235	0.0314	0.078	0.117
30	0.0006	0.0009	0.0029	0.0039	0.061	
31	0.0094	0.0126	0.0238	0.0319	0.073	0.109
32	0.0055	0.0073	0.0050	0.0067	0.058	
33	0.0010	0.0013	0.0013	0.0017	0.068	0.102
34	0.0042	0.0057	0.0060	0.0080	0.054	
35	0.0091	0.0122	0.0173	0.0231	0.064	0.096
36	0.0029	0.0039	0.0010	0.0013	0.051	
37	0.0061	0.0081	0.0136	0.0182	0.061	0.091
38	0.0047	0.0063	0.0051	0.0068	0.048	

39	0.0024	0.0032	0.0030	0.0040	0.058	0.087
40	0.0027	0.0036	0.0022	0.0029	0.046	

Note the higher limits for odd harmonics 21 and above are only allowable under certain conditions, if these higher limits are utilised please state the exemption used as detailed in part 6.2.3.4 of BS EN 61000-3-2 in the box below.

L2

SSEG rating per phase (rpp)			2.74205	**kW**	**NV=MV*3.68/rpp**	
Harmonic	**At45-55%of rated output**		**100%of rated output**		1.215	
	Measured Value(MV) inAmps	Normalised Value(NV)in Amps	Measured Value(MV)in Amps	Normalised Value(NV)in Amps	LimitinBSEN 61000-3-2in Amps	Higherlimitfor oddharmonics 21andabove
2	0.0171	0.0063	0.0376	0.0504	1.080	
3	0.0262	0.0096	0.0268	0.0360	2.300	
4	0.0271	0.0099	0.0176	0.0237	0.430	
5	0.0511	0.0186	0.0509	0.0683	1.140	
6	0.0009	0.0003	0.0030	0.0040	0.300	
7	0.0517	0.0188	0.0468	0.0628	0.770	
8	0.0374	0.0137	0.0275	0.0369	0.230	
9	0.0057	0.0021	0.0029	0.0039	0.400	
10	0.0277	0.0101	0.0150	0.0201	0.184	
11	0.0565	0.0206	0.0478	0.0642	0.450	
12	0.0034	0.0012	0.0018	0.0024	0.153	
13	0.0541	0.0197	0.0484	0.0649	0.210	
14	0.0124	0.0045	0.0067	0.0089	0.131	
15	0.0093	0.0034	0.0085	0.0114	0.150	
16	0.0161	0.0059	0.0065	0.0087	0.115	
17	0.0373	0.0136	0.0441	0.0592	0.132	
18	0.0027	0.0010	0.0014	0.0019	0.102	
19	0.0294	0.0107	0.0457	0.0614	0.118	
20	0.0071	0.0026	0.0070	0.0095	0.092	
21	0.0059	0.0021	0.0080	0.0108	0.107	0.160
22	0.0096	0.0035	0.0063	0.0085	0.084	
23	0.0155	0.0057	0.0346	0.0464	0.098	0.147
24	0.0037	0.0014	0.0006	0.0007	0.077	
25	0.0150	0.0055	0.0289	0.0388	0.090	0.135
26	0.0074	0.0027	0.0081	0.0109	0.071	
27	0.0033	0.0012	0.0082	0.0110	0.083	0.124
28	0.0083	0.0030	0.0055	0.0073	0.066	
29	0.0058	0.0021	0.0243	0.0326	0.078	0.117
30	0.0020	0.0007	0.0015	0.0020	0.061	
31	0.0099	0.0036	0.0193	0.0259	0.073	0.109
32	0.0049	0.0018	0.0048	0.0064	0.058	
33	0.0010	0.0004	0.0045	0.0060	0.068	0.102
34	0.0044	0.0016	0.0024	0.0032	0.054	
35	0.0059	0.0022	0.0166	0.0223	0.064	0.096
36	0.0013	0.0005	0.0009	0.0013	0.051	
37	0.0081	0.0030	0.0120	0.0161	0.061	0.091

38	0.0025	0.0009	0.0042	0.0057	0.048	
39	0.0003	0.0001	0.0033	0.0044	0.058	0.087
40	0.0033	0.0012	0.0030	0.0040	0.046	

Note the higher limits for odd harmonics 21 and above are only allowable under certain conditions, if these higher limits are utilised please state the exemption used as detailed in part 6.2.3.4 of BS EN 61000-3-2 in the box below.

L3

SSEG rating per phase (rpp)			2.75411	**kW**	**NV=MV*3.68/rpp**	
Harmonic	**At45-55%of rated output**		**100%of rated output**		1.428	
	Measured Value(MV) inAmps	Normalised Value(NV)in Amps	Measured Value(MV)in Amps	Normalised Value(NV)in Amps	LimitinBSEN 61000-3-2in Amps	Higherlimitfor oddharmonics 21andabove
2	0.0115	0.0423	0.0300	0.0401	1.080	
3	0.0320	0.1177	0.0324	0.0432	2.300	
4	0.0346	0.1275	0.0253	0.0338	0.430	
5	0.0554	0.2040	0.0582	0.0777	1.140	
6	0.0065	0.0240	0.0059	0.0079	0.300	
7	0.0550	0.2023	0.0553	0.0739	0.770	
8	0.0352	0.1295	0.0233	0.0312	0.230	
9	0.0075	0.0275	0.0092	0.0124	0.400	
10	0.0263	0.0968	0.0156	0.0208	0.184	
11	0.0641	0.2358	0.0592	0.0792	0.450	
12	0.0057	0.0208	0.0024	0.0033	0.153	
13	0.0607	0.2234	0.0606	0.0810	0.210	
14	0.0141	0.0517	0.0072	0.0096	0.131	
15	0.0089	0.0329	0.0062	0.0083	0.150	
16	0.0187	0.0689	0.0073	0.0097	0.115	
17	0.0404	0.1488	0.0498	0.0665	0.132	
18	0.0035	0.0128	0.0040	0.0053	0.102	
19	0.0389	0.1433	0.0599	0.0800	0.118	
20	0.0095	0.0351	0.0073	0.0097	0.092	
21	0.0102	0.0374	0.0078	0.0104	0.107	0.160
22	0.0122	0.0448	0.0072	0.0097	0.084	
23	0.0130	0.0480	0.0356	0.0476	0.098	0.147
24	0.0035	0.0129	0.0030	0.0040	0.077	
25	0.0178	0.0654	0.0423	0.0565	0.090	0.135
26	0.0083	0.0305	0.0071	0.0094	0.071	
27	0.0037	0.0138	0.0068	0.0091	0.083	0.124
28	0.0094	0.0346	0.0090	0.0120	0.066	
29	0.0051	0.0187	0.0264	0.0353	0.078	0.117
30	0.0023	0.0083	0.0046	0.0061	0.061	
31	0.0099	0.0365	0.0286	0.0382	0.073	0.109
32	0.0061	0.0225	0.0069	0.0092	0.058	
33	0.0012	0.0043	0.0031	0.0041	0.068	0.102
34	0.0065	0.0238	0.0072	0.0096	0.054	
35	0.0065	0.0239	0.0175	0.0234	0.064	0.096
36	0.0022	0.0081	0.0028	0.0038	0.051	

37	0.0073	0.0270	0.0175	0.0233	0.061	0.091
38	0.0045	0.0165	0.0036	0.0048	0.048	
39	0.0029	0.0107	0.0001	0.0002	0.058	0.087
40	0.0045	0.0167	0.0049	0.0065	0.046	

Note the higher limits for odd harmonics 21 and above are only allowable under certain conditions, if these higher limits are utilised please state the exemption used as detailed in part 6.2.3.4 of BS EN 61000-3-2 in the box below.

TYPEVERIFICATIONTESTSHEET

Omniksol-9k-TL2

Power Quality.Harmonics.

