TEST REPORT

Reference No	:	WTU18U09123828S
Applicant	:	GlobTek,Inc.
Address	:	186 Veterans Dr. Northvale NJ 07647 USA
Manufacturer	:	GlobTek (Suzhou) Co., Ltd
Address	:	Building 4, No. 76 JinLing East Road, Suzhou Industrial Park, Suzhou, JiangSu, 215021, China
Product Name	:	Power Supply
Model No	:	See model list on page 2- page 4
Ratings	:	See page 2 – page 4
Standards	:	IEC 60529:1989+A1:1999+A2:2013
Test Category	:	Entrusted Test
Test Item	:	IP68 Test
Date of Receipt sample	:	2018-09-12
Date of Test	:	2018-09-14 to 2018-09-14
Date of Issue	:	2018-09-14
Test Report Form No	:	WST-60529-68B
Test Result	:	Pass

*Remarks:
The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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Martin Sun/Projector Engineer	Stephen Tian / Tech. Manager	Connie Liu /Engineering Manager

List of test items:

No.	Test Items	Requirement + Test	Result
1	IP68 Test	IEC60529:1989+A1:1999+A2:2013	Pass

Subcontract
Whether parts of tests for the product have been subcontracted to other labs:
☐ Yes ☒ No
If Yes, list the related test items and lab information:
Test items: ---
Lab information: --

Remarks:
1.All models have the same structure except output voltage and current, please see model list as below.

Model	Outout voltage(Vdc)	Max. Output current(A)	Max. Output power(W)
GTM91099-ww09-X.X-P2	5-9	6	50
GTM91099-ww15-X.X-P2	9.1-15	6	60
GTM91099-ww24-X.X-P2	15.1-24	3.73	60
GTM91099-ww48-X.X-P2	24.1-48	2.5	60
GTM91099-ww09-X.X-P3	5-9	6	50
GTM91099-ww15-X.X-P3	9.1-15	6	60
GTM91099-ww24-X.X-P3	15.1-24	3.73	60
GTM91099-ww48-X.X-P3	24.1-48	2.5	60

M can be 'M' or '-' for market identification and not related to safety.
-X.X denotes the optional deviation, subtracted or added from standard output voltage in 0.1volt increments or blank to indicate the no voltage different.
This report is amendment of previous test report WTF13F1209661S for adding new models listed below.

Model	Descriptions
GT**-*****	The 1st "*" part can be 'M' or '-' or 'H' for market identification and not related to safety. The 2nd"*" can be 91099 or 96600 for market identification The 3rd "*" denotes the rated output wattage designation, which can be "01" to "65", with interval of 1. When the 2nd "*"=91099 The 4th "*" denotes the standard rated output voltage designation, which can be"09","15","24", "48"; The 5th "*"is optional deviation, subtracted from standard output voltage, which can be "-0.01" to "-23.9" with interval of 0.01, or blank to indicate no voltage different. The 4th"*" and 5th "*" together denote the output voltage, with a range of 5–48volts. When the 2nd "*"=96600 The 4th"*" denote the standard rated output voltage designation, which can be "05" to "54" or "5.0" to "54.0" in 0.1V increments. The 5th"*"=Blank The 6th"*" =-P2 means Encapsulated class II =-P3 means Encapsulated class I The last * denote any six character = 0-9 or A-Z or ()[] or – or blank for marketing purposes.
GT**-*****	The 1st "*" part can be 'M' or '-' or 'H' for market identification and not related to safety. The 2nd"*" can be 96180 or 96300 or 91120 for market identification The 3rd "*" denotes the rated output wattage designation, which can be "01" to "36", with interval of 1. The 4th "*" denotes the standard rated output voltage designation, when the 2nd"*" = 96180 which can be

