



Reliability Laboratory

TEST REPORT



Report No.: HH40002A/2017

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Date: April 25, 2017

ALLTEK MARINE ELECTRONICS CORP.
14F-2, NO. 237, SEC. 1, DATONG RD., XIZHI DISTRICT,
NEW TAIPEI CITY, TAIWAN, R.O.C.

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

Product Description: GPS Antenna
Style/ Item No.: GA-22/ No.1
Manufacturer/ Vendor: Alltek Marine Electronics Corp.
Country of Origin: Taiwan
Quantity: Total 1 piece
Testing Period: Apr. 21, 2017

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 2.2: 2013)

IP Code	IPX6
First characteristic numeral	Omitted
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 2.2: 2013 Degrees of Protection Provided by Enclosures -- IPX6 The detailed description of test result, please see attached sheet(s).

Signed for and on behalf of
SGS TAIWAN Ltd.

Hank Chiou

Hank Chiou
Supervisor

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Test for Degrees of Protection Provided by Enclosures:Test Equipment:

Name	Brand	Model	Serial No.
IPX6 Water Jet Hose Nozzle Set	PTL	P03.28	5040045

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 2.2: 2013 --IPX6Sample condition: Operating (GPS 3D fixed function)

Internal diameter

of the nozzle: 12.5 mmDelivery rate: 100 l/minute $\pm 5\%$

Distance from nozzle

to enclosure surface: between 2.5 m and 3 m

Core of the substantial

stream: circle of approximately 120 mm diameter at 2.5 m distance from nozzleTest duration: Total 30 minutes

- Examine the protection against ingress water of specimen(s) and perform functional check after this test.
- Functional check: Examine whether the GPS 3D fixed or not.

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Specimen:Style/ Item No.: GA-22/ No.1Quantity: Total 1 pieceTest Result:

Degree of protection against ingress of water (IPX6)

Test Result		
Check Item		Style/ Item No.
		GA-22/ 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
3	Functional Check	Normal
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 2.2: 2013 and in accordance with the acceptance conditions specified by client.		

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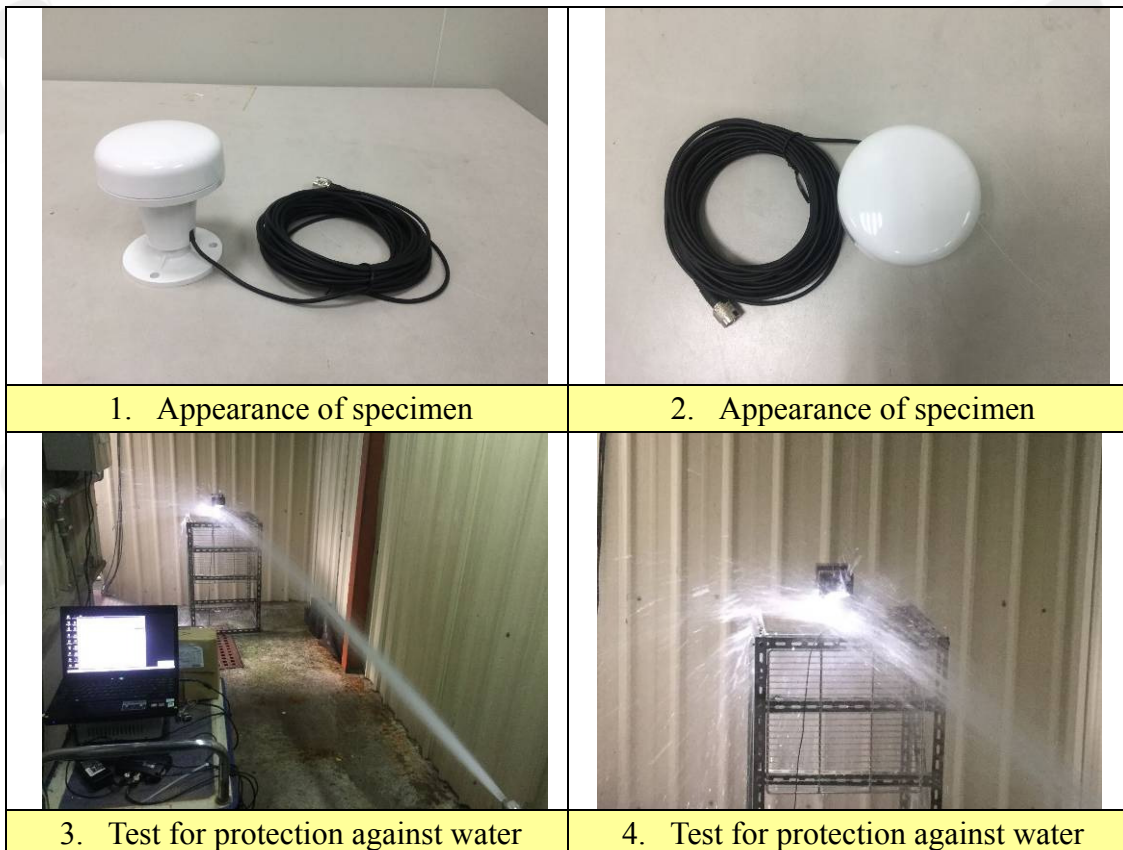
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Test Photos:



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