The requirement is specified in section 5.4.1, test procedure in Annex A or B 1.4.1

L1

SSEG rating per phase (rpp)			2.7231	**kW**	**NV=MV*3.68/rpp**	
Harmonic	**At45-55%of rated output**		**100%of rated output**		1.285	
	Measured Value(MV) inAmps	Normalised Value(NV)in Amps	Measured Value(MV)in Amps	Normalised Value(NV)in Amps	LimitinBSEN 61000-3-2in Amps	Higherlimitfor oddharmonics 21andabove
2	0.0064	0.0087	0.0425	0.0575	1.080	
3	0.0319	0.0431	0.0293	0.0396	2.300	
4	0.0303	0.0410	0.0244	0.0330	0.430	
5	0.0449	0.0607	0.0560	0.0756	1.140	
6	0.0060	0.0081	0.0061	0.0083	0.300	
7	0.0453	0.0612	0.0430	0.0580	0.770	
8	0.0377	0.0509	0.0279	0.0377	0.230	
9	0.0140	0.0189	0.0158	0.0213	0.400	
10	0.0281	0.0379	0.0169	0.0229	0.184	
11	0.0523	0.0707	0.0491	0.0663	0.450	
12	0.0007	0.0010	0.0023	0.0030	0.153	
13	0.0467	0.0631	0.0487	0.0658	0.210	
14	0.0183	0.0247	0.0104	0.0141	0.131	
15	0.0151	0.0205	0.0125	0.0169	0.150	
16	0.0141	0.0191	0.0077	0.0105	0.115	
17	0.0313	0.0422	0.0412	0.0557	0.132	
18	0.0033	0.0044	0.0028	0.0038	0.102	
19	0.0271	0.0367	0.0476	0.0644	0.118	
20	0.0111	0.0150	0.0094	0.0127	0.092	
21	0.0077	0.0104	0.0106	0.0143	0.107	0.160
22	0.0086	0.0116	0.0073	0.0098	0.084	
23	0.0104	0.0140	0.0309	0.0418	0.098	0.147
24	0.0043	0.0058	0.0030	0.0041	0.077	
25	0.0110	0.0149	0.0360	0.0486	0.090	0.135
26	0.0085	0.0114	0.0105	0.0143	0.071	
27	0.0032	0.0043	0.0082	0.0111	0.083	0.124

28	0.0075	0.0101	0.0077	0.0103	0.066	
29	0.0076	0.0103	0.0212	0.0287	0.078	0.117
30	0.0038	0.0052	0.0023	0.0032	0.061	
31	0.0112	0.0151	0.0225	0.0304	0.073	0.109
32	0.0050	0.0068	0.0047	0.0064	0.058	
33	0.0012	0.0016	0.0012	0.0017	0.068	0.102
34	0.0041	0.0056	0.0075	0.0102	0.054	
35	0.0082	0.0110	0.0148	0.0199	0.064	0.096
36	0.0019	0.0026	0.0025	0.0034	0.051	
37	0.0107	0.0144	0.0155	0.0209	0.061	0.091
38	0.0011	0.0015	0.0043	0.0058	0.048	
39	0.0039	0.0053	0.0023	0.0031	0.058	0.087
40	0.0041	0.0056	0.0077	0.0104	0.046	

Note the higher limits for odd harmonics 21 and above are only allowable under certain conditions, if these higher limits are utilised please state the exemption used as detailed in part 6.2.3.4 of BS EN 61000-3-2 in the box below.

L2

SSEG rating per phase (rpp)			2.71093	**kW**	**NV=MV*3.68/rpp**	
Harmonic	**At45-55%of rated output**		**100%of rated output**		1.234	
	Measured Value(MV) inAmps	Normalised Value(NV)in Amps	Measured Value(MV)in Amps	Normalised Value(NV)in Amps	LimitinBSEN 61000-3-2in Amps	Higherlimitfor oddharmonics 21andabove
2	0.0173	0.0234	0.0340	0.0462	1.080	
3	0.0128	0.0173	0.0114	0.0155	2.300	
4	0.0340	0.0462	0.0274	0.0372	0.430	
5	0.0451	0.0612	0.0545	0.0740	1.140	
6	0.0083	0.0112	0.0063	0.0085	0.300	
7	0.0404	0.0549	0.0420	0.0570	0.770	
8	0.0373	0.0506	0.0295	0.0400	0.230	
9	0.0092	0.0125	0.0058	0.0078	0.400	
10	0.0295	0.0400	0.0161	0.0218	0.184	
11	0.0534	0.0725	0.0506	0.0687	0.450	
12	0.0007	0.0009	0.0027	0.0036	0.153	
13	0.0439	0.0596	0.0481	0.0653	0.210	
14	0.0155	0.0210	0.0109	0.0148	0.131	
15	0.0122	0.0165	0.0053	0.0072	0.150	
16	0.0151	0.0204	0.0082	0.0111	0.115	
17	0.0320	0.0434	0.0400	0.0544	0.132	
18	0.0023	0.0032	0.0035	0.0047	0.102	
19	0.0280	0.0381	0.0486	0.0659	0.118	
20	0.0085	0.0115	0.0082	0.0111	0.092	
21	0.0080	0.0108	0.0056	0.0076	0.107	0.160
22	0.0070	0.0095	0.0066	0.0090	0.084	
23	0.0086	0.0117	0.0292	0.0397	0.098	0.147
24	0.0020	0.0028	0.0031	0.0041	0.077	
25	0.0123	0.0167	0.0364	0.0495	0.090	0.135
26	0.0067	0.0091	0.0096	0.0130	0.071	

27	0.0052	0.0071	0.0056	0.0075	0.083	0.124
28	0.0074	0.0101	0.0058	0.0079	0.066	
29	0.0047	0.0064	0.0199	0.0270	0.078	0.117
30	0.0027	0.0037	0.0013	0.0018	0.061	
31	0.0114	0.0155	0.0232	0.0315	0.073	0.109
32	0.0057	0.0077	0.0057	0.0078	0.058	
33	0.0029	0.0039	0.0035	0.0048	0.068	0.102
34	0.0040	0.0054	0.0055	0.0075	0.054	
35	0.0082	0.0111	0.0127	0.0173	0.064	0.096
36	0.0021	0.0029	0.0001	0.0001	0.051	
37	0.0109	0.0148	0.0165	0.0224	0.061	0.091
38	0.0025	0.0034	0.0035	0.0048	0.048	
39	0.0023	0.0031	0.0010	0.0014	0.058	0.087
40	0.0022	0.0030	0.0066	0.0090	0.046	

Note the higher limits for odd harmonics 21 and above are only allowable under certain conditions, if these higher limits are utilised please state the exemption used as detailed in part 6.2.3.4 of BS EN 61000-3-2 in the box below.