	“07”,“11”, “17.9”,“30”, “38”, “48”, “54” or “56”; when the 2nd”*”=96300 or 91120 which can be “07.5”,“10.5”, “14.5”,“19.5”, “24”, “36”, “48”, “54” or “56”. The 5th “*”is optional deviation, subtracted from standard output voltage, which can be “-0.01” to “-12.0” with interval of 0.01, or blank to indicate no voltage different. The 4th “*” and 5th “*” together denote the output voltage, with a range of 5 - 56 volts. The 6th“*” =-P2 means Encapsulated class II =-P3 means Encapsulated class I The last * denote any six character = 0-9 or A-Z or ()[] or – or blank for marketing purposes.
GT*96600-*56**	The 1st “*” part can be ‘M’ or ‘-’ or ‘H’ for market identification and not related to safety. The 2nd “*” denotes the rated output wattage designation, which can be “01” to “70”, with interval of 1. The 3rd “*” =-P2 means Encapsulated class II =-P3 means Encapsulated class I The last * denote any six character = 0-9 or A-Z or ()[] or – or blank for marketing purposes.
GT*961200P****, GT*96900P**** and GT*41133-*****	The 1st “*” part can be ‘M’ or ‘-’ or ‘H’ for market identification and not related to safety. When model = GT*41133-***** The 2nd “*” denotes the rated output wattage designation, which can be “01” to “90”, with interval of 1. The 3rd “*” denotes the standard rated output voltage designation, which can be “16”, “24”, “35” and “48”. The 4th “*” part is optional, which can be “-0.1” to “-12.9” with interval of 0.1 to denote voltage deviation or blank to indicate no voltage different. The 3rd “*” and 4th “*” together denote the output voltage, with a range of 12 - 48 volts The 5th “*” =-P2 means Encapsulated class II =-P3 means Encapsulated class I The last * denote any six character = 0-9 or A-Z or ()[] or – or blank for marketing purposes. When model = GT*961200P**** and GT*96900P**** The 2nd “*” denotes the rated output wattage designation, which can be “-01” to “-120”, with interval of 1 and “-” can be omitted. The 3rd “*” denote the standard rated output voltage designation, which can be “12” to “54” or “12.0” to “54.0” in 0.1V increments The 4th“*” =-P2 means Encapsulated class II =-P3 means Encapsulated class I The last * denote any six character = 0-9 or A-Z or ()[] or – or blank for marketing purposes
GT*43004P-***-**	The 1st “*” part can be ‘M’ or ‘-’ or ‘H’ for market identification and not related to safety. The 2nd “*” part denotes the rated output wattage designation, which can be “01” to “120”, with interval of 1. The 3rd “*” part denotes the standard rated output voltage designation, which can be “8.9”, “16”, “24”, “35” and “48”. The 4th “*” part is optional, which can be “-0.1” to “-12.9” with interval of 0.1 to denote voltage deviation or blank to indicate no voltage different. The result by subtracting the deviation value from the standard rated

	output voltage denotes the rated output voltage, with a range of 5-48 volts. The 5th "*" =-P2 means Encapsulated class II =-P3 means Encapsulated class I The last * denote any six character = 0-9 or A-Z or ()[] or – or blank for marketing purposes.

2.Full tests have been carried out on model GTM91099-6048-P2

Test Item ：

Tests for protection against dust-proof：IP6X

Test Method:

The tests should be carried out under the standard atmospheric condition.

The atmospheric conditions during tests are as follows:

Temperature range:15 ℃ to 35℃. Relative humidity: 25% to 75%.

The test is made using a dust chamber incorporating the basic principles shown in figure 2 where by the powder circulation pump may be replaced by other means suitable to maintain the talcum powder in suspension in a closed test chamber. The talcum powder used shall be able to pass through a square-meshed sieve the nominal wire diameter of which is 50μm and the nominal width of gap between wires 75 μm. The amount of talcum powder to be used is 2 kg per cubic meter of the test chamber volume. It shall not have been used for more than 20 tests.

Enclosures are of necessity in one of two categories:

Category 1:Enclosures where the normal working cycle of the equipment causes reductions in air pressure within the enclosure below that of the surrounding air，for example，due to thermal cycling effects.

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. In no event shall the depression exceed 2 KPa(20mbar) on the manometer shown in figure 2. If an extraction rate of 40 to 60 volumes per hour is obtained the duration of the test is 2h.The extraction rate is less than 40 volumes pre hour, the test is continued until 80 volumes have been drawn through, or a period of 8h has elapsed.

Category 2: Enclosures where no pressure difference relative to the surrounding air is present.

The enclosure under test is supported in its normal operating position inside the test chamber, but is not connected to a vacuum pump. Any drain-hole normally open shall be left open for the duration of the test. The test shall be continued for a period of 8h.

The enclosure shall be deemed category 1, whether reductions in pressure below the atmospheric pressure are present or not.

