TL-395

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TEST REPORT
IEC 61727
Photovoltaic (PV) systems – Characteristics of the utility interface

Report Number. ..... :	260302136GZU-001
Date of issue ..... :	12 Mar 2026
Total number of pages ..... :	25 Pages
Name of Testing Laboratory preparing the Report ..... :	Intertek Testing Services Shenzhen Ltd. Guangzhou Branch Room101/301/401/102/202/302/402/502/602/702/802, No. 7-2, Caipin Road, Huangpu District, Guangzhou, Guangdong, China.
Applicant's name ..... :	Shenzhen Lux Power Technology Co., Ltd.
Address ..... :	C501, Building A, Donghua Industrial Park, 5003 Bao'an Avenue, Sanwei Community, Hangcheng Street, Bao'an District, Shenzhen, 518126, China.
Test specification:	
Standard ..... :	IEC 61727:2004
Test procedure ..... :	Type approval
Non-standard test method ..... :	N/A
Test Report Form No. ..... :	IEC61727B
Test Report Form(s) Originator .... :	TÜV SÜD Product Service GmbH
Master TRF ..... :	Dated 2017-11-03

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

General disclaimer:

The test results presented in this report relate only to the object tested.
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Test item description . :	Smart PCS
Trade Mark ..... :	Lux Power
Manufacturer..... :	Same as Applicant
Model/Type reference :	SNA PRO-EU 3K, SNA PRO-EU 4K, SNA PRO-EU 5K , SNA PRO-EU 6K, SNA PRO-EU 6.5K

Ratings ..... :

Model	SNA PRO-EU 3K	SNA PRO-EU 4K	SNA PRO-EU 5K	SNA PRO-EU 6K	SNA PRO-EU 6.5K
Input (PV)					
Max. input voltage	500 Vd.c.				
MPPT voltage range	80-400 Vd.c.				
Max. short-circuit current	25/25 Ad.c.				
Max. input current per MPPT	20/20 Ad.c.				
Input(Battery)					
Battery type	Lithium-ion/Lead-Acid				
Battery voltage range	38.4-60 Vd.c.				
Max. charging current	70 Ad.c.	90 Ad.c.	110 Ad.c.	135 Ad.c.	135 Ad.c.
Max. charging current power	3000 W	4000 W	5000 W	6000 W	6500 W
Output/Input (On Grid)					
Rated output power	3000 W	4000 W	5000 W	6000 W	6500 W
Rated intput power	6000 W	8000 W	8000 W	9000 W	9000 W
Max. apparent power	3000 VA	4000 VA	5000 VA	6000 VA	6500 VA
Rated output voltage	220/230 Va.c., L/N/PE				
Max. output	13 Aa.c.	17.5	22 Aa.c.	26.5	28.2

current		Aa.c.		Aa.c.	Aa.c.
Max. intput current	26 Aa.c.	35 Aa.c.	35 Aa.c.	39.1 Aa.c.	39.1 Aa.c.
Rated AC grid frequency	50/60 Hz				
Adjustable power factor	0.9 leading-0.9 lagging				
Backup parameter (AC)					
Rated output power	2000 W	2000 W	2000 W	3000 W	3000 W
Max. output current	8.6 Aa.c.	8.6 Aa.c.	8.6 Aa.c.	13 Aa.c.	13 Aa.c.
Rated output voltage	220/230 Va.c., L/N/PE				
AC frequency	50/60 Hz				
General Data					
Safety level	Class I				
Degree of protection	IP66				
Operating temperature range	-25~60 °C (derating at 45°C)				
FW Version	V1.0				

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):			
☒	**Testing Laboratory:**	Intertek Testing Services Shenzhen Ltd. Guangzhou Branch	
Testing location/ address.....:		Room101/301/401/102/202/302/402/502/602/702/802, No. 7-2, Caipin Road, Huangpu District, Guangzhou, Guangdong, China.	
☐	**Associated CB Testing Laboratory:**	N/A	
Testing location/ address.....:		N/A	
Tested by (name, function, signature).....:		Charlie Yang Engineer	Charlie Yang
Approved by (name, function, signature)...:		Jason Fu Supervisor	Jason Fu
☐	**Testing procedure: TMP/CTF Stage 1:**	N/A	
Testing location/ address.....:		N/A	
Tested by (name, function, signature).....:		N/A	
Approved by (name, function, signature)...:		N/A	
☐	**Testing procedure: WMT/CTF Stage 2:**	N/A	
Testing location/ address.....:		N/A	
Tested by (name + signature).....:		N/A	
Witnessed by (name, function, signature) .:		N/A	
Approved by (name, function, signature)...:		N/A	
☐	**Testing procedure: SMT/CTF Stage 3 or 4:**	N/A	
Testing location/ address.....:		N/A	
Tested by (name, function, signature).....:		N/A	
Witnessed by (name, function, signature) .:		N/A	
Approved by (name, function, signature)...:		N/A	
Supervised by (name, function, signature) :		N/A	

List of Attachments (including a total number of pages in each attachment): **Appendix 1: photos (2 pages)**	
Summary of testing:	
Tests performed (name of test and test clause): All applicable tests	**Testing location:** Intertek Testing Services Shenzhen Ltd. Guangzhou Branch Room 101/301/401/102/202/302/402/502/602/702/802, No. 7-2, Caipin Road, Huangpu District, Guangzhou, Guangdong, China.
Summary of compliance with National Differences: **List of countries addressed** N/A ☒ **The product fulfils the requirements of IEC 61727:2004**	

Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

LUX POWER TEK

Energy Storage Inverter

Model Name	SNA PRO-EU 6.5K
PV Input	
Max. PV Input voltage	500d.c.V
MPPT voltage range	80-400d.c.V
Number of MPPT Inputs	2
Inputs per MPPT	1/1
Max. PV short current(Input A/B)	25d.c.A/25d.c.A
Max. PV current(Input A/B)	20d.c.A/20d.c.A
Max. PV power	12000W(6000W+6000W)
AC Input	
Nominal AC voltage, Frequency	230.a.c.V,50Hz/60Hz
Max. GRID Input	39.1a.c.A,9000W
Max. GEN Input	32a.c.A,7370W
Max. AC charging power to battery	6500W
AC Output(Back-up)	
Nominal voltage,current	230a.c.V/28.2a.c.A
Frequency	50Hz/60Hz
Nominal output power	6500W(L-N)
Output power factor	0.75~0.99
Battery	
Battery type	Lithium-ion/Lead-Acid
Battery voltage range	38.4d.c.V-60d.c.V
Nominal voltage	48d.c.V
Max. charge and discharge current	135d.c.A/140d.c.A
Max. charge and discharge power	6500W/6500W
Environment	
Altitude	<6561ft
Ingress protection rating	IP66
Protective class	I
Operating environment temperature	0-45°C
Display	LCD+LED
Communication	RS485/WIFI/CAN

5min

Shenzhen Lux Power Technology Co., Ltd
C501, Building A, Donghua Industrial Park, 5003 Bao'an Avenue, Sanwei Community, Hangcheng Street, Bao'an District, Shenzhen, 518126, China.

Note:

1. The above markings are the minimum requirements required by the safety standard. For the final production samples, the additional markings which do not give rise to misunderstanding may be added.
2. Label is attached on the side surface of enclosure and visible after installation.
3. Other models same as above except rating parameters.

Test item particulars..... :	
Classification of installation and use..... :	Fixed and outdoor used
Supply Connection ..... :	Permanent connection
Possible test case verdicts:	
- test case does not apply to the test object .....:	N/A
- test object does meet the requirement.....:	P (Pass)
- test object does not meet the requirement .....:	F (Fail)
Testing.....:	
Date of receipt of test item .....:	02 Mar 2026
Date (s) of performance of tests .....:	03 Mar 2026 – 10 Mar 2026

General remarks:

"(See Enclosure #)" refers to additional information appended to the report.
"(See appended table)" refers to a table appended to the report.
Throughout this report a ☐ comma / ☒ point is used as the decimal separator.

Determination of the test conclusion is based on IEC Guide 115 in consideration of measurement uncertainty.

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The test report only allows to be revised only within the report defined retention period unless standard or regulation was withdrawn or invalid.

Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided .....:	☐ **Yes** ☒ **Not applicable**

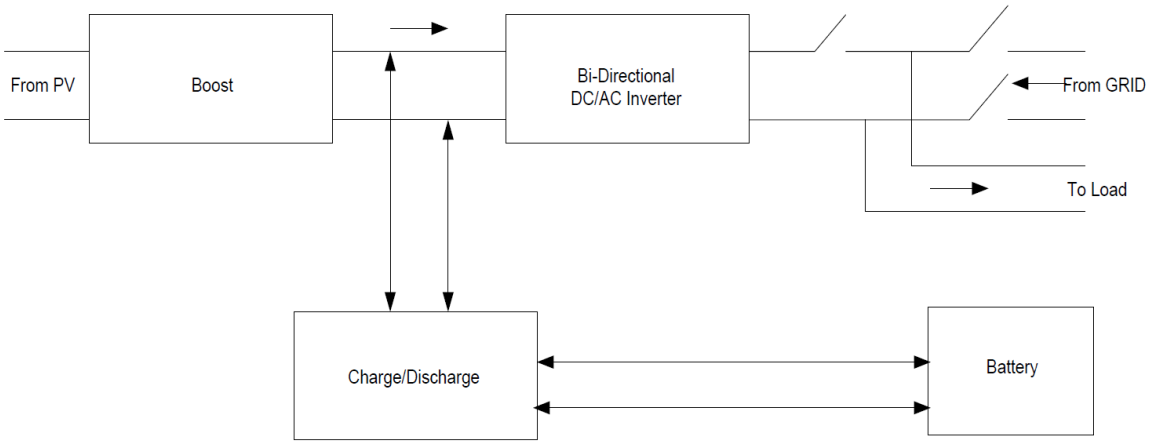
When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies) .....:	Huizhou Jingchuangyuan Technology Co., Ltd No.86, Hechang 7th Road (W), Zhongkai High-tech Zone, Huizhou, Guangdong, China

General product information:

1)The Solar Inverter converts DC voltage into AC voltage.
2)The enclosure assembly was secured by screws.
3) Dusty conditions on the unit may impair the performance of this inverter.
4) It is manufactured to be mounted on a wall and its degree of protection is IP65.
5) The ambient temperature should be between -10'C and +50°C to ensure optimal operation.
6) All models have the similar constructions, circuit diagram and PCB layout except model name and outputpower. (See below table for details) Unless otherwise stated, all tests were performed on model SNA PRO.EU 6.5K,which means the typical model.