L3

SSEG rating per phase (rpp)			2.71399	**kW**	**NV=MV*3.68/rpp**	
Harmonic	**At45-55%of rated output**		**100%of rated output**		1.262	
	Measured Value(MV) inAmps	Normalised Value(NV)in Amps	Measured Value(MV)in Amps	Normalised Value(NV)in Amps	LimitinBSEN 61000-3-2in Amps	Higherlimitfor oddharmonics 21andabove
2	0.0177	0.0240	0.0482	0.0654	1.080	
3	0.0278	0.0376	0.0247	0.0335	2.300	
4	0.0270	0.0366	0.0190	0.0257	0.430	
5	0.0484	0.0656	0.0541	0.0734	1.140	
6	0.0041	0.0056	0.0010	0.0014	0.300	
7	0.0492	0.0667	0.0465	0.0630	0.770	
8	0.0396	0.0537	0.0315	0.0427	0.230	
9	0.0052	0.0070	0.0109	0.0147	0.400	
10	0.0306	0.0415	0.0152	0.0206	0.184	
11	0.0548	0.0743	0.0510	0.0691	0.450	
12	0.0010	0.0014	0.0032	0.0043	0.153	
13	0.0482	0.0653	0.0464	0.0629	0.210	
14	0.0151	0.0204	0.0103	0.0140	0.131	
15	0.0041	0.0055	0.0094	0.0127	0.150	
16	0.0148	0.0201	0.0072	0.0098	0.115	
17	0.0384	0.0521	0.0436	0.0592	0.132	
18	0.0032	0.0043	0.0025	0.0033	0.102	
19	0.0248	0.0336	0.0445	0.0603	0.118	
20	0.0096	0.0131	0.0067	0.0091	0.092	
21	0.0020	0.0027	0.0063	0.0086	0.107	0.160
22	0.0091	0.0124	0.0057	0.0077	0.084	
23	0.0130	0.0176	0.0323	0.0438	0.098	0.147
24	0.0033	0.0044	0.0015	0.0021	0.077	
25	0.0116	0.0157	0.0314	0.0426	0.090	0.135

26	0.0062	0.0084	0.0094	0.0128	0.071	
27	0.0032	0.0044	0.0039	0.0053	0.083	0.124
28	0.0055	0.0075	0.0055	0.0074	0.066	
29	0.0059	0.0080	0.0212	0.0288	0.078	0.117
30	0.0026	0.0036	0.0016	0.0022	0.061	
31	0.0077	0.0104	0.0167	0.0226	0.073	0.109
32	0.0037	0.0050	0.0060	0.0081	0.058	
33	0.0025	0.0034	0.0022	0.0029	0.068	0.102
34	0.0009	0.0013	0.0047	0.0063	0.054	
35	0.0063	0.0086	0.0122	0.0165	0.064	0.096
36	0.0007	0.0009	0.0017	0.0023	0.051	
37	0.0075	0.0102	0.0108	0.0146	0.061	0.091
38	0.0023	0.0031	0.0039	0.0053	0.048	
39	0.0020	0.0028	0.0013	0.0018	0.058	0.087
40	0.0019	0.0026	0.0045	0.0062	0.046	

Note the higher limits for odd harmonics 21 and above are only allowable under certain conditions, if these higher limits are utilised please state the exemption used as detailed in part 6.2.3.4 of BS EN 61000-3-2 in the box below.

TYPEVERIFICATIONTESTSHEET

Omniksol-8k-TL2

Power Quality.Harmonics.

The requirement is specified in section 5.4.1, test procedure in Annex A or B 1.4.1

L1

SSEG rating per phase (rpp)			2.6901	**kW**	**NV=MV*3.68/rpp**	
Harmonic	**At45-55%of rated output**		**100%of rated output**		1.26	
	Measured Value(MV) inAmps	Normalised Value(NV)in Amps	Measured Value(MV)in Amps	Normalised Value(NV)in Amps	LimitinBSEN 61000-3-2in Amps	Higherlimitfor oddharmonics 21andabove
2	0.0164	0.0224	0.0220	0.0301	1.080	
3	0.0150	0.0205	0.0135	0.0185	2.300	
4	0.0288	0.0394	0.0235	0.0322	0.430	
5	0.0424	0.0580	0.0499	0.0682	1.140	
6	0.0061	0.0083	0.0040	0.0055	0.300	
7	0.0397	0.0543	0.0412	0.0563	0.770	
8	0.0345	0.0472	0.0252	0.0344	0.230	
9	0.0127	0.0174	0.0094	0.0128	0.400	
10	0.0213	0.0291	0.0140	0.0192	0.184	
11	0.0455	0.0622	0.0487	0.0667	0.450	
12	0.0019	0.0026	0.0020	0.0027	0.153	
13	0.0431	0.0589	0.0459	0.0628	0.210	
14	0.0093	0.0127	0.0115	0.0158	0.131	
15	0.0100	0.0137	0.0086	0.0118	0.150	
16	0.0045	0.0062	0.0074	0.0101	0.115	
17	0.0312	0.0426	0.0414	0.0567	0.132	

18	0.0011	0.0014	0.0018	0.0024	0.102	
19	0.0206	0.0282	0.0396	0.0542	0.118	
20	0.0067	0.0092	0.0091	0.0125	0.092	
21	0.0079	0.0108	0.0074	0.0101	0.107	0.160
22	0.0026	0.0036	0.0061	0.0083	0.084	
23	0.0093	0.0127	0.0318	0.0435	0.098	0.147
24	0.0022	0.0029	0.0010	0.0013	0.077	
25	0.0080	0.0110	0.0280	0.0382	0.090	0.135
26	0.0064	0.0087	0.0086	0.0118	0.071	
27	0.0061	0.0084	0.0060	0.0083	0.083	0.124
28	0.0025	0.0034	0.0089	0.0122	0.066	
29	0.0013	0.0018	0.0235	0.0322	0.078	0.117
30	0.0006	0.0008	0.0016	0.0021	0.061	
31	0.0040	0.0054	0.0208	0.0285	0.073	0.109
32	0.0047	0.0065	0.0043	0.0058	0.058	
33	0.0026	0.0035	0.0049	0.0067	0.068	0.102
34	0.0019	0.0026	0.0065	0.0089	0.054	
35	0.0070	0.0096	0.0145	0.0198	0.064	0.096
36	0.0006	0.0008	0.0028	0.0039	0.051	
37	0.0082	0.0113	0.0132	0.0180	0.061	0.091
38	0.0012	0.0017	0.0039	0.0054	0.048	
39	0.0014	0.0019	0.0019	0.0026	0.058	0.087
40	0.0015	0.0021	0.0023	0.0031	0.046	

Note the higher limits for odd harmonics 21 and above are only allowable under certain conditions, if these higher limits are utilised please state the exemption used as detailed in part 6.2.3.4 of BS EN 61000-3-2 in the box below.

L2

SSEG rating per phase (rpp)			2.6971	**kW**	**NV=MV*3.68/rpp**	
Harmonic	**At45-55%of rated output**		**100%of rated output**		1.257	
	Measured Value(MV) inAmps	Normalised Value(NV)in Amps	Measured Value(MV)in Amps	Normalised Value(NV)in Amps	LimitinBSEN 61000-3-2in Amps	Higherlimitfor oddharmonics 21andabove
2	0.0159	0.0216	0.0409	0.0152	1.080	
3	0.0243	0.0332	0.0255	0.0095	2.300	
4	0.0227	0.0310	0.0171	0.0063	0.430	
5	0.0460	0.0627	0.0561	0.0208	1.140	
6	0.0013	0.0017	0.0018	0.0007	0.300	
7	0.0381	0.0520	0.0449	0.0166	0.770	
8	0.0303	0.0413	0.0289	0.0107	0.230	
9	0.0044	0.0060	0.0043	0.0016	0.400	
10	0.0219	0.0299	0.0165	0.0061	0.184	
11	0.0495	0.0676	0.0483	0.0179	0.450	
12	0.0072	0.0098	0.0021	0.0008	0.153	
13	0.0391	0.0533	0.0479	0.0178	0.210	
14	0.0071	0.0097	0.0069	0.0026	0.131	
15	0.0034	0.0047	0.0057	0.0021	0.150	
16	0.0095	0.0129	0.0095	0.0035	0.115	