The test wire of 1.0 mmφ insert into any openings of the enclosure with a force of 1N±10％.

Acceptance Conditions:

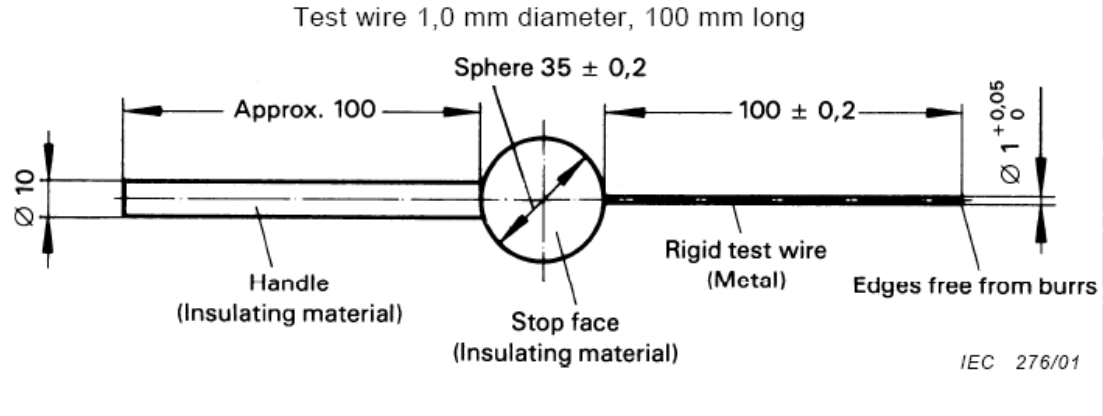
The protection is satisfactory if no deposit of dust is observable inside the enclosure at the end of the test.

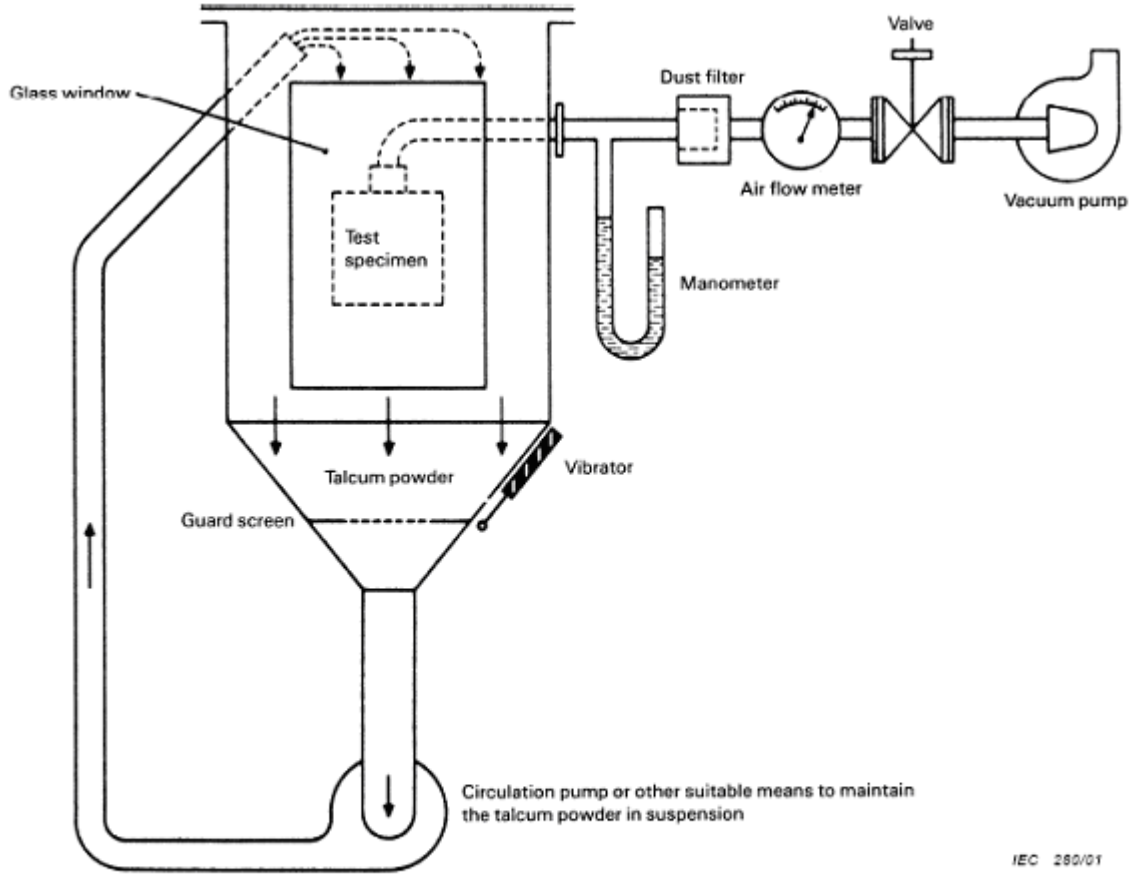
The protection is satisfactory if adequate clearance is kept between the access probe and hazardous parts.