The topology diagram as following:



The product was tested on:

The Software version: CHAA-xx02

The Hardware version: E

IEC61727			
Cl.	Requirement - Test	Result	Verdict

4	**UTILITY COMPATIBILITY**		**P**
	The quality of power provided by the PV system for the on-site AC loads and for power delivered to the utility is governed by practices and standards on voltage, flicker, frequency, harmonics and power factor.		P
	Deviation from these standards represents out-of-bounds conditions and may require the PV system to sense the deviation and properly disconnect from the utility system.		P
4.1	**Voltage, current and frequency**		**P**
	The PV system AC voltage, current and frequency are compatible with the utility system.		P
4.2	**Normal voltage operating range**		**P**
	Utility-interconnected PV systems do not normally regulate voltage, they inject current into the utility. Therefore, the voltage operating range for PV inverters is selected as a protection function that responds to abnormal utility conditions, not as a voltage regulation function.		P
4.3	**Flicker**		**P**
	The operation of the PV system is not cause voltage flicker in excess of limits stated in the relevant sections of IEC 61000-3-3 for systems less than 16 A or IEC 61000-3-5 for systems with current of 16 A and above.		P
4.4	**DC injection**		**P**
	The PV system is not inject DC current greater than 1 % of the rated inverter output current, into the utility AC interface under any operating condition.	(See appended table)	P
4.5	**Normal frequency operating range**		**P**
	The PV system operates in synchronism with the utility system, and within the frequency trip limits defined in 5.2.2.		P
4.6	**Harmonics and waveform distortion**		**P**
	Total harmonic current distortion is less than 5 % at rated inverter output. Each individual harmonic is limited to the percentages listed in Table 1.	(See appended table)	P
	Even harmonics in these ranges is less than 25 % of the lower odd harmonic limits listed.		P

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Cl.	Requirement - Test	Result	Verdict

	Table 1 – Current distortion limits **Odd harmonics** / **Distortion limit** 3rd through 9th — Less than 4,0 % 11th through 15th — Less than 2,0 % 17th through 21st — Less than 1,5 % 23rd through 33rd — Less than 0,6 % **Even harmonics** / **Distortion limit** 2nd through 8th — Less than 1,0 % 10th through 32nd — Less than 0,5 %		P
4.7	The PV system has a lagging power factor greater than 0,9 when the output is greater than 50 % of the rated inverter output power.		P
5	**PERSONNEL SAFETY AND EQUIPMENT PROTECTION**		**P**
	This Clause provides information and considerations for the safe and proper operation of the utility-connected PV systems.		P
5.1	**Loss of utility voltage**		**P**
	To prevent islanding, a utility connected PV system ceases to energize the utility system from a de-energized distribution line irrespective of connected loads or other generators within specified time limits.	Complied with IEC 62116, See the separate report for reference Report No.:260302136GZU-002	P
	A utility distribution line can become de-energized for several reasons. For example, a substation breaker opening due to fault conditions or the distribution line switched out during maintenance.		P
5.2	**Over/under voltage and frequency**		**P**
	The abnormal utility conditions of concern are voltage and frequency excursions above or below the values stated in this Clause, and the complete disconnection of the utility, presenting the potential for a distributed resource island.		P
5.2.1	**Over/under voltage**		**P**
	When the interface voltage deviates outside the conditions specified in Table 2, the photovoltaic system ceases to energize the utility distribution system. This applies to any phase of a multiphase system.	(See appended table)	P

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Cl.	Requirement - Test	Result	Verdict
	Table 2 – Response to abnormal voltages Voltage (at point of utility connection) / Maximum trip time* V < 0,5 × Vnominal / 0,1 s 50 % ≤ V < 85 % / 2,0 s 85 % ≤ V ≤ 110 % / Continuous operation 110 % < V < 135 % / 2,0 s 135 % ≤ V / 0,05 s * Trip time refers to the time between the abnormal condition occurring and the inverter ceasing to energize the utility line. The PV system control circuits shall actually remain connected to the utility to allow sensing of utility electrical conditions for use by the "reconnect" feature.		P
5.2.2	**Over/under frequency**		**P**
	When the utility frequency deviates outside the specified conditions the photovoltaic system ceases to energize the utility line. The unit does not have to cease to energize if the frequency returns to the normal utility continuous operation condition within the specified trip time.	(See appended table)	P
	When the utility frequency is outside the range of ±1 Hz, the system ceases to energize the utility line within 0,2 s. The purpose of the allowed range and time delay is to allow continued operation for short-term disturbances and to avoid excessive nuisance tripping in weak-utility system conditions.		P
5.3	**Islanding protection**		**P**
	The PV system must cease to energize the utility line within 2 s of loss of utility.		P
5.4	**Response to utility recovery**		**P**
	Following an out-of-range utility condition that has caused the photovoltaic system to cease energizing, the photovoltaic system is not energize the utility line for 20 s to 5 min after the utility service voltage and frequency have recovered to within the specified ranges.	(See appended table)	P
5.5	**Earthing**		**P**
	The utility interface equipment is earthed/grounded in accordance with IEC 60364-7-712.		P
5.6	**Short circuit protection**		**N/A**
	The photovoltaic system has short-circuit protection in accordance with IEC 60364-7-712.	Should consider in the end use	N/A
5.7	**Isolation and switching**		N/A
	A method of isolation and switching is provided in accordance with IEC 60364-7-712.	Should consider in the end use	N/A

4.3	TABLE: Flicker			P
Model: SNA PRO-EU 3K				
	Starting	**Stopping**	**Running**	
Limit	**4%**	**4%**	**Pst = 1.0**	**Plt = 0.65**
Test value L1-N	0.001	0.001	0.094	0.056
Model: SNA PRO-EU 3K				
	Starting	**Stopping**	**Running**	
Limit	**4%**	**4%**	**Pst = 1.0**	**Plt = 0.65**
Test value L1-N	0.001	0.001	0.017	0.017
Supplementary information: Test with 220 Va.c.				