17	0.0346	0.0472	0.0425	0.0158	0.132	
18	0.0052	0.0071	0.0020	0.0007	0.102	
19	0.0166	0.0227	0.0450	0.0167	0.118	
20	0.0030	0.0040	0.0066	0.0024	0.092	
21	0.0042	0.0058	0.0052	0.0019	0.107	0.160
22	0.0052	0.0070	0.0051	0.0019	0.084	
23	0.0131	0.0179	0.0317	0.0118	0.098	0.147
24	0.0037	0.0050	0.0020	0.0008	0.077	
25	0.0039	0.0053	0.0343	0.0127	0.090	0.135
26	0.0042	0.0057	0.0044	0.0016	0.071	
27	0.0032	0.0043	0.0049	0.0018	0.083	0.124
28	0.0061	0.0083	0.0065	0.0024	0.066	
29	0.0010	0.0014	0.0215	0.0080	0.078	0.117
30	0.0015	0.0020	0.0014	0.0005	0.061	
31	0.0059	0.0080	0.0198	0.0074	0.073	0.109
32	0.0025	0.0034	0.0023	0.0008	0.058	
33	0.0028	0.0038	0.0016	0.0006	0.068	0.102
34	0.0031	0.0042	0.0046	0.0017	0.054	
35	0.0056	0.0077	0.0166	0.0061	0.064	0.096
36	0.0013	0.0018	0.0003	0.0001	0.051	
37	0.0073	0.0099	0.0125	0.0046	0.061	0.091
38	0.0018	0.0024	0.0036	0.0013	0.048	
39	0.0032	0.0044	0.0013	0.0005	0.058	0.087
40	0.0007	0.0009	0.0038	0.0014	0.046	

Note the higher limits for odd harmonics 21 and above are only allowable under certain conditions, if these higher limits are utilised please state the exemption used as detailed in part 6.2.3.4 of BS EN 61000-3-2 in the box below.

L3

SSEG rating per phase (rpp)			2.7027	**kW**	**NV=MV*3.68/rpp**	
Harmonic	**At45-55%of rated output**		**100%of rated output**		1.259	
	Measured Value(MV) inAmps	Normalised Value(NV)in Amps	Measured Value(MV)in Amps	Normalised Value(NV)in Amps	LimitinBSEN 61000-3-2in Amps	Higherlimitfor oddharmonics 21andabove
2	0.0085	0.0116	0.0378	0.0515	1.080	
3	0.0336	0.0458	0.0341	0.0465	2.300	
4	0.0296	0.0403	0.0234	0.0319	0.430	
5	0.0481	0.0654	0.0539	0.0734	1.140	
6	0.0065	0.0089	0.0039	0.0053	0.300	
7	0.0404	0.0550	0.0419	0.0571	0.770	
8	0.0307	0.0418	0.0248	0.0338	0.230	
9	0.0094	0.0128	0.0050	0.0068	0.400	
10	0.0261	0.0355	0.0179	0.0244	0.184	
11	0.0546	0.0744	0.0476	0.0648	0.450	
12	0.0052	0.0071	0.0026	0.0035	0.153	
13	0.0472	0.0643	0.0500	0.0680	0.210	
14	0.0103	0.0141	0.0081	0.0110	0.131	
15	0.0135	0.0184	0.0047	0.0064	0.150	

16	0.0109	0.0149	0.0071	0.0096	0.115	
17	0.0346	0.0470	0.0398	0.0542	0.132	
18	0.0037	0.0051	0.0029	0.0039	0.102	
19	0.0260	0.0354	0.0489	0.0666	0.118	
20	0.0072	0.0097	0.0093	0.0127	0.092	
21	0.0128	0.0174	0.0074	0.0100	0.107	0.160
22	0.0051	0.0070	0.0057	0.0078	0.084	
23	0.0111	0.0151	0.0300	0.0408	0.098	0.147
24	0.0019	0.0026	0.0029	0.0039	0.077	
25	0.0094	0.0128	0.0351	0.0477	0.090	0.135
26	0.0039	0.0053	0.0075	0.0102	0.071	
27	0.0092	0.0125	0.0084	0.0115	0.083	0.124
28	0.0057	0.0078	0.0056	0.0077	0.066	
29	0.0019	0.0025	0.0195	0.0265	0.078	0.117
30	0.0013	0.0017	0.0001	0.0002	0.061	
31	0.0050	0.0069	0.0203	0.0277	0.073	0.109
32	0.0052	0.0070	0.0049	0.0067	0.058	
33	0.0041	0.0056	0.0019	0.0026	0.068	0.102
34	0.0025	0.0035	0.0041	0.0055	0.054	
35	0.0069	0.0094	0.0151	0.0205	0.064	0.096
36	0.0003	0.0004	0.0018	0.0024	0.051	
37	0.0065	0.0089	0.0142	0.0193	0.061	0.091
38	0.0024	0.0032	0.0027	0.0037	0.048	
39	0.0033	0.0045	0.0012	0.0017	0.058	0.087
40	0.0025	0.0034	0.0037	0.0050	0.046	

Note the higher limits for odd harmonics 21 and above are only allowable under certain conditions, if these higher limits are utilised please state the exemption used as detailed in part 6.2.3.4 of BS EN 61000-3-2 in the box below.

TYPEVERIFICATIONTESTSHEET

Omniksol-6k-TL2

Power Quality.Harmonics.

The requirement is specified in section 5.4.1, test procedure in Annex A or B 1.4.1

L1

SSEG rating per phase (rpp)			2.0054	**kW**	**NV=MV*3.68/rpp**	
Harmonic	**At45-55%of rated output**		**100%of rated output**		1.537	
	Measured Value(MV) inAmps	Normalised Value(NV)in Amps	Measured Value(MV)in Amps	Normalised Value(NV)in Amps	LimitinBSEN 61000-3-2in Amps	Higherlimitfor oddharmonics 21andabove
2	0.0190	0.0349	0.0105	0.0193	1.080	
3	0.0294	0.0539	0.0246	0.0452	2.300	
4	0.0348	0.0639	0.0202	0.0370	0.430	
5	0.0395	0.0725	0.0486	0.0891	1.140	
6	0.0034	0.0062	0.0034	0.0062	0.300	

7	0.0519	0.0953	0.0458	0.0840	0.770	
8	0.0320	0.0587	0.0334	0.0612	0.230	
9	0.0078	0.0144	0.0011	0.0020	0.400	
10	0.0134	0.0246	0.0197	0.0362	0.184	
11	0.0696	0.1278	0.0498	0.0913	0.450	
12	0.0015	0.0027	0.0013	0.0024	0.153	
13	0.0722	0.1325	0.0517	0.0948	0.210	
14	0.0072	0.0131	0.0113	0.0207	0.131	
15	0.0109	0.0200	0.0076	0.0139	0.150	
16	0.0086	0.0157	0.0095	0.0175	0.115	
17	0.0585	0.1074	0.0395	0.0726	0.132	
18	0.0019	0.0036	0.0017	0.0031	0.102	
19	0.0447	0.0821	0.0396	0.0727	0.118	
20	0.0099	0.0182	0.0063	0.0115	0.092	
21	0.0054	0.0099	0.0091	0.0166	0.107	0.160
22	0.0083	0.0153	0.0081	0.0148	0.084	
23	0.0257	0.0472	0.0274	0.0503	0.098	0.147
24	0.0023	0.0043	0.0008	0.0014	0.077	
25	0.0290	0.0531	0.0236	0.0433	0.090	0.135
26	0.0047	0.0087	0.0054	0.0098	0.071	
27	0.0045	0.0082	0.0076	0.0140	0.083	0.124
28	0.0047	0.0086	0.0062	0.0114	0.066	
29	0.0261	0.0480	0.0156	0.0287	0.078	0.117
30	0.0012	0.0023	0.0014	0.0026	0.061	
31	0.0241	0.0443	0.0127	0.0234	0.073	0.109
32	0.0037	0.0067	0.0062	0.0114	0.058	
33	0.0027	0.0050	0.0049	0.0091	0.068	0.102
34	0.0042	0.0077	0.0044	0.0080	0.054	
35	0.0160	0.0294	0.0081	0.0148	0.064	0.096
36	0.0023	0.0043	0.0005	0.0010	0.051	
37	0.0126	0.0232	0.0067	0.0122	0.061	0.091
38	0.0040	0.0073	0.0045	0.0083	0.048	
39	0.0038	0.0069	0.0024	0.0045	0.058	0.087
40	0.0027	0.0049	0.0035	0.0065	0.046	

Note the higher limits for odd harmonics 21 and above are only allowable under certain conditions, if these higher limits are utilised please state the exemption used as detailed in part 6.2.3.4 of BS EN 61000-3-2 in the box below.

