

TEST REPORT

Report No.: HC60206/2013

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Date: July 11, 2013

GREAT SUMMIT CO., LTD.
1F-8, NO.7, WO-CHUAN 1 RD.,
HSIN CHUANG DIST., NEW TAIPEI CITY

The following merchandise was submitted and identified by the vendor as:

Product Description: Waterproof, Dustproof Ventilation Valves
Style/ Item No.: IVD12/ No.1
Manufacturer/ Vendor: Great Summit Co., Ltd.
Country of Origin: Taiwan
Quantity: Total 1 piece
Testing Period: Jul. 2, 2013 to Jul. 10, 2013

We have tested the submitted sample(s) as requested and the following results were obtained:

Test Required:

Test for Degrees of Protection Provided by Enclosures (IEC 60529 Edition 2.1: 2001)

IP Code	IP68
First characteristic numeral	Degrees of protection against access to hazardous parts and against solid foreign objects
Second characteristic numeral	Degrees of protection against ingress of water

Test Results:

Conclusion
Submittals sample(s) comply with the requirement and acceptance conditions of IEC 60529 Edition 2.1: 2001 Degrees of Protection Provided by Enclosures -- IP68 The detailed description of test result, please see attached sheet(s).

Signed for and on behalf of
SGS TAIWAN Ltd.



Winson Tseng
Asst. Manager

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Test for Degrees of Protection Provided by Enclosures:

Test Equipment:

Name	Brand	Model	Serial No.
1.0 mm Test Wire Probe	ED&D	TRP-02	B0050180
Digital Force Gauge	ALGOL	HF-50	HF-106764
Dust Tester	T-MACHINE	TMJ-9723S	T-23-110708
IPX7/IPX8 Immersion Tank	Self-made	SGS-ETR-0201	000001

Lab Environmental Conditions:

 Ambient temperature: $(25 \pm 3) ^\circ\text{C}$

 Ambient humidity: $(55 \pm 20) \% \text{RH}$

Test Method/ Specification:

 Test method: IEC 60529 Edition 2.1: 2001--IP68

1. Test for protection against access to hazardous parts:

Test method: The test wire with 1.0 mm in diameter and 100 mm long is pushed against or inserted through any openings of the enclosure with designated force. Examine whether the test wire touches the hazardous live parts inside the enclosure or not.

 Test force: 1 N \pm 10 %

2. Test for protection against solid foreign objects:

 Test method: Dust test

 Type of dust: Talcum powder

 The amount of dust: 6.75 kg

 The chamber size: 3.375 m³

 The maximum depression: -20 mbar

 Test duration: 8 hours

- Examine the protection against ingress of dust of specimen(s) after this test.

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Test Method/ Specification--Continued:

3. Test for protection against water:

Test means: Completely immerse the specimen in water in its service position as specified by client.

Test condition: The lowest point of enclosures is located 1000 mm below the surface of the water

Test duration: 24 hours

Test Device: As shown in photo 6, 7

- Examine the protection against ingress water of specimen after this test.

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Specimen:

Style/ Item No.: IVD12/ No.1

Quantity: Total 1 piece

Test Result:

A. Degrees of protection against access to hazardous parts and against solid foreign objects (IP6X)

A-1 Test for protection against access to hazardous parts (IP6X)

Test Result		
Check Item		Style/ Item No.
		IVD12/ No.1
1	Does the test wire penetrate any openings of the enclosure?	No
2	(followed check item 1) If the test wire penetrates any openings of the enclosure, does the test wire touch any hazardous live parts or any hazardous mechanical parts?	N/A
3	(followed check item 2) Does adequate clearance be kept between the test wire and hazardous live parts or hazardous mechanical parts?	N/A
Note 1: N/A means "Not Applicable". Note 2: The check items in this test report for inspecting the degree of protection provided by enclosures are reference to the requirements specified in IEC 60529 Edition 2.1: 2001 and in accordance with the acceptance conditions specified by client.		

A-2 Test for protection against solid foreign objects (IP6X)

Test Result		
Check Item		Style/ Item No.
		IVD12/ No.1
1	Does any dust deposit inside the enclosure at the end of the test?	No
Note 1: N/A means "Not Applicable". Note 2: The check items in this test report for inspecting the degree of protection provided by enclosures are reference to the requirements specified in IEC 60529 Edition 2.1: 2001 and in accordance with the acceptance conditions specified by client.		