4.3	TABLE: Flicker			P
Model: SNA PRO-EU 6.5K				
	Starting	**Stopping**	**Running**	
Limit	**4%**	**4%**	**Pst = 1.0**	**Plt = 0.65**
Test value L1-N	0.001	0.001	0.082	0.056
Model: SNA PRO-EU 6.5K				
	Starting	**Stopping**	**Running**	
Limit	**4%**	**4%**	**Pst = 1.0**	**Plt = 0.65**
Test value L1-N	0.001	0.001	0.017	0.017
Supplementary information: Test with 230 Va.c.				

4.4	TABLE: Direct current injection								
Rated output current (A)	**Ratio of rated output power (VA)**	**Measured DC output current between terminals**						**Isolated transformer ? (Yes/No)**	**Limit (mA)**
		L1-L2 (mA)	**L1-L3 (mA)**	**L2-L3 (mA)**	**L1-N (mA)**	**L2-N (mA)**	**L3-N (mA)**		
Model: SNA PRO-EU 3K									
13.64	33%	--	--	--	64	--	--	No	136.4
13.64	66%	--	--	--	58	--	--	No	136.4
13.64	100%	--	--	--	72	--	--	No	136.4
Model: SNA PRO-EU 6.5K									
29.55	33%	--	--	--	141	--	--	No	295.5
29.55	66%	--	--	--	161	--	--	No	295.5

29.55	100%	--	--	--	155	--	--	No	295.5
Supplementary information: Test with 220 Va.c.									

4.4	TABLE: Direct current injection								P
Rated output current (A)	Ratio of rated output power (VA)	Measured DC output current between terminals						Isolated transformer ? (Yes/No)	Limit (mA)
		L1-L2 (mA)	L1-L3 (mA)	L2-L3 (mA)	L1-N (mA)	L2-N (mA)	L3-N (mA)		
Model: SNA PRO-EU 3K									
13.04	33%	--	--	--	35	--	--	No	130.4
13.04	66%	--	--	--	33	--	--	No	130.4
13.04	100%	--	--	--	48	--	--	No	130.4
Model: SNA PRO-EU 6.5K									
28.26	33%	--	--	--	137	--	--	No	282.6
28.26	66%	--	--	--	152	--	--	No	282.6
28.26	100%	--	--	--	151	--	--	No	282.6
Supplementary information: Test with 230 Va.c.									

4.6	TABLE: Harmonics and waveform distortion						P
Model: SNA PRO-EU 3K							
Harmonic	fundamental L1 (A)	% of fundamental)	fundamental L2 (A)	% of fundamental)	fundamental L3 (A)	% of fundamental)	Harmonic Current Limits (%)
02	0.024	0.175%	--	--	--	--	1.0%
03	0.309	2.263%	--	--	--	--	4.0%
04	0.026	0.194%	--	--	--	--	1.0%
05	0.072	0.527%	--	--	--	--	4.0%
06	0.012	0.086%	--	--	--	--	1.0%
07	0.071	0.523%	--	--	--	--	4.0%
08	0.008	0.058%	--	--	--	--	1.0%
09	0.062	0.455%	--	--	--	--	4.0%
10	0.010	0.077%	--	--	--	--	0.5%
11	0.048	0.351%	--	--	--	--	2.0%
12	0.005	0.035%	--	--	--	--	0.5%
13	0.064	0.472%	--	--	--	--	2.0%
14	0.006	0.045%	--	--	--	--	0.5%

15	0.042	0.304%	--	--	--	--	2.0%
16	0.006	0.047%	--	--	--	--	0.5%
17	0.030	0.216%	--	--	--	--	1.5%
18	0.003	0.023%	--	--	--	--	0.5%
19	0.031	0.228%	--	--	--	--	1.5%
20	0.007	0.054%	--	--	--	--	0.5%
21	0.036	0.263%	--	--	--	--	1.5%
22	0.004	0.032%	--	--	--	--	0.5%
23	0.019	0.141%	--	--	--	--	0.6%
24	0.003	0.022%	--	--	--	--	0.5%
25	0.017	0.128%	--	--	--	--	0.6%
26	0.005	0.034%	--	--	--	--	0.5%
27	0.023	0.166%	--	--	--	--	0.6%
28	0.011	0.081%	--	--	--	--	0.5%
29	0.021	0.152%	--	--	--	--	0.6%
30	0.026	0.192%	--	--	--	--	0.5%
31	0.023	0.170%	--	--	--	--	0.6%
32	0.012	0.090%	--	--	--	--	0.5%
33	0.011	0.080%	--	--	--	--	0.6%
THD	2.602%		--		--		5%

Model: SNA PRO-EU 6.5K

Harmonic	fundamental L1 (A)	% of fundamental)	fundamental L2 (A)	% of fundamental)	fundamental L3 (A)	% of fundamental)	Harmonic Current Limits (%)
02	0.030	0.229%	--	--	--	--	1.0%
03	0.302	2.316%	--	--	--	--	4.0%
04	0.026	0.202%	--	--	--	--	1.0%
05	0.070	0.539%	--	--	--	--	4.0%
06	0.016	0.123%	--	--	--	--	1.0%
07	0.048	0.371%	--	--	--	--	4.0%
08	0.005	0.037%	--	--	--	--	1.0%
09	0.078	0.600%	--	--	--	--	4.0%
10	0.014	0.107%	--	--	--	--	0.5%
11	0.040	0.304%	--	--	--	--	2.0%