L2

SSEG rating per phase (rpp)			2.01364	**kW**	**NV=MV*3.68/rpp**	
Harmonic	**At45-55%of rated output**		**100%of rated output**		1.5400	
	Measured Value(MV) inAmps	Normalised Value(NV)in Amps	Measured Value(MV)in Amps	Normalised Value(NV)in Amps	LimitinBSEN 61000-3-2in Amps	Higherlimitfor oddharmonics 21andabove
2	0.0235	0.0430	0.0028	0.0051	1.080	
3	0.0139	0.0255	0.0161	0.0294	2.300	
4	0.0332	0.0607	0.0217	0.0396	0.430	
5	0.0495	0.0904	0.0513	0.0937	1.140	

6	0.0052	0.0096	0.0047	0.0086	0.300	
7	0.0513	0.0938	0.0379	0.0693	0.770	
8	0.0261	0.0476	0.0354	0.0646	0.230	
9	0.0080	0.0147	0.0081	0.0149	0.400	
10	0.0189	0.0345	0.0256	0.0468	0.184	
11	0.0751	0.1372	0.0507	0.0926	0.450	
12	0.0042	0.0077	0.0028	0.0051	0.153	
13	0.0808	0.1476	0.0501	0.0915	0.210	
14	0.0036	0.0065	0.0116	0.0213	0.131	
15	0.0015	0.0028	0.0055	0.0101	0.150	
16	0.0105	0.0191	0.0126	0.0231	0.115	
17	0.0595	0.1087	0.0408	0.0746	0.132	
18	0.0025	0.0046	0.0007	0.0013	0.102	
19	0.0542	0.0990	0.0432	0.0789	0.118	
20	0.0089	0.0162	0.0063	0.0115	0.092	
21	0.0032	0.0059	0.0025	0.0045	0.107	0.160
22	0.0091	0.0167	0.0117	0.0213	0.084	
23	0.0254	0.0464	0.0267	0.0488	0.098	0.147
24	0.0026	0.0047	0.0019	0.0035	0.077	
25	0.0323	0.0591	0.0257	0.0469	0.090	0.135
26	0.0046	0.0083	0.0082	0.0149	0.071	
27	0.0007	0.0012	0.0029	0.0053	0.083	0.124
28	0.0029	0.0054	0.0082	0.0150	0.066	
29	0.0286	0.0522	0.0132	0.0241	0.078	0.117
30	0.0011	0.0019	0.0018	0.0032	0.061	
31	0.0266	0.0487	0.0133	0.0243	0.073	0.109
32	0.0032	0.0058	0.0067	0.0123	0.058	
33	0.0032	0.0059	0.0022	0.0041	0.068	0.102
34	0.0026	0.0048	0.0052	0.0096	0.054	
35	0.0201	0.0367	0.0073	0.0133	0.064	0.096
36	0.0011	0.0021	0.0017	0.0031	0.051	
37	0.0144	0.0264	0.0062	0.0113	0.061	0.091
38	0.0030	0.0055	0.0062	0.0114	0.048	
39	0.0038	0.0070	0.0027	0.0050	0.058	0.087
40	0.0016	0.0029	0.0041	0.0074	0.046	

Note the higher limits for odd harmonics 21 and above are only allowable under certain conditions, if these higher limits are utilised please state the exemption used as detailed in part 6.2.3.4 of BS EN 61000-3-2 in the box below.

L3

SSEG rating per phase (rpp)			2.01721	**kW**	**NV=MV*3.68/rpp**	
Harmonic	**At45-55%of rated output**		**100%of rated output**		1.7890	
	Measured Value(MV) inAmps	Normalised Value(NV)in Amps	Measured Value(MV)in Amps	Normalised Value(NV)in Amps	LimitinBSEN 61000-3-2in Amps	Higherlimitfor oddharmonics 21andabove
2	0.0227	0.0414	0.0106	0.0194	1.080	
3	0.0336	0.0613	0.0332	0.0606	2.300	
4	0.0411	0.0750	0.0279	0.0509	0.430	

5	0.0446	0.0814	0.0560	0.1022	1.140	
6	0.0034	0.0061	0.0016	0.0029	0.300	
7	0.0384	0.0700	0.0532	0.0971	0.770	
8	0.0308	0.0563	0.0333	0.0608	0.230	
9	0.0115	0.0209	0.0096	0.0175	0.400	
10	0.0193	0.0353	0.0249	0.0454	0.184	
11	0.0540	0.0985	0.0573	0.1045	0.450	
12	0.0044	0.0080	0.0010	0.0018	0.153	
13	0.0734	0.1339	0.0597	0.1090	0.210	
14	0.0072	0.0131	0.0130	0.0237	0.131	
15	0.0109	0.0200	0.0060	0.0109	0.150	
16	0.0086	0.0158	0.0140	0.0256	0.115	
17	0.0500	0.0912	0.0419	0.0764	0.132	
18	0.0051	0.0093	0.0009	0.0016	0.102	
19	0.0486	0.0886	0.0519	0.0947	0.118	
20	0.0086	0.0157	0.0089	0.0163	0.092	
21	0.0089	0.0163	0.0099	0.0180	0.107	0.160
22	0.0109	0.0199	0.0128	0.0233	0.084	
23	0.0250	0.0455	0.0265	0.0483	0.098	0.147
24	0.0044	0.0080	0.0024	0.0044	0.077	
25	0.0309	0.0563	0.0320	0.0584	0.090	0.135
26	0.0055	0.0100	0.0076	0.0138	0.071	
27	0.0046	0.0084	0.0090	0.0164	0.083	0.124
28	0.0049	0.0090	0.0098	0.0179	0.066	
29	0.0277	0.0505	0.0145	0.0264	0.078	0.117
30	0.0018	0.0033	0.0017	0.0032	0.061	
31	0.0263	0.0480	0.0155	0.0283	0.073	0.109
32	0.0047	0.0086	0.0059	0.0107	0.058	
33	0.0049	0.0089	0.0037	0.0068	0.068	0.102
34	0.0047	0.0085	0.0061	0.0112	0.054	
35	0.0178	0.0325	0.0063	0.0115	0.064	0.096
36	0.0016	0.0029	0.0008	0.0014	0.051	
37	0.0136	0.0248	0.0073	0.0132	0.061	0.091
38	0.0042	0.0076	0.0045	0.0082	0.048	
39	0.0070	0.0127	0.0006	0.0010	0.058	0.087
40	0.0039	0.0071	0.0055	0.0100	0.046	

Note the higher limits for odd harmonics 21 and above are only allowable under certain conditions, if these higher limits are utilised please state the exemption used as detailed in part 6.2.3.4 of BS EN 61000-3-2 in the box below.

TYPEVERIFICATIONTESTSHEET

Omniksol-5k-TL2

Power Quality.Harmonics.