The protection is satisfactory if the access probe 1.0 mm diameter shall not pass through the any opening.

Test Result:

☒ Pass ☐ Fail





NOTE See IEC 60068-2-68, figure 2 valid for La2 only.

Figure 2 – Test device to verify protection against dust (dust chamber)

Test Item ：

Tests for protection against ingress moisture：IPX8

Test Method:

The tests should be carried out under the standard atmospheric condition.The atmospheric conditions during tests are as follows:

Temperature range:15 ℃ to 35 ℃； Relative humidity: 25% to 75%.

The tests are conducted with fresh water.

Unless there is a relevant product standard, the test conditions are subject to agreement between manufacturer and user, but they shall be more severe than those prescribed in 14.2.7 and they shall take account of the condition that the enclosure will be continuously immersed in actual use.

The test is made by completely immersing the enclosure in water in its service position as specified by the manufacturer so that the following conditions are satisfied:

—the lowest point of enclosures is located mm (According to the entrust) below the surface of the water;

—the highest point of enclosures is located mm (According to the entrust) below the surface of the water;

—the duration of the test is min (According to the entrust);

—the water temperature does not differ from that of the equipment by more than 5 K. However, a modified requirement may be specified in the relevant product standard if the tests are to be made when the equipment is energized and/or its parts in motion.

Acceptance Conditions:

After testing in accordance with the appropriate requirements, the enclosure shall be inspected for ingress of water.

It is the responsibility of the relevant Technical Committee to specify the amount of water which may be allowed to enter the enclosure and the details of a dielectric strength test, if any.

In general, if any water has entered, it shall not:

■be sufficient to interfere with the correct operation of the equipment or impair safety;

■deposit on insulation parts where it could lead to tracking along the creepage distances;

■reach live parts or windings not designed to operate when wet;

■accumulate near the cable end or enter the cable if any.

If the enclosure is provided with drain-holes, it should be proved by inspection that any water which enters does not accumulate and that it drains away without doing any harm to the equipment.

For enclosures without drain-holes, the relevant product standard shall specify the acceptance conditions if water can accumulate to reach live parts.

Test Result:

☒ Pass ☐ Fail

Photo Documentation :