12	0.005	0.038%	--	--	--	--	0.5%
13	0.043	0.332%	--	--	--	--	2.0%
14	0.003	0.022%	--	--	--	--	0.5%
15	0.041	0.316%	--	--	--	--	2.0%
16	0.009	0.068%	--	--	--	--	0.5%
17	0.041	0.316%	--	--	--	--	1.5%
18	0.005	0.037%	--	--	--	--	0.5%
19	0.030	0.230%	--	--	--	--	1.5%
20	0.004	0.032%	--	--	--	--	0.5%
21	0.023	0.178%	--	--	--	--	1.5%
22	0.009	0.069%	--	--	--	--	0.5%
23	0.031	0.236%	--	--	--	--	0.6%
24	0.007	0.052%	--	--	--	--	0.5%
25	0.021	0.162%	--	--	--	--	0.6%
26	0.005	0.038%	--	--	--	--	0.5%
27	0.015	0.117%	--	--	--	--	0.6%
28	0.011	0.085%	--	--	--	--	0.5%
29	0.023	0.180%	--	--	--	--	0.6%
30	0.024	0.183%	--	--	--	--	0.5%
31	0.015	0.117%	--	--	--	--	0.6%
32	0.013	0.099%	--	--	--	--	0.5%
33	0.009	0.067%	--	--	--	--	0.6%
THD	2.645%		--		--		5%
Supplementary information:Test with 220 Va.c.							

4.6	**TABLE: Harmonics and waveform distortion**						**P**
Model: SNA PRO-EU 3K							
Harmonic	**fundamental L1 (A)**	**% of fundamental)**	**fundamental L2 (A)**	**% of fundamental)**	**fundamental L3 (A)**	**% of fundamental)**	**Harmonic Current Limits (%)**
02	0.017	0.059%	--	--	--	--	1.0%
03	1.177	3.985%	--	--	--	--	4.0%
04	0.014	0.048%	--	--	--	--	1.0%
05	0.164	0.555%	--	--	--	--	4.0%

06	0.038	0.127%	--	--	--	--	1.0%
07	0.019	0.066%	--	--	--	--	4.0%
08	0.020	0.069%	--	--	--	--	1.0%
09	0.217	0.734%	--	--	--	--	4.0%
10	0.010	0.035%	--	--	--	--	0.5%
11	0.099	0.335%	--	--	--	--	2.0%
12	0.003	0.010%	--	--	--	--	0.5%
13	0.148	0.500%	--	--	--	--	2.0%
14	0.007	0.024%	--	--	--	--	0.5%
15	0.097	0.329%	--	--	--	--	2.0%
16	0.004	0.012%	--	--	--	--	0.5%
17	0.062	0.211%	--	--	--	--	1.5%
18	0.004	0.014%	--	--	--	--	0.5%
19	0.075	0.254%	--	--	--	--	1.5%
20	0.004	0.012%	--	--	--	--	0.5%
21	0.055	0.185%	--	--	--	--	1.5%
22	0.005	0.018%	--	--	--	--	0.5%
23	0.017	0.057%	--	--	--	--	0.6%
24	0.006	0.020%	--	--	--	--	0.5%
25	0.044	0.149%	--	--	--	--	0.6%
26	0.006	0.019%	--	--	--	--	0.5%
27	0.048	0.162%	--	--	--	--	0.6%
28	0.014	0.047%	--	--	--	--	0.5%
29	0.024	0.081%	--	--	--	--	0.6%
30	0.026	0.090%	--	--	--	--	0.5%
31	0.043	0.146%	--	--	--	--	0.6%
32	0.012	0.039%	--	--	--	--	0.5%
33	0.030	0.101%	--	--	--	--	0.6%
THD	4.182		--		--		5%

Model: SNA PRO-EU 6.5K

Harmonic	fundamental L1 (A)	% of fundamental)	fundamental L2 (A)	% of fundamental)	fundamental L3 (A)	% of fundamental)	Harmonic Current Limits (%)
02	0.109	0.387%	--	--	--	--	1.0%

03	0.412	1.459%	--	--	--	--	4.0%
04	0.153	0.543%	--	--	--	--	1.0%
05	0.121	0.427%	--	--	--	--	4.0%
06	0.045	0.160%	--	--	--	--	1.0%
07	0.042	0.149%	--	--	--	--	4.0%
08	0.071	0.250%	--	--	--	--	1.0%
09	0.090	0.319%	--	--	--	--	4.0%
10	0.011	0.040%	--	--	--	--	0.5%
11	0.051	0.179%	--	--	--	--	2.0%
12	0.029	0.103%	--	--	--	--	0.5%
13	0.087	0.309%	--	--	--	--	2.0%
14	0.049	0.173%	--	--	--	--	0.5%
15	0.067	0.237%	--	--	--	--	2.0%
16	0.011	0.041%	--	--	--	--	0.5%
17	0.034	0.122%	--	--	--	--	1.5%
18	0.044	0.156%	--	--	--	--	0.5%
19	0.087	0.309%	--	--	--	--	1.5%
20	0.054	0.191%	--	--	--	--	0.5%
21	0.029	0.103%	--	--	--	--	1.5%
22	0.025	0.089%	--	--	--	--	0.5%
23	0.022	0.076%	--	--	--	--	0.6%
24	0.053	0.187%	--	--	--	--	0.5%
25	0.069	0.245%	--	--	--	--	0.6%
26	0.063	0.224%	--	--	--	--	0.5%
27	0.014	0.050%	--	--	--	--	0.6%
28	0.021	0.076%	--	--	--	--	0.5%
29	0.035	0.125%	--	--	--	--	0.6%
30	0.046	0.162%	--	--	--	--	0.5%
31	0.046	0.162%	--	--	--	--	0.6%
32	0.021	0.076%	--	--	--	--	0.5%
33	0.023	0.080%	--	--	--	--	0.6%
THD	2.199%		--		--		5%
Supplementary information:Test with 230 Va.c.							