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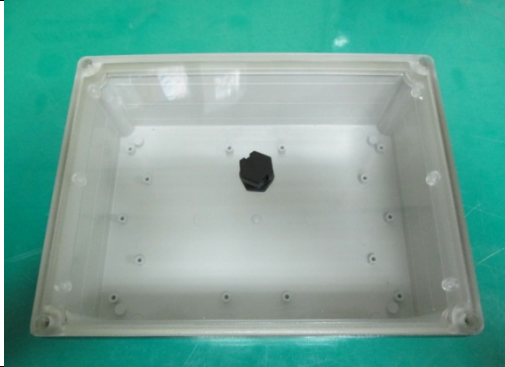

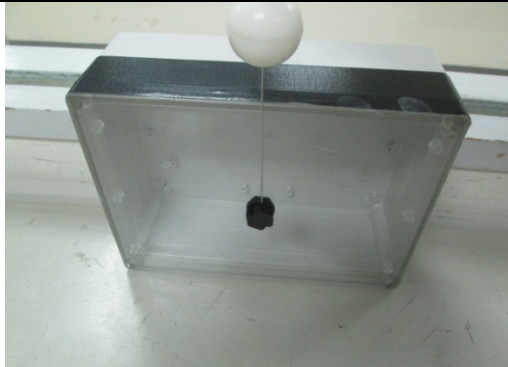
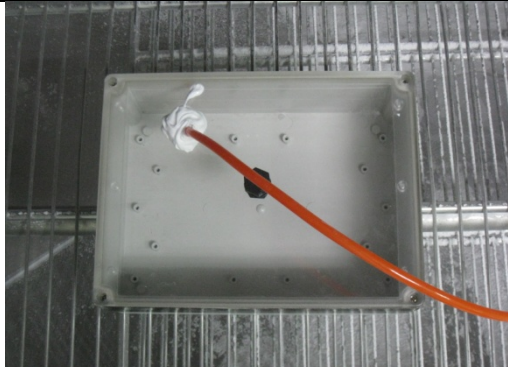
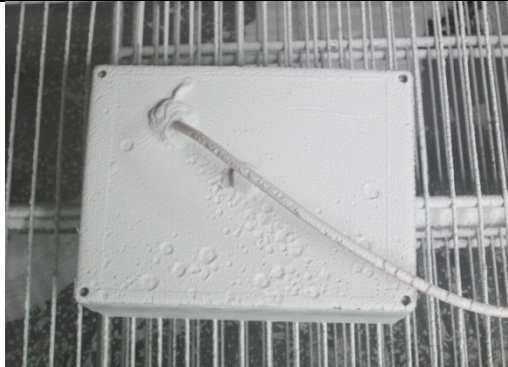
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Test Result--Continued:

B. Degree of protection against ingress of water (IPX8)

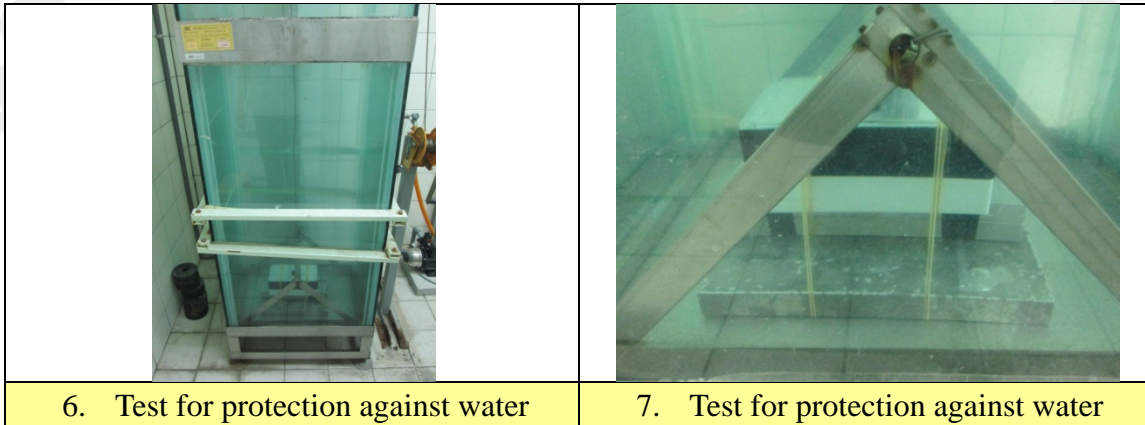
Test Result		Style/ Item No.
Check Item		IVD12/ No.1
1	Does any water enter the enclosure?	No
2	(followed check item 1) If any water has entered, does the water accumulate near the cable end or live parts?	N/A
2.1	(followed check item 2) Does the water be sufficient to interfere with the correct operation of the equipment or impair safety?	N/A
2.2	(followed check item 2.1) Does the water deposit on insulation parts where it could lead to tracking along the creepage distances?	N/A
2.3	(followed check item 2.2) Does the water reach live parts or windings not designed to operate when wet?	N/A
<p>Note 1: N/A means "Not Applicable".</p> <p>Note 2: The check items in this test report for inspecting the degree of protection provided by enclosures are reference to the requirements specified in IEC 60529 Edition 2.1: 2001 and in accordance with the acceptance conditions specified by client.</p>		

Test Photos:

	
1. Appearance of specimen	
	
2. Test for protection against access to hazardous parts	3. Test for protection against access to hazardous parts
	
4. Test for protection against solid foreign objects (Dust test)	5. Test for protection against solid foreign objects (Dust test)

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Test Photos--Continued:



— — — The End of Test Report — — —

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