Model: GTM91099-6048-P2

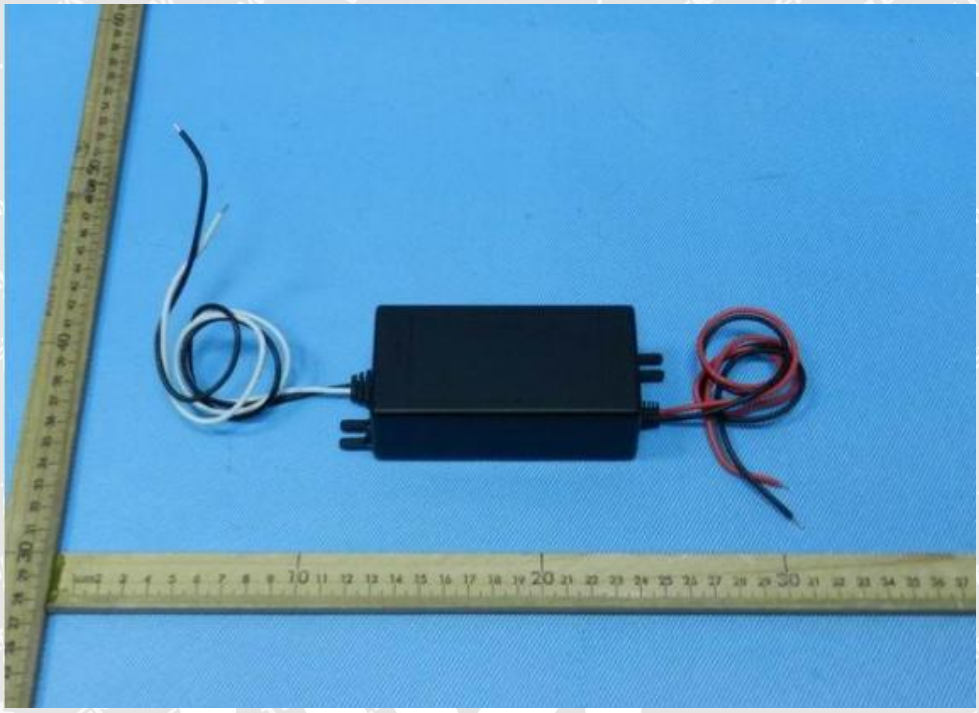


Photo 1

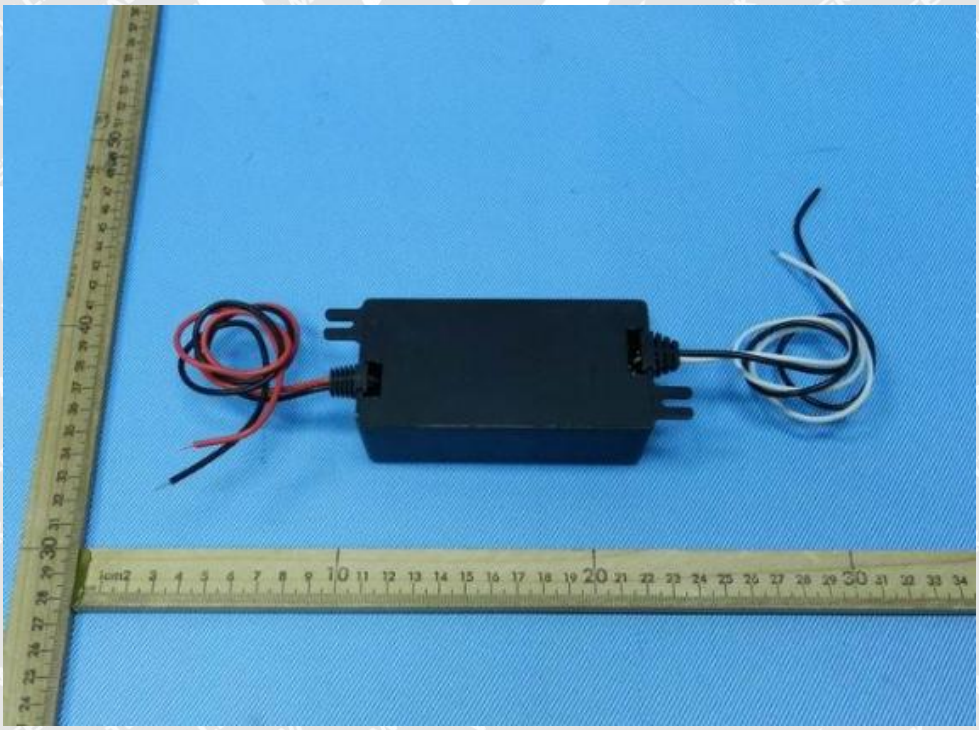


Photo 2

During the IP6X test

Photo 3

After the IP6X test

Photo 4

After the IP6X test

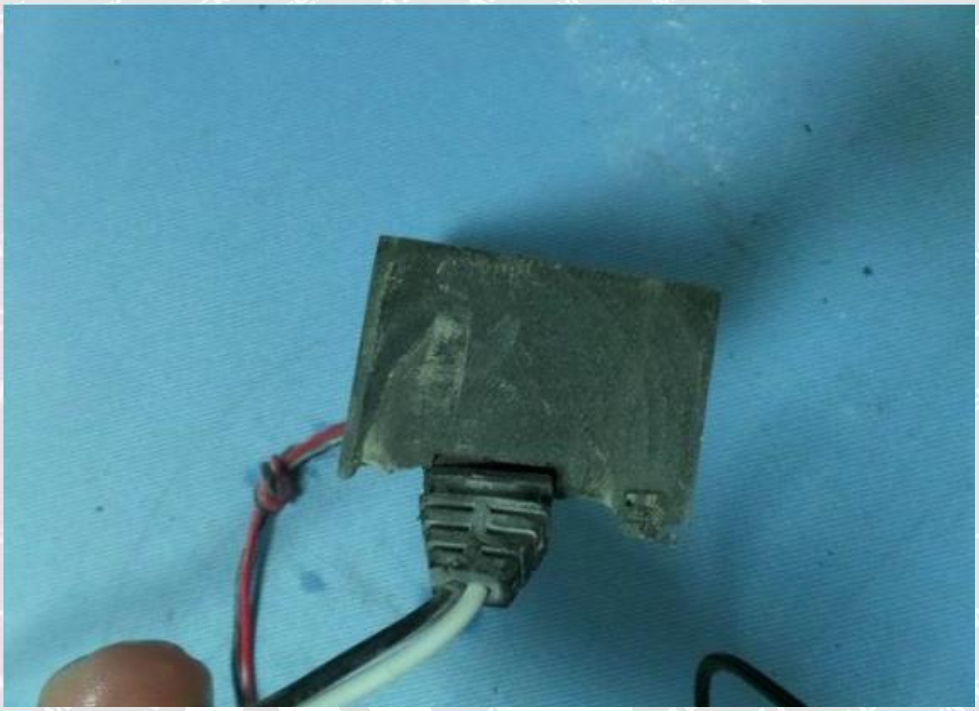


Photo 5

During the IPX8 test

Photo 6

After the IPX8 test

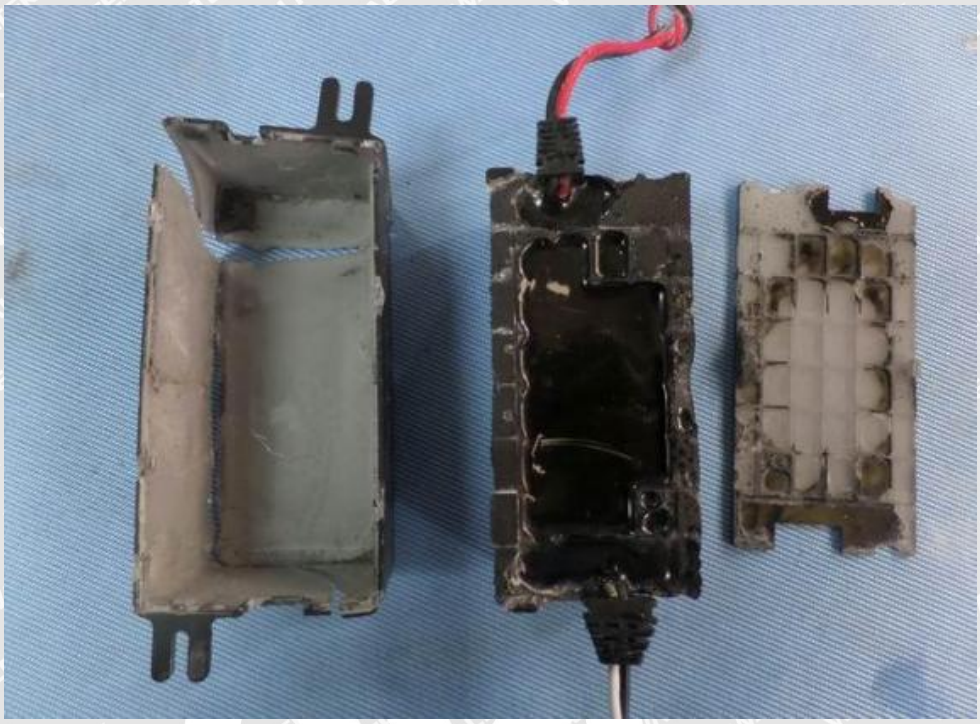


Photo 7

After the IPX8 test

Photo 8

Equipment Used during Test :

Equipment	Model/Type	Cal. Date
Standard test pin	IEC61032 probe D	2018-03-09
Power Meter	YUANFANG PF9811	2018-06-17
Dielectric & Insulation Resistance Tester	CHROMA 9012	2018-03-03
Protection against water test device	HAIYU HY-IPX1-6	2018-03-03
Tape Measure	Assist 3m	2018-03-04
Temperature & Humidity Datalogger	Testo 608-H1	2018-03-07

====== End of Report ======