4.7	TABLE: Power factor	P

Model: SNA PRO-EU 3K

	Input			Output				
No	Voltage (V d.c.)	Current (A d.c.)	Power (W)	Voltage (V a.c.)	Current (A a.c.)	Power (W)	Power factor (+/-)	Rated output (V.A)
1	374.42	2.02	526.32	219.92	2.93	604.42	0.9884	(20±5)%
2	374.41	2.90	857.26	219.93	4.25	908.53	0.9727	(30±5)%
3	374.41	3.59	1187.37	219.94	5.60	1212.49	0.9846	(40±5)%
4	374.40	4.58	1532.64	219.95	6.97	1517.42	0.9897	(50±5)%
5	374.34	5.46	1880.14	219.96	8.34	1821.40	0.9926	(60±5)%
6	374.32	6.23	2218.29	219.98	9.72	2125.36	0.9945	(70±5)%
7	374.29	6.96	2549.42	219.99	11.09	2428.65	0.9958	(80±5)%
8	372.74	7.80	2874.02	220.00	12.46	2731.41	0.9967	(90±5)%
9	371.38	8.57	3155.33	220.01	13.59	2981.61	0.9972	(100±5)%

Model: SNA PRO-EU 6.5K

	Input			Output				
No	Voltage (V d.c.)	Current (A d.c.)	Power (W)	Voltage (V a.c.)	Current (A a.c.)	Power (W)	Power factor (+/-)	Rated output (V.A)
1	370.67	3.34	1228.89	219.94	6.05	1312.56	0.9863	(20±5)%
2	368.93	5.23	1908.56	219.97	9.02	1970.72	0.9936	(30±5)%
3	368.46	7.39	2646.51	219.99	11.99	2627.46	0.9958	(40±5)%
4	371.33	9.42	3492.97	220.02	14.97	3282.53	0.9968	(50±5)%
5	368.18	11.76	4289.20	220.04	17.95	3939.33	0.9974	(60±5)%
6	368.48	14.91	5481.57	220.07	21.05	4623.05	0.9979	(70±5)%
7	364.18	17.41	6320.22	220.09	23.90	5251.80	0.9983	(80±5)%
8	361.40	19.31	6958.19	220.11	26.88	5907.64	0.9986	(90±5)%
9	351.60	19.61	6887.29	220.14	29.61	6509.20	0.9987	(100±5)%

Supplementary information:
Test with 220 Va.c.
Power factor with “+” indicating leading and “-“ indicating lagging.

4.7	TABLE: Power factor	P

Model: SNA PRO-EU 3K

	Input			Output				
No	Voltage (V d.c.)	Current (A d.c.)	Power (W)	Voltage (V a.c.)	Current (A a.c.)	Power (W)	Power factor (+/-)	Rated output (V.A)
1	369.71	1.97	500.61	229.91	2.82	603.84	0.9805	(20±5)%
2	368.89	2.63	814.05	229.92	4.08	908.59	0.9682	(30±5)%
3	368.42	3.39	1126.22	229.94	5.37	1212.54	0.9820	(40±5)%
4	369.00	4.01	1439.99	229.95	6.68	1517.36	0.9879	(50±5)%
5	367.95	4.94	1754.56	229.96	7.99	1821.66	0.9913	(60±5)%
6	366.61	5.85	2072.12	229.97	9.30	2125.14	0.9936	(70±5)%
7	365.23	6.78	2387.88	229.98	10.61	2428.26	0.9950	(80±5)%
8	365.25	7.54	2697.80	229.99	11.92	2731.68	0.9961	(90±5)%
9	364.42	8.30	2978.22	230.00	13.10	3002.99	0.9967	(100±5)%

Model: SNA PRO-EU 6.5K

	Input			Output				
No	Voltage (V d.c.)	Current (A d.c.)	Power (W)	Voltage (V a.c.)	Current (A a.c.)	Power (W)	Power factor (+/-)	Rated output (V.A)
1	345.20	19.31	6653.41	230.11	28.24	6490.46	0.9986	(20±5)%
2	348.35	17.51	6025.46	230.09	25.68	5899.72	0.9984	(30±5)%
3	351.61	15.50	5337.46	230.07	22.85	5247.73	0.9981	(40±5)%
4	354.88	13.45	4643.17	230.05	20.01	4593.20	0.9977	(50±5)%
5	359.81	11.17	3955.88	230.03	17.17	3937.70	0.9970	(60±5)%
6	362.02	9.27	3270.37	230.00	14.32	3282.49	0.9964	(70±5)%
7	365.03	7.24	2587.02	229.98	11.48	2626.82	0.9952	(80±5)%
8	367.93	5.29	1912.47	229.96	8.64	1970.95	0.9925	(90±5)%
9	369.08	3.51	1233.55	229.93	5.80	1311.88	0.9832	(100±5)%

Supplementary information:
Test with 230 Va.c.
Power factor with “+” indicating leading and “-“ indicating lagging.

