

Test Report

Verified Code:665924

Report No.:H202403271022-04EN

Customer: ProTech CO., Ltd

Address: No. 18, Baoying Road, Dawang High-Tech District, Zhaoqing, Guangdong

Sample Name: SINORA HARD SHELL

Sample Model: SIN-07146-28BK

Receive
Sample Date: Mar.28,2024

Test Date: Apr.02,2024 ~ Apr.13,2024

Reference
Document: According to ISO 20653:2013

Test Result: Please refer to page 4 of the report for details

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Issued Date: 2024/4/18

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Test type	<input checked="" type="checkbox"/> Commissioning Test <input type="checkbox"/> Routine test <input type="checkbox"/> R&D test <input type="checkbox"/> PV <input type="checkbox"/> DV <input type="checkbox"/> ECV <input type="checkbox"/> Others_____			
Sample Source	<input checked="" type="checkbox"/> Commissioned units send sample <input type="checkbox"/> Others:			
Sample	Model	Quantity	Sample No.	Test No.
SINORA HARD SHELL	SIN-07146-28BK	1 pc	/	H202403271022-0004
Sample Components and Accessories	Components: / Accessories: /			
Test with packaging or not	<input type="checkbox"/> Yes, Outer Packing _____ <input checked="" type="checkbox"/> No			
Sample quality before test	<input checked="" type="checkbox"/> Conformity Product <input type="checkbox"/> Non-conformity Product <input type="checkbox"/> Prototype <input type="checkbox"/> Others			
Abnormal condition of sample before test	No Abnormalities			
Environmental requirements	Temperature: 15.0℃~35.0℃ Relative Humidity: 25%~75% Atmospheric pressure: 86kPa~106kPa			
Test Address	No.10,Dafu Industrial Erea,Guanguang RD, Guanlan Street, Longhua Sistrick Shenzhen Guangdong China.			

Summary of Test Information

No.	Item Name	Test Standard	Test Result	Page
1	IP6X	ISO 20653:2013	Meet a requirement	Page 6
2	IPX7	ISO 20653:2013	Meet a requirement	Page 9

----- The following blanks -----

1 IP6X

1.1 Test Condition

According to ISO 20653:2013.

1.1.1 Before the test: Check the appearance of sample.

1.1.2 Dustproof test:

1.1.2.1 Degrees of protection against access: use a metal probe with a diameter of 1.0mm to detect the shell of the tested product with a force of $1N \pm 0.1N$.

1.1.2.2 Degrees of protection against foreign objects: fix the tested product in the test box and carry out the test according to the items in Table 1-1.

1.1.3 After the test: Check the appearance of the sample.

Table 1-1 Dustproof test conditions

Test dust	Dosage of dust	Test time
Arizona powder	2kg/m ³	6s blowing dust, 15min standing, this is a cycle, running 20 cycles

1.2 Sample Information

Sample information is shown in Table 1-2.

Table 1-2 Sample Information

Sample Name	Sample Model	Quantity	Test No.
SINORA HARD SHELL	SIN-07146-28BK	1 pc	H202403271022-0004

1.3 Test Requirements

According to ISO 20653:2013.

The rigid test wire (diameter 1.0 mm) shall not penetrate, and dust shall not penetrate.

1.4 Test Result

The test result are shown in Table 1-3.

Table 1-3 Test Result

Test No.	Test Results	Conclusion
H202403271022-0004	The 1mm metal probe did not enter the sample shell, and no dust entered the inside of the subject after the test	Meet the requirement

1.5 Test Photos



Fig.1-1 Sample appearance inspection before test



Fig.1-2 Sample appearance inspection after test



Fig.1-3 Sample appearance inspection before test



Fig.1-4 Sample unpacking inspection after test



Fig.1-5 Metal probe inspection before test



Fig.1-6 Test sample placement

----- The following blanks -----

2 IPX7

2.1 Test Condition

According to ISO 20653:2013.