The requirement is specified in section 5.4.1, test procedure in Annex A or B 1.4.1

L1

SSEG rating per phase (rpp)			1.68307	kW	NV=MV*3.68/rpp	
Harmonic	**At45-55%of rated output**		**100%of rated output**		1.705	
	Measured Value(MV) inAmps	Normalised Value(NV)in Amps	Measured Value(MV)in Amps	Normalised Value(NV)in Amps	LimitinBSEN 61000-3-2in Amps	Higherlimitfor oddharmonics 21andabove
2	0.0191	0.0418	0.0080	0.0174	1.080	
3	0.0302	0.0660	0.0291	0.0636	2.300	
4	0.0336	0.0734	0.0228	0.0498	0.430	
5	0.0443	0.0970	0.0456	0.0998	1.140	
6	0.0016	0.0034	0.0023	0.0050	0.300	
7	0.0529	0.1156	0.0450	0.0984	0.770	
8	0.0378	0.0826	0.0337	0.0736	0.230	
9	0.0122	0.0266	0.0072	0.0157	0.400	
10	0.0223	0.0487	0.0203	0.0444	0.184	
11	0.0559	0.1223	0.0511	0.1117	0.450	
12	0.0029	0.0064	0.0024	0.0052	0.153	
13	0.0494	0.1081	0.0452	0.0988	0.210	
14	0.0111	0.0243	0.0102	0.0223	0.131	
15	0.0129	0.0282	0.0116	0.0254	0.150	
16	0.0066	0.0144	0.0080	0.0175	0.115	
17	0.0370	0.0809	0.0342	0.0748	0.132	
18	0.0012	0.0026	0.0005	0.0011	0.102	
19	0.0320	0.0700	0.0297	0.0650	0.118	
20	0.0054	0.0118	0.0066	0.0145	0.092	
21	0.0091	0.0200	0.0076	0.0166	0.107	0.160
22	0.0028	0.0060	0.0087	0.0190	0.084	
23	0.0250	0.0547	0.0205	0.0447	0.098	0.147
24	0.0019	0.0041	0.0009	0.0019	0.077	
25	0.0222	0.0484	0.0163	0.0356	0.090	0.135
26	0.0033	0.0072	0.0075	0.0163	0.071	
27	0.0110	0.0240	0.0040	0.0087	0.083	0.124
28	0.0040	0.0087	0.0054	0.0118	0.066	
29	0.0203	0.0444	0.0101	0.0221	0.078	0.117
30	0.0032	0.0070	0.0003	0.0006	0.061	
31	0.0198	0.0433	0.0121	0.0264	0.073	0.109
32	0.0052	0.0113	0.0059	0.0128	0.058	
33	0.0080	0.0174	0.0011	0.0023	0.068	0.102
34	0.0039	0.0086	0.0038	0.0082	0.054	
35	0.0168	0.0366	0.0078	0.0170	0.064	0.096
36	0.0035	0.0077	0.0008	0.0018	0.051	
37	0.0173	0.0377	0.0078	0.0171	0.061	0.091
38	0.0047	0.0103	0.0031	0.0068	0.048	
39	0.0052	0.0113	0.0020	0.0044	0.058	0.087
40	0.0050	0.0110	0.0031	0.0067	0.046	

Note the higher limits for odd harmonics 21 and above are only allowable under certain conditions, if these higher limits are utilised please state the exemption used as detailed in part 6.2.3.4 of BS EN 61000-3-2 in the box below.

L2						
SSEG rating per phase (rpp)			1.68698	**kW**	**NV=MV*3.68/rpp**	
Harmonic	**At45-55%of rated output**		**100%of rated output**		1.838	
	Measured Value(MV) inAmps	Normalised Value(NV)in Amps	Measured Value(MV)in Amps	Normalised Value(NV)in Amps	LimitinBSEN 61000-3-2in Amps	Higherlimitfor oddharmonics 21andabove
2	0.0158	0.0345	0.0036	0.0079	1.080	
3	0.0090	0.0196	0.0120	0.0262	2.300	
4	0.0324	0.0706	0.0247	0.0539	0.430	
5	0.0566	0.1234	0.0527	0.1149	1.140	
6	0.0022	0.0048	0.0071	0.0154	0.300	
7	0.0438	0.0956	0.0391	0.0853	0.770	
8	0.0343	0.0747	0.0320	0.0698	0.230	
9	0.0106	0.0231	0.0126	0.0274	0.400	
10	0.0232	0.0506	0.0221	0.0483	0.184	
11	0.0674	0.1470	0.0628	0.1371	0.450	
12	0.0049	0.0106	0.0015	0.0033	0.153	
13	0.0466	0.1016	0.0501	0.1093	0.210	
14	0.0095	0.0207	0.0106	0.0232	0.131	
15	0.0064	0.0141	0.0083	0.0180	0.150	
16	0.0078	0.0171	0.0070	0.0153	0.115	
17	0.0379	0.0828	0.0406	0.0886	0.132	
18	0.0041	0.0089	0.0014	0.0031	0.102	
19	0.0284	0.0620	0.0353	0.0771	0.118	
20	0.0054	0.0118	0.0074	0.0162	0.092	
21	0.0035	0.0077	0.0064	0.0140	0.107	0.160
22	0.0041	0.0090	0.0064	0.0139	0.084	
23	0.0221	0.0482	0.0228	0.0497	0.098	0.147
24	0.0021	0.0046	0.0017	0.0037	0.077	
25	0.0179	0.0391	0.0227	0.0495	0.090	0.135
26	0.0035	0.0076	0.0074	0.0161	0.071	
27	0.0025	0.0054	0.0010	0.0021	0.083	0.124
28	0.0022	0.0048	0.0041	0.0089	0.066	
29	0.0202	0.0441	0.0114	0.0248	0.078	0.117
30	0.0030	0.0066	0.0014	0.0031	0.061	
31	0.0117	0.0254	0.0143	0.0312	0.073	0.109
32	0.0043	0.0094	0.0042	0.0092	0.058	
33	0.0025	0.0055	0.0012	0.0027	0.068	0.102
34	0.0026	0.0057	0.0031	0.0067	0.054	
35	0.0166	0.0361	0.0072	0.0156	0.064	0.096
36	0.0022	0.0048	0.0016	0.0036	0.051	
37	0.0098	0.0214	0.0085	0.0185	0.061	0.091
38	0.0025	0.0055	0.0024	0.0053	0.048	
39	0.0041	0.0090	0.0025	0.0055	0.058	0.087
40	0.0023	0.0050	0.0018	0.0040	0.046	

Note the higher limits for odd harmonics 21 and above are only allowable under certain conditions, if these higher limits are utilised please state the exemption used as detailed in part 6.2.3.4 of BS EN 61000-3-2 in the box below.

L3

SSEG rating per phase (rpp)			1.69208	**kW**	**NV=MV*3.68/rpp**	
Harmonic	**At45-55%of rated output**		**100%of rated output**		2.05	
	Measured Value(MV) inAmps	Normalised Value(NV)in Amps	Measured Value(MV)in Amps	Normalised Value(NV)in Amps	LimitinBSEN 61000-3-2in Amps	Higherlimitfor oddharmonics 21andabove
2	0.0232	0.0505	0.0105	0.0228	1.080	
3	0.0313	0.0681	0.0335	0.0729	2.300	
4	0.0392	0.0852	0.0303	0.0659	0.430	
5	0.0513	0.1116	0.0577	0.1255	1.140	
6	0.0025	0.0055	0.0049	0.0106	0.300	
7	0.0451	0.0981	0.0530	0.1152	0.770	
8	0.0343	0.0746	0.0294	0.0639	0.230	
9	0.0111	0.0241	0.0071	0.0155	0.400	
10	0.0265	0.0576	0.0200	0.0436	0.184	
11	0.0467	0.1016	0.0631	0.1373	0.450	
12	0.0020	0.0043	0.0010	0.0022	0.153	
13	0.0460	0.1001	0.0568	0.1235	0.210	
14	0.0117	0.0254	0.0110	0.0239	0.131	
15	0.0105	0.0229	0.0060	0.0130	0.150	
16	0.0101	0.0219	0.0095	0.0207	0.115	
17	0.0216	0.0471	0.0417	0.0907	0.132	
18	0.0033	0.0072	0.0011	0.0025	0.102	
19	0.0290	0.0630	0.0410	0.0892	0.118	
20	0.0041	0.0089	0.0086	0.0188	0.092	
21	0.0073	0.0158	0.0060	0.0130	0.107	0.160
22	0.0045	0.0099	0.0098	0.0212	0.084	
23	0.0149	0.0325	0.0249	0.0542	0.098	0.147
24	0.0023	0.0050	0.0027	0.0059	0.077	
25	0.0187	0.0406	0.0258	0.0561	0.090	0.135
26	0.0021	0.0046	0.0067	0.0146	0.071	
27	0.0071	0.0154	0.0022	0.0047	0.083	0.124
28	0.0036	0.0078	0.0064	0.0140	0.066	
29	0.0142	0.0310	0.0114	0.0248	0.078	0.117
30	0.0022	0.0048	0.0010	0.0022	0.061	
31	0.0154	0.0336	0.0152	0.0330	0.073	0.109
32	0.0019	0.0042	0.0051	0.0112	0.058	
33	0.0065	0.0141	0.0021	0.0046	0.068	0.102
34	0.0045	0.0098	0.0065	0.0141	0.054	
35	0.0111	0.0241	0.0088	0.0192	0.064	0.096
36	0.0014	0.0029	0.0017	0.0038	0.051	
37	0.0136	0.0295	0.0082	0.0179	0.061	0.091
38	0.0031	0.0067	0.0027	0.0058	0.048	
39	0.0072	0.0157	0.0024	0.0052	0.058	0.087