5.2.1 & 5.4	TABLE: Under-and over-voltage trip settings and reconnection test	P

(1) Under voltage disconnection procedure

Rated output voltage (V)	Output power (VA)	Required min. voltage (V)	Value of PCE trip settings (V)	Ratio of decreased (V / s)	Interval time (s)	Measured tripped voltage (V)	Measured disconnection time (s)
220	6500	187	187	0.1	2	188	1.955
Rated output voltage (V)	Output power (VA)	Required min. voltage (V)	Value of PCE trip settings (V)	Ratio of decreased (V / s)	Interval time (s)	Measured tripped voltage (V)	Measured disconnection time (s)
220	6500	110	110	0.1	1	110	0.067

(2) Under voltage reconnection procedure

Ratio of voltage rapidly decreased (V / s)	Reconnection voltage (V)	Reconnection time (s)
0.1	>187	62

(3) **Over voltage disconnection procedure**

Rated output voltage (V)	Output power (VA)	Required max. voltage (V)	Value of PCE trip settings (V)	Ratio of increased (V / s)	Interval time (s)	Measured tripped voltage (V)	Measured disconnection time (s)
220	6500	242	242	0.1	2	240	1.959
Rated output voltage (V)	Output power (VA)	Required max. voltage (V)	Value of PCE trip settings (V)	Ratio of increased (V / s)	Interval time (s)	Measured tripped voltage (V)	Measured disconnection time (s)
220	6500	297	297	0.1	0.05	297	0.038

(4) Over voltage reconnection procedure

Ratio of voltage rapidly decreased (V / s)	Reconnection voltage (V)	Reconnection time (s)
0.1	<242	62

Supplementary information:
Tested on model SNA PRO-EU 6.5K

5.2.1 & 5.4	TABLE: Under-and over-voltage trip settings and reconnection test	P

(1) Under voltage disconnection procedure

Rated output voltage (V)	Output power (VA)	Required min. voltage (V)	Value of PCE trip settings (V)	Ratio of decreased (V / s)	Interval time (s)	Measured tripped voltage (V)	Measured disconnection time (s)
230	6500	195.5	195.5	0.1	2	196	1.965
Rated output voltage (V)	Output power (VA)	Required min. voltage (V)	Value of PCE trip settings (V)	Ratio of decreased (V / s)	Interval time (s)	Measured tripped voltage (V)	Measured disconnection time (s)

230	6500	115	115	0.1	0.1	115	0.071
(2) Under voltage reconnection procedure							
Ratio of voltage rapidly decreased (V / s)			**Reconnection voltage (V)**			**Reconnection time (s)**	
0.1			>195.5			62	
(3) **Over voltage disconnection procedure**							
Rated output voltage (V)	**Output power (VA)**	**Required max. voltage (V)**	**Value of PCE trip settings (V)**	**Ratio of increased (V / s)**	**Interval time (s)**	**Measured tripped voltage (V)**	**Measured disconnection time (s)**
230	6500	253	253	0.1	2	253	1.967
Rated output voltage (V)	Output power (VA)	Required max. voltage (V)	Value of PCE trip settings (V)	Ratio of increased (V / s)	Interval time (s)	Measured tripped voltage (V)	Measured disconnection time (s)
230	6500	299	299	0.1	0.05	298	0.010
(4) Over voltage reconnection procedure							
Ratio of voltage rapidly decreased (V / s)			**Reconnection voltage (V)**			**Reconnection time (s)**	
0.1			<242			62	
Supplementary information: Tested on model SNA PRO-EU 6.5K							

5.2.2 & 5.4	TABLE: Over/under frequency trip settings and reconnection test	P

(1) Under frequency disconnection procedure

Rated output frequency (Hz)	Output power (VA)	Required min. frequency (Hz)	Value of PCE trip settings (Hz)	Ratio of decreased (Hz / s)	Interval time (s)	Measured tripped frequency (Hz)	Measured disconnection time (s)
50	6500	49	49	0.01	0.3	49	0.158

(2) Under frequency reconnection procedure

Ratio of frequency rapidly decreased (Hz / s)	Reconnection frequency (Hz)	Reconnection time (s)
0.01	>59	62

(3) Over frequency disconnection procedure

Rated output frequency (Hz)	Output power (VA)	Required max. frequency (Hz)	Value of PCE trip settings (Hz)	Ratio of increased (Hz / s)	Interval time (s)	Measured tripped frequency (Hz)	Measured disconnection time (s)
50	6500	51	51	0.01	0.3	50.9	0.159

(4) Over frequency reconnection procedure

Ratio of frequency rapidly decreased (Hz / s)	Reconnection frequency (Hz)	Reconnection time (s)
0.01	<51	62

Supplementary information:
Tested on model SNA PRO-EU 6.5K

5.2.2 & 5.4	TABLE: Over/under frequency trip settings and reconnection test	P

(1) Under frequency disconnection procedure

Rated output frequency (Hz)	Output power (VA)	Required min. frequency (Hz)	Value of PCE trip settings (Hz)	Ratio of decreased (Hz / s)	Interval time (s)	Measured tripped frequency (Hz)	Measured disconnection time (s)
60	6500	59	59	0.01	0.3	59	0.131

