

TEST REPORT

Applicant : Shenzhen SOFAR SOLAR Co., Ltd.
Address : 401, Building 4, AnTongDa Industrial Park, District 68, XingDong Community, XinAn Street, BaoAn District, Shenzhen, China.

Report No : 200303129GZU-001 **Issue Date** : 05 Mar., 2020

Sample Description

Name of Sample : Solar Grid-tied Inverter
Model Number : SOFAR 3KTLM-G2, SOFAR 3.6KTLM-G2, SOFAR 4.0KTLM-G2, SOFAR 4.6KTLM-G2, SOFAR 5KTLM-G2, SOFAR 5.6KTLM-G2, SOFAR 6KTLM-G2
Quantity of Sample(s) : 1
Date of Receival : 03 Mar., 2020
Date of test Conducted : 05 Mar., 2020

Test

Test Requested : IP65
Test Method : Refer to IEC/EN 62109-1:2010 clause 6.3
Test Observation: : See appendix test condition for details
Test Conclusion: : **Pass**
Other information : --
Remark :

- This test report is only for evaluation of the specified standard clauses listed in Test Requested.
- When determine the test result, measurement uncertainty has been considered.

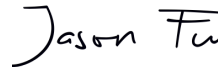
***** End of page *****

Tested by:



Sunny Lin
Engineer

Approved by:



Jason Fu
Technical Team Leader

Note: This document is the property of Intertek Testing Service Shenzhen Ltd. Guangzhou Branch, and it is not transferable. Only the applicant may reproduce it. The testing of this report is type tests. The requirements and tolerances permitted by this report are related to testing of a type-test sample submitted by the manufacturer for that purpose. Compliance of the type-test sample does not ensure compliance of the whole production of a manufacturer.

Note: The testing of this report is type tests. The requirements and tolerances permitted by this report are related to testing of a type-test sample submitted by the manufacturer for that purpose. Compliance of the type-test sample does not ensure compliance of the whole production of a manufacturer.

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

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

Rating:

Model	SOFAR 3KTLM-G2	SOFAR 3.6KTLM-G2	SOFAR 4.0KTLM-G2	SOFAR 4.6KTLM-G2
Max.PV voltage	600 d.c.V			
MPPT voltage range	90-580 d.c.V			
PV Isc	13.2 d.c.A*2			
Max.input current	11 d.c.A*2			
Rated.output power	3000W	3680W	4000W	4600W
Max.output power	3000VA	3680VA	4000VA	4600VA
Nominal output voltage	230 a.c.V			
Max.output current	13.7 a.c.A	16 a.c.A	18.2 a.c.A	21 a.c.A
Nominal output Frequency	50/60Hz			
Power factor range	0.8Leading – 0.8 lagging			
Safety level	Class I			
Ingress Protection	IP 65			
Operation Ambient Temperature	-25°C - +60°C			
Model	SOFAR 5KTLM-G2	SOFAR 5.6KTLM-G2	SOFAR 6KTLM-G2	
Max.PV voltage	600 d.c.V			
MPPT voltage range	90-580 d.c.V			
PV Isc	13.2 d.c.A*2			
Max.input current	11 d.c.A*2			
Rated.output power	5000W	5600W	6000W	
Max.output power	5000W	5600W	6000W	
Nominal output voltage	230 a.c.V			
Max.output current	22.8 a.c.A	25.5 a.c.A	27.3 a.c.A	

Intertek Testing Services Shenzhen Ltd. Guangzhou Branch

Block E, No.7-2 Guang Dong Software Science Park, Caipin Road, Guangzhou Science City, GETDD, Guangzhou, China
Tel: 86 20 8213 9688 Fax: 86 20 3205 7538 www.china.intertek-etlsemko.com

Nominal output Frequency	50/60Hz
Power factor range	0.8Leading – 0.8 lagging
Safety level	Class I
Ingress Protection	IP 65
Operation Ambient Temperature	-25°C - +60°C

Model differences:

All models have identical mechanical and electrical construction except some parameter of the software architecture to control the max output power. The detailed difference as following:

Model Item	SOFAR 6KTLM -G2	SOFAR 5.6KTLM- G2	SOFAR 5KTLM- G2	SOFAR 4.6KTLM- G2	SOFAR 4KTLM - G2	SOFAR 3.6KTLM- G2	SOFAR 3KTLM- G2
Model resistance (R450, R452, R454)	(0Ω, NC, 0Ω)				(NC, 0Ω, NC)		
Bus capacitor	8				6		
inverter inductor	0.75mH				1.035mH		
Output current sampling resistor (R113, R117)	(1kΩ, 1kΩ)				(0Ω, 0Ω)		
Full load MPPT voltage	300- 520Vdc	280- 520Vdc	250- 520Vdc	230- 520Vdc	200- 520Vdc	180- 520Vdc	160- 520Vdc
Output current	27.3A	25.5	22.8A	21A	18.2A	16.8A	13.7A
output power	6000VA	5600VA	5000VA	4600VA	4000VA	3680VA	3000VA

Appendix test condition :

Number	Test items	Test condition	Test result
<u>1</u>	IP6X	The enclosure under test is supported inside the test chamber and the pressure inside the enclosure is maintained below the surrounding atmospheric pressure by a vacuum pump, The suction connection shall be made to a hole specially provided for the test.	No deposit of dust is observable inside the enclosure.
<u>2</u>	IPX5	Internal diameter of the nozzle: 6.3 mm Delivery rate: 12.5 L/min Core of the substantial stream: circle of approximately 40 mm diameter at 2.5 m distance from nozzle Test duration: 3 min Distance from nozzle to enclosure surface: between 2.5 m and 3 m.	No water inside the enclosure