40	0.0045	0.0097	0.0042	0.0091	0.046	

Note the higher limits for odd harmonics 21 and above are only allowable under certain conditions, if these higher limits are utilised please state the exemption used as detailed in part 6.2.3.4 of BS EN 61000-3-2 in the box below.

Power Quality. Voltage fluctuations and Flicker.

The requirement is specified in section 5.4.2, test procedure in Annex A or B 1.4.3

	Starting			Stopping			Running	
	dmax [%]	dc [%]	d(t) [%]	dmax [%]	dc [%]	d(t) [%]	Pst	Plt 2 hours
Measured Values	0.21	0.23	0.22	0	0.22	0	0.188	0.157
Normalised to standard impedance and 3.68kW for multiple units	0.386	0.423	0.405	0	0.405	0	0.346	0.289
Limits set under BS EN 61000-3-3	4%	3.30%	3.3% 500ms	4%	3.30%	3.3% 500ms	1	0.65

Test start date		Test end date	
Test location	Omnik New Energy Co.,Ltd, CN-215213 Suzhou China Xinghu Road No.218 Biobay		

Omniksol-10k-TL2

Power quality. DC injection.

The requirement is specified in section 5.5, test procedure in Annex A or B 1.4.4

Test power level	10%	55%	100%	
Recorded value(mA)	15/6/13	10/10/12	10/10/13	
as % of rated AC current	0.125%/0.05%/0.108%	0.083%/0.083%/1%	0.083%/0.083%/0.108%	
Limit	0.25%	0.25%	0.25%	

Omniksol-9k-TL2

Power quality. DC injection.

The requirement is specified in section 5.5, test procedure in Annex A or B 1.4.4

Test power level	10%	55%	100%	

Recorded value(mA)	2/6/3	2/8/2	2/7/2	
as % of rated AC current	0.014%/0.043%/0.021%	0.014%/0.057%/0.014%	0.014%/0.05%/0.014%	
Limit	0.25%	0.25%	0.25%	

Omniksol-8k-TL2				
Power quality. DC injection. The requirement is specified in section 5.5, test procedure in Annex A or B 1.4.4				
Test power level	10%	55%	100%	
Recorded value(mA)	22/22/23	24/23/22	13/15/15	
as % of rated AC current	0.18%/0.18%/0.19%	0.2%/0.19%/0.18%	0.1%/0.125%/0.125%	
Limit	0.25%	0.25%	0.25%	

Omniksol-6k-TL2				
Power quality. DC injection. The requirement is specified in section 5.5, test procedure in Annex A or B 1.4.4				
Test power level	10%	55%	100%	
Recorded value(mA)	2/18/12	3/20/12	2/22/19	
as % of rated AC current	0.022%/0.2%/0.133%	0.033%/0.222%/0.133%	0.022%/0.244%/0.211%	
Limit	0.25%	0.25%	0.25%	

Omnik-5k-TL2				
Power quality. DC injection. The requirement is specified in section 5.5, test procedure in Annex A or B 1.4.4				
Test power level	10%	55%	100%	
Recorded value(mA)	2/8/8	2/10/11	1/14/16	
as % of rated AC current	0.025%/0.1%/0.1%	0.025%/0.125%/0.137%	0.012%/0.175%/0.2%	

Limit	0.25%	0.25%	0.25%	

Omniksol-10k-TL2				
Power Quality. Power factor. The requirement is specified in section 5.6, test procedure in Annex A or B 1.4.2				
	216.2V	230V	253V	Measured at three voltage levels and at full output. Voltage to be maintained within ±1.5% of the stated level during the test.
Measured value-L1	0.999	0.999	0.999	
L2	0.999	0.999	0.999	
L3	0.999	0.999	0.999	
Limit	>0.95	>0.95	>0.95	

Omniksol-9k-TL2				
Power Quality. Power factor. The requirement is specified in section 5.6, test procedure in Annex A or B 1.4.2				
	216.2V	230V	253V	Measured at three voltage levels and at full output. Voltage to be maintained within ±1.5% of the stated level during the test.
Measured value-L1	0.999	0.999	0.999	
Measured value-L2	0.999	0.999	0.999	
Measured value-L3	0.999	0.999	0.999	
Limit	>0.95	>0.95	>0.95	

Omniksol-8k-TL2				
Power Quality. Power factor. The requirement is specified in section 5.6, test procedure in Annex A or B 1.4.2				
	216.2V	230V	253V	Measured at three voltage levels and at full output. Voltage to be maintained within ±1.5% of the stated level during the test.
Measured value-L1	0.999	0.999	0.999	
Measured value-L2	0.999	0.999	0.999	
Measured value-L3	0.999	0.999	0.999	
Limit	>0.95	>0.95	>0.95	

Omniksol-6k-TL2				
Power Quality. Power factor. The requirement is specified in section 5.6, test procedure in Annex A or B 1.4.2				
	216.2V	230V	253V	Measured at three voltage levels and at full output. Voltage to be maintained within ±1.5% of the stated level during the test.
Measured value-L1	0.999	0.999	0.999	
Measured value-L2	0.999	0.999	0.999	
Measured value-L3	0.999	0.999	0.999	
Limit	>0.95	>0.95	>0.95	

Omniksol-5k-TL2				
Power Quality. Power factor. The requirement is specified in section 5.6, test procedure in Annex A or B 1.4.2				
	216.2V	230V	253V	Measured at three voltage levels and at full output. Voltage to be maintained within ±1.5% of the stated level during the test.
Measured value-L1	0.999	0.999	0.999	
Measured value-L2	0.999	0.999	0.999	
Measured value-L3	0.999	0.999	0.999	
Limit	>0.95	>0.95	>0.95	

Protection. Frequency tests.

The requirement is specified in section 5.3.1, test procedure in Annex A or B 1.3.3

Function	Setting		Trip test		"No trip tests"	
	Frequency	Time delay	Frequency	Time delay	Frequency /time	Confirm no trip
U/F stage 1	47.5Hz	20s	47.46	20	47.7Hz/ 25s	N
U/F stage 2	47Hz	0.5s	46.97	0.498	47.2Hz/ 19.98s	N
					46.8Hz/ 0.48s	N
O/F stage 1	51.5Hz	90s	51.52	89.3	51.3Hz/95s	N
O/F stage 2	52Hz	0.5s	52.01	0.498	51.8Hz/ 89.98s	N
					52.2Hz/ 0.48s	N

Protection. Voltage tests.