(2) Under frequency reconnection procedure

Ratio of frequency rapidly decreased (Hz / s)	Reconnection frequency (Hz)	Reconnection time (s)
0.01	>59	62

(3) Over frequency disconnection procedure

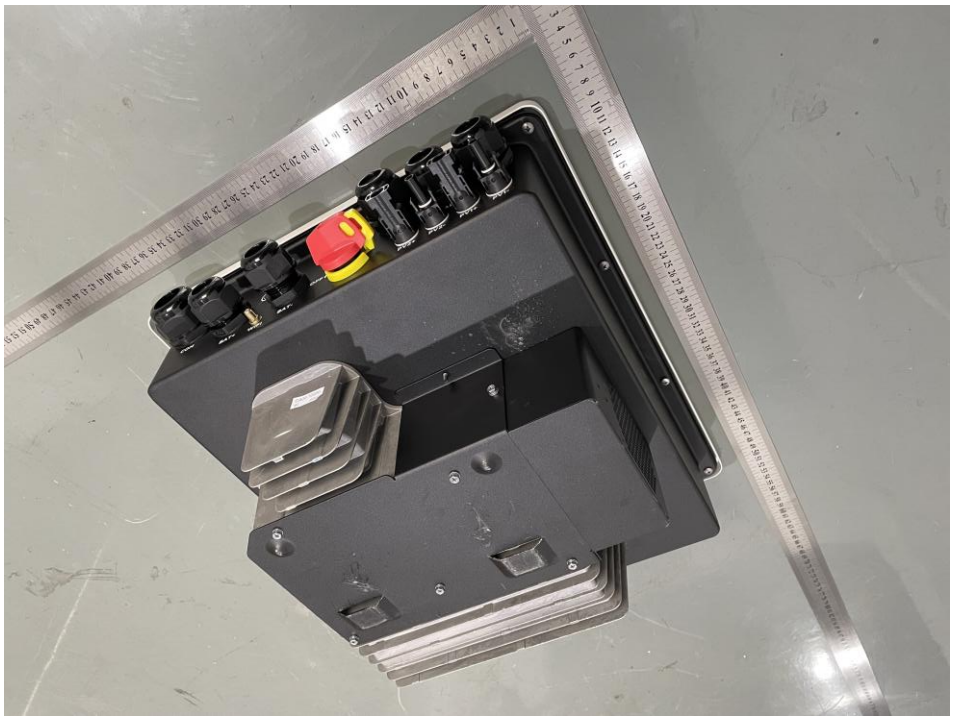
Rated output frequency (Hz)	Output power (VA)	Required max. frequency (Hz)	Value of PCE trip settings (Hz)	Ratio of increased (Hz / s)	Interval time (s)	Measured tripped frequency (Hz)	Measured disconnection time (s)
61	6500	51	61	0.01	0.3	61	0.142

(4) Over frequency reconnection procedure

Ratio of frequency rapidly decreased (Hz / s)	Reconnection frequency (Hz)	Reconnection time (s)
0.01	<51	62
Supplementary information: Tested on model SNA PRO-EU 6.5K		

Appendix 1: Photos

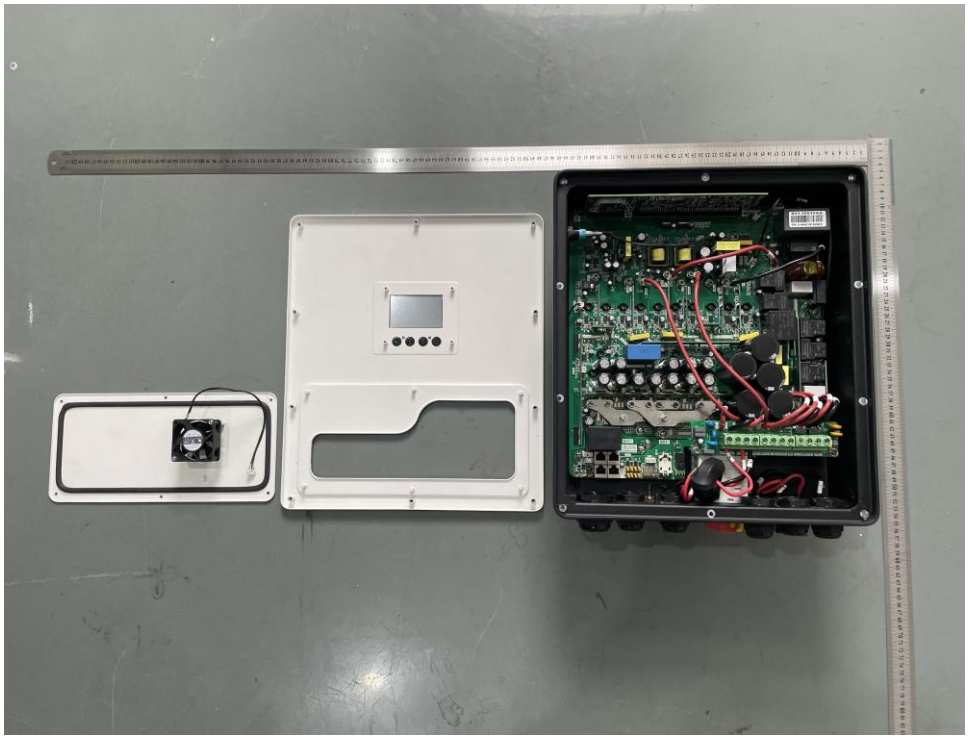
Overview



Bottom view

Appendix 1: Photos

Connection view



Internal view

--- End of test report---