



# **TEST REPORT**

**REPORT NO.:** 190502828RT-2

**PRODUCT:** Solar Grid-tied Inverter

**RECEIVED:** 2019.06.04

**TESTED:** 2019.06.10~2019.06.17

**ISSUED:** 2019.07.08

APPLICANT: EVOLVE ENERGY GROUP CO., LIMITED

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PRODUCT: Solar Grid-tied Inverter

PART NO .: EVVO 3000TLG2, EVVO 3600TLG2, EVVO 4000TLG2,

EVVO 4600TLG2, EVVO 5000TLG2, EVVO 6000TLG2

MANUFACTURER: EVOLVE ENERGY GROUP CO., LIMITED

APPLICANT: EVOLVE ENERGY GROUP CO., LIMITED

**TESTED:** 2019.06.10~2019.06.17

**STANDARDS: IEC60529:2001** 

The above equipment has been tested by Bureau Veritas Consumer Products Services (Guangzhou) Co., Ltd , Science City Branch, The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's Reliability characteristics under the conditions specified in this report.

PREPARED BY:

(Mike Zhu / Project Engineer)

DATE: 7/5, 07/08

**VERIFIED BY:** 

(Jet Ruan / Project Manager)

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# **2 SUMMARY OF TEST RESULTS**

TEST ITEMS	STANDARD	SAMPLE NO.	TEST RESULT
Protection of electrical equipment against foreign objects, water and access (IP65)	IEC60529:2001	GZ190604/001-Q04N03GZ84	Refer to section 4.4

### **3 GENERAL INFORMATION**

#### 3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Solar Grid-tied Inverter	
PARINO	EVVO 3000TLG2, EVVO 3600TLG2, EVVO 4000TLG2, EVVO 4600TLG2, EVVO 5000TLG2, EVVO 6000TLG2	

# 4 PROTECTION OF ELECTRICAL EQUIPMENT AGAINST FOREIGN OBJECTS, WATER AND ACCESS (IP65)

Reference to: IEC 60529:2001

#### 4.1 TEST SAMPLE NO. AND TEST DATE

Sample No.	GZ190604/001-Q04N03GZ84	
Sample quantity	1 PCS	
Test date	2019.06.10~2019.06.17	

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# 4.2 TEST CONDITIONS

4.2 TEST CONDITIONS			
Clauses	Title	Test Conditions	
12.2	Test for first characteristic numeral 6 for protection against access to hazardous parts	The protection is satisfactory if the rigid steel rod 1.0+0.05mm diameter of the probe does not pass through any opening.	
13.4	Test for first characteristic numeral 6 for protection against solid foreign objects	The test is made using a dust chamber incorporating the basic principles shown in below figure, whereby the power circulation pump to maintain the talcum powder in suspension in a closed test chamber, the amount of talcum powder to be used is 2 kg per cubic meter of the test chamber volume, the test period is 8 hours.  Glass window  Glass window  Glass window  Glass window  Circulation pump or other suitable means to maintain the talcum powder in suspension	
14.2.5	Test for second characteristic numeral 5 for protection against water	Nozzles: 6.3 mm diameter, Distance: 2.5 m to 3 m, Water flow rate is 12.5 l/min±5%, Duration: 1min/m², at least 3min Water pressure:30kPa	

# 4.3 TEST REQUIREMENTS

Clauses	Title	Test Requirements	
12.2	Test for first characteristic numeral 6 for protection against access to hazardous parts	Test wire is not access to hazardous parts.	
13.6.2	Test for first characteristic numeral 6 for protection against solid foreign objects	There is no dust be observed.	
14.3	Test for second characteristic numeral 5 for protection against water	There is no water be observed.	



# 4.4 TEST RESULT

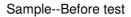
Clauses	Title	Test Results
12.2	Test for first characteristic numeral 6 for protection against access to hazardous parts	Pass
13.6.2	Test for first characteristic numeral 6 for protection against solid foreign objects	Pass
14.3	Test for second characteristic numeral 5 for protection against water	Pass

#### 4.5 TEST EQUIPMENTS

EQUIPMENT NAME	EQUIPMENT MODE	EQUIPMENT NO.	CALIBRATION DUE
Dust Resistance Test Chamber	CH-7139-CF-T	BVGZ-RT-0036	2019.06.13
IP1X dust test needle	IP1X	BVGZ-SAF-0102	2019.09.26
Spray test device	PS-2	BVGZ-SAF-0054	2020.04.25

# 4.6 TEST PHOTO







Test setup—IP6X sample in the chamber



During test—IP6X



Sample-- After IP6X test

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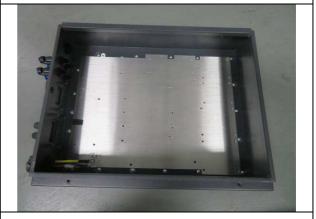


During test--IPX5

EVVO

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During test--IPX5



Sample-- After IPX5 test

After test—IP65



# VERITAS 5 PHOTOGRAPHS OF DUT



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