2.1.1 Before the test: Check the appearance of sample.

2.1.2 Waterproof test: Fix the sample in the dipping tank and test according to the conditions listed in Table 2-1.

2.1.3 After the test: Check the appearance of the sample.

Table 2-1 Waterproof test conditions

Distance between the highest point of the box body and the water surface	Test time
1000mm	Soak 30min

2.2 Sample Information

Sample information is shown in Table 2-2.

Table 2-2 Sample Information

Sample Name	Sample Model	Quantity	Test No.
SINORA HARD SHELL	SIN-07146-28BK	1 pc	H202403271022-0004

2.3 Test Requirements

According to ISO 20653:2013.

Water shall not penetrate in a quantity causing harmful effects or impair performance if the enclosure is immersed in water temporarily under specified pressure and time conditions.

2.4 Test Result

The test result are shown in Table 2-3.

Table 2-3 Test Result

Test No.	Test Results	Conclusion
H202403271022-0004	After the experiment, there is no water inside the measured object.	Meet the requirement

2.5 Test Photos



Fig.2-1 Sample appearance inspection before test



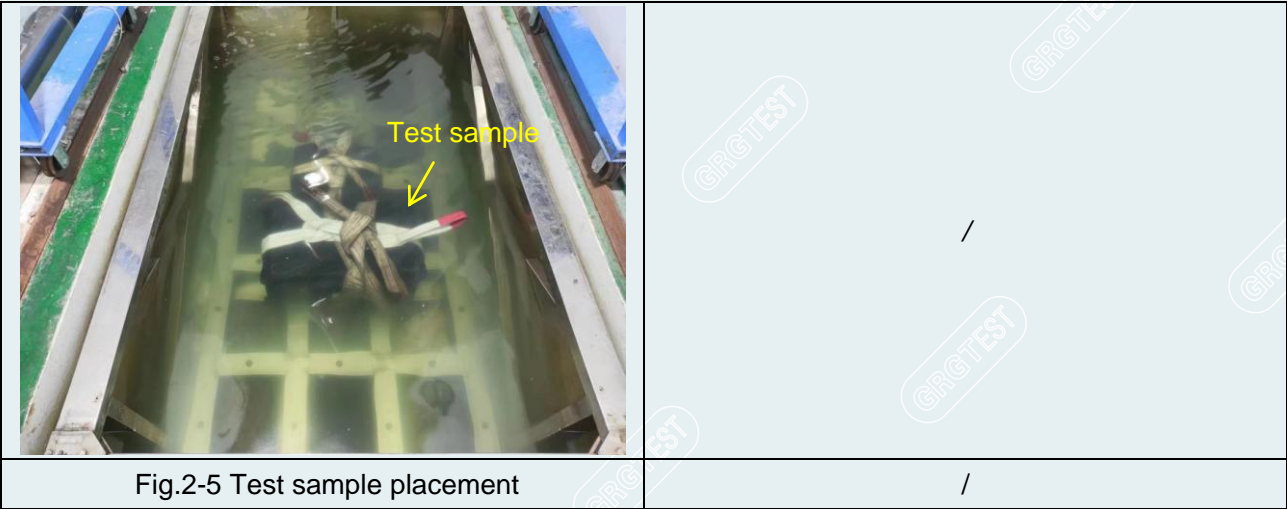
Fig.2-2 Sample appearance inspection after test



Fig.2-3 Sample unpacking inspection before test



Fig.2-4 Sample unpacking inspection after test



3 Test Instrument & Equipment

List of instruments for testing equipment					
No.	Testing item	Equipment	Type	Serial No.	Calibration valid date
1	Dustproof test (IP6X)	Dust test chamber	GT1321	GT20170703001	2023-12-16~2024-12-15
		IP4X test sonde	CX-T4D	CX1807237	2024-03-23~2025-03-22
2	Waterproof test (IPX7)	Water tank	/	/	/
		Steel rule	0~1000mm	2482515	2024-02-21~2025-02-20
		Stopwatch	PC396	949696	2023-06-06~2024-06-05

----- End of Report -----