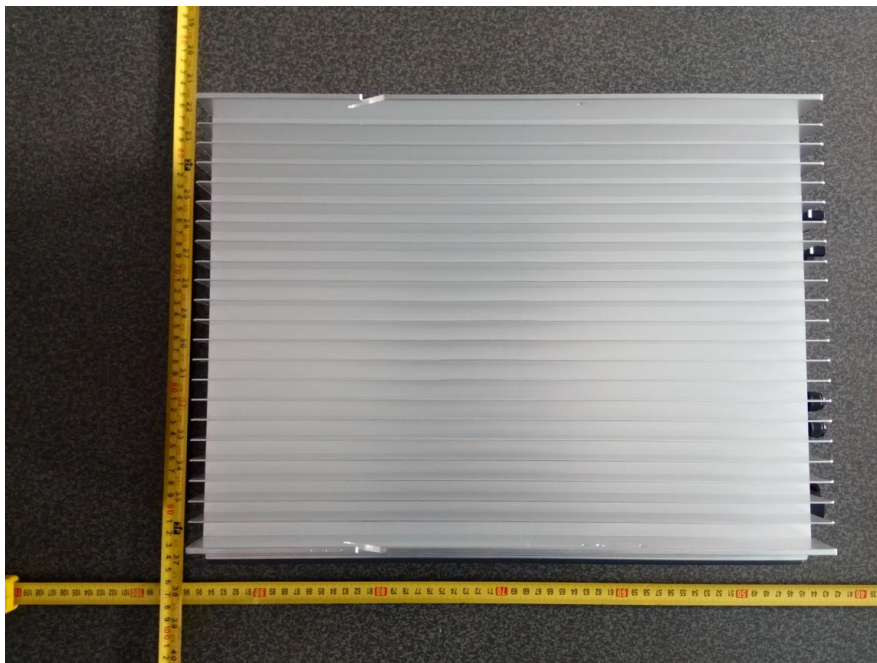
***** End of page *****

Appendix Photos:

Report No.: 200303129GZU-001



Overview



Bottom view

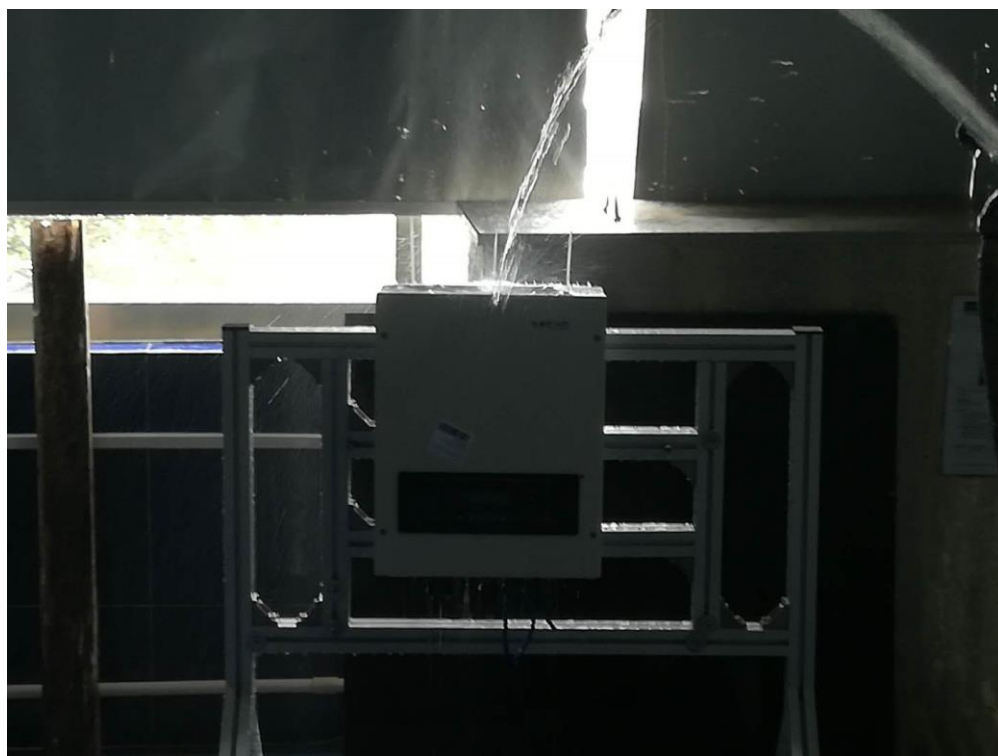
***** End of page *****

Appendix Photos:

Report No.: 200303129GZU-001



Test setup of IP6X



Test setup of IPX5

Intertek Testing Services Shenzhen Ltd. Guangzhou Branch

Block E, No.7-2 Guang Dong Software Science Park, Caipin Road, Guangzhou Science City, GETDD, Guangzhou, China
Tel: 86 20 8213 9688 Fax: 86 20 3205 7538 www.china.intertek-etlsemko.com

© 2016 Intertek

File No.: General-ACCE-001, date: May 2016

Appendix Photos:

Report No.: 200303129GZU-001



Checked after test finish

*****End of report*****