The requirement is specified in section 5.3.1, test procedure in Annex A or B 1.3.2

Function	Setting		Trip test		"No trip tests"	
	Voltage	Time delay	Voltage	Time delay	Voltage /time	Confirm no trip
U/V stage 1	200.1V	2.5s	203	2.51	204.1V/3.5s	N
U/V stage 2	184V	0.5s	187	0.52	188V/2.48s	N
					180V/0.48s	N
O/V stage 1	262.2V	1.0s	261	0.946	258.2V/2.0s	N
O/V stage 2	273.7V	0.5s	273	0.52	269.7V/0.98s	N
					277.7V/0.48s	N

Note for Voltage tests the Voltage required to trip is the setting ±3.45V, The time delay can be measured at a larger deviation than the minimum required to operate the protection. The No trip tests need to be carried out at the setting ±4V and for the relevant times as shown in the table above to ensure that the protection will not trip in error.

Omniksol-10k-TL2

Protection. Loss of Mains test.

The requirement is specified in section 5.3.2, test procedure in Annex A or B 1.3.4

Note: Inverter tested according to BS EN 62116.

Test Power and imbalance	33% -5% Q Test 22	66% -5% Q Test 12	100% -5% P Test 5	33% +5% Q Test 31	66% +5% Q Test 21	100% +5% P Test 10
Trip time. Limit is 0.5s	0.030	0.030	0.249	0.029	0.103	0.425

Omniksol-9k-TL2

Protection. Loss of Mains test.

The requirement is specified in section 5.3.2, test procedure in Annex A or B 1.3.4

Note: Inverter tested according to BS EN 62116.

Test Power and imbalance	33% -5% Q Test 22	66% -5% Q Test 12	100% -5% P Test 5	33% +5% Q Test 31	66% +5% Q Test 21	100% +5% P Test 10

Trip time. Limit is 0.5s	0.05	0.05	0.25	0.03	0.09	0.38

Omniksol-8k-TL2						
Protection. Loss of Mains test. The requirement is specified in section 5.3.2, test procedure in Annex A or B 1.3.4						
Note: Inverter tested according to BS EN 62116.						
Test Power and imbalance	33% -5% Q Test 22	66% -5% Q Test 12	100% -5% P Test 5	33% +5% Q Test 31	66% +5% Q Test 21	100% +5% P Test 10
Trip time. Limit is 0.5s	0.047	0.1 41	0.103	0.043	0.161	0.259

Omniksol-6k-TL2						
Protection. Loss of Mains test. The requirement is specified in section 5.3.2, test procedure in Annex A or B 1.3.4						
Note: Inverter tested according to BS EN 62116.						
Test Power and imbalance	33% -5% Q Test 22	66% -5% Q Test 12	100% -5% P Test 5	33% +5% Q Test 31	66% +5% Q Test 21	100% +5% P Test 10
Trip time. Limit is 0.5s	0.03	0.03	0.072	0.03	0.03	0.174

Omniksol-5k-TL2						
Protection. Loss of Mains test. The requirement is specified in section 5.3.2, test procedure in Annex A or B 1.3.4						
Note: Inverter tested according to BS EN 62116.						
Test Power and imbalance	33% -5% Q Test 22	66% -5% Q Test 12	100% -5% P Test 5	33% +5% Q Test 31	66% +5% Q Test 21	100% +5% P Test 10
Trip time. Limit is 0.5s	0.03	0.03	0.003	0.03	0.03	0.1

Protection. Frequency change, Stability test The requirement is specified in section 5.3.3, test procedure in Annex A or B 1.3.6				
	Start Frequency	Change	End Frequency	Confirm no trip
Positive Vector Shift	49.5Hz	+9 degrees		N
Negative Vector Shift	50.5Hz	- 9 degrees		N
Positive Frequency drift	49.5Hz	+0.19Hz/sec	51.5Hz	N
Negative Frequency drift	50.5Hz	-0.19Hz/sec	47.5Hz	N

Protection. Re-connection timer. The requirement is specified in section 5.3.4, test procedure in Annex A or B 1.3.5					
Test proves that the reconnection sequence starts after a minimum delay of 20 seconds for restoration of voltage and frequency to within the stage 1 settings of table 1 of the subject normative.					
Time delay	Measured delay	No reconnection when voltage or frequency is brought to just outside			
	26S	At 266.2V	At 196.1V	At 47.4Hz	At 51.6Hz
Confirmation that the SSEG does not re-connect.		N	N	N	N

Omniksol-10k-TL2					
Fault level contribution. The requirement is specified in section 5.7 test procedure in Annex A or B 1.4.6					
For a directly coupled SSEG			For a Inverter SSEG		
Parameter	Symbol	Value	Time after fault	Volts	Amps
Peak Short Circuit current	i_p		20ms	39.0V	0.090
Initial Value of aperiodic current	A		100ms	38.7V	0.091
Initial symmetrical short-circuit current*	I_k		250ms	38.8V	0.091
Decaying (aperiodic) component of short circuit current*	i_{DC}		500ms	38.9V	0.091
Reactance/Resistance Ratio of source*	X/R		Time to trip	0.026	(in seconds)

Omniksol-9k-TL2

Fault level contribution.

The requirement is specified in section 5.7 test procedure in Annex A or B 1.4.6

For a directly coupled SSEG			For a Inverter SSEG		
Parameter	Symbol	Value	Time after fault	Volts	Amps
Peak Short Circuit current	i_p		20ms	39.1V	0.091
Initial Value of aperiodic current	A		100ms	39.1V	0.091
Initial symmetrical short-circuit current*	I_k		250ms	39.0V	0.091
Decaying (aperiodic) component of short circuit current*	i_{DC}		500ms	39.0V	0.091
Reactance/Resistance Ratio of source*	X/R		Time to trip	0.025	(in seconds)

Omniksol-8k-TL2

Fault level contribution.

The requirement is specified in section 5.7 test procedure in Annex A or B 1.4.6

For a directly coupled SSEG			For a Inverter SSEG		
Parameter	Symbol	Value	Time after fault	Volts	Amps
Peak Short Circuit current	i_p		20ms	39.3V	0.088
Initial Value of aperiodic current	A		100ms	40.3V	0.088
Initial symmetrical short-circuit current*	I_k		250ms	40.2V	0.89
Decaying (aperiodic) component of short circuit current*	i_{DC}		500ms	40.3V	0.89
Reactance/Resistance Ratio of source*	X/R		Time to trip	0.025	(in seconds)

Omniksol-6k-TL2

Fault level contribution.

The requirement is specified in section 5.7 test procedure in Annex A or B 1.4.6

For a directly coupled SSEG			For a Inverter SSEG		
Parameter	Symbol	Value	Time after fault	Volts	Amps
Peak Short Circuit current	i_p		20ms	39.9V	0.92
Initial Value of aperiodic current	A		100ms	39.9V	0.92
Initial symmetrical short-circuit current*	I_k		250ms	39.8V	0.93
Decaying (aperiodic) component of short circuit current*	i_{DC}		500ms	39.8V	0.93
Reactance/Resistance Ratio of source*	X/R		Time to trip	0.025	(in seconds)

Omniksol-5k-TL2

Fault level contribution.

The requirement is specified in section 5.7 test procedure in Annex A or B 1.4.6

For a directly coupled SSEG			For a Inverter SSEG		
Parameter	Symbol	Value	Time after fault	Volts	Amps
Peak Short Circuit current	i_p		20ms	40.1V	0.89
Initial Value of aperiodic current	A		100ms	39.8V	0.89
Initial symmetrical short-circuit current*	I_k		250ms	39.8V	0.90
Decaying (aperiodic) component of short circuit current*	i_{DC}		500ms	39.7V	0.91
Reactance/Resistance Ratio of source*	X/R		Time to trip	0.025	(in seconds)

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