



中国认可
国际互认
检测
TESTING
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检 验 报 告

TEST REPORT



北京尊冠科技有限公司
Beijing Zunguan Science & Technology Ltd.
国家电子计算机质量监督检验中心
China National Computer Quality Supervising Test Center



TEST REPORT

No: A20181579

Product : DE LiDAR

Model and specification : TFmini Plus

Client : BENEWAKE (BEIJING) CO., LTD.

Factory : BENEWAKE (BEIJING) CO., LTD.


Test sort : Commission Test



China National Computer Quality Supervising Test Center

TEST REPORT

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Product	DE LiDAR	Model and specification	TFmini Plus
Client	BENEWAKE(BEIJING) CO., LTD.	Trade Mark	Benewake
Client Address	10/F, Block A, Keshi Building, No.28 Xinxu Road, Haidian District, Beijing 100085, China	Test Sort	Commission Test
Factory	BENEWAKE(BEIJING) CO., LTD.	Product Date	Nov.6 th ,2018
Sampler	/	Sample Date	/
Sender	Feng Yuzhi	Receipt Data	Nov.9 th ,2018
Place	/	Base	/
Test Period	Nov.9 th ,2018	Number	2
Test Item	Degrees of protection provided by enclosure (IP code)		
Test Specifications	GB/T 4208-2017 Degrees of protection provided by enclosure (IP code)		
Test Conclusion	<p>According to list Standards and Requirements, The test sample passed all test items.</p> <div style="text-align: right;">  <p>Date of issue: 2018-11-28</p> </div>		
Remarks			

Approver:

 Audit:

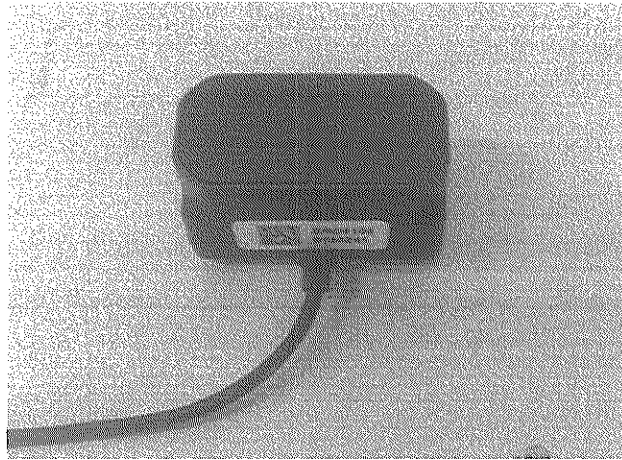
周会芬

Checker:

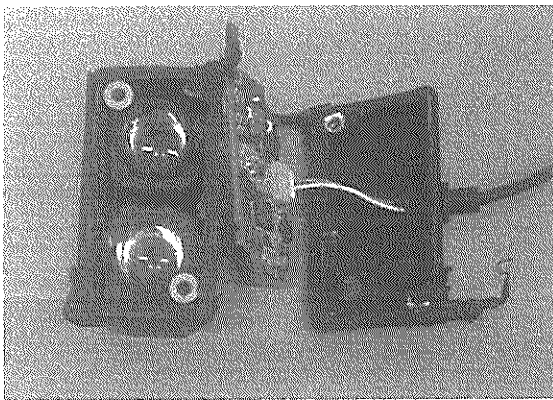
李腾骏

Mostly Apparatus and Equipment	Serial	Equipment Description	Model / Specification	To Use
	1	Sand dust test chamber	SC-010	√
	2	IP1X-IP6X test tool	/	√
	3	Rain test equipment	IPX1-IPX8	√
	Mostly apparatus and equipment make use of “ √ ”			
	Sample Number	Sample Status		
Produce number		Test items		
001	/	Degrees of protection provided by enclosure (IP code)		
002	/			

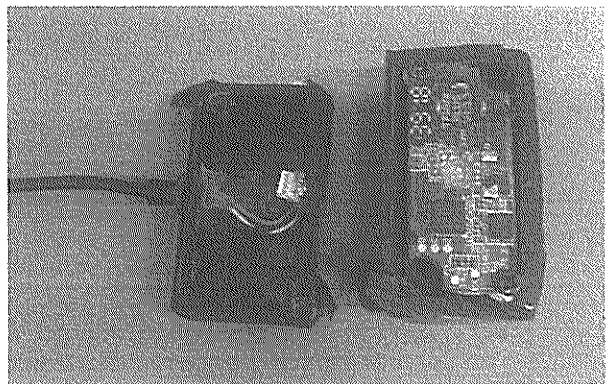
Test Item		Test Requirement	Sample Number	Test Result	Judge ment
Degrees of protection provided by enclosure (IP code)	1. Dustproof sealing test	<p>Test requirements: Degrees of protection provided by enclosure (IP6X)</p> <p>1. Protection against dangerous parts</p> <p>Test conditions:</p> <p>Test tool: Rigid wire with insulated baffle for testing metal wire (100 ± 0.2) mm</p> <p>Diameter: $\phi 1^{+0.05}_0$ mm</p> <p>Test force: $1N \pm 0.1N$</p> <p>Decision requirements:</p> <p>Rigid test wires must not enter the shell. Adequate clearance should be kept with charged parts.</p> <p>2. Protection against entry of solid foreign matter</p> <p>Test conditions:</p> <p>talcum powder: (Sifted by metal square hole sieve which the wire diameter is $50 \mu m$ and the sieve size is $75 \mu m$.)</p> <p>Talcum powder dosage: $2kg/m^3$</p> <p>Enclosure species: The first type</p> <p>Pumping condition: If the maximum pressure difference is $2kPa$. And the pumping speed is $40 \sim 60$ times enclosure volume per hour. Then the test finished until the pumping time is up to $2h$.</p> <p>Test time: $2h$</p> <p>Test Status: No electricity</p> <p>Decision requirements: If there is no apparent dust deposition in the enclosure after the test, the test results conform to the requirements.</p>	001	Metal wires can not enter any openings. There is no dust in the enclosure after the test.	Pass
	2. Waterproof test	<p>Test requirements: Degrees of protection provided by enclosure (IPX5)</p> <p>Test conditions:</p> <ol style="list-style-type: none"> Nozzle inner diameter: $6.3mm$ Water flow: (12.5 ± 0.625) L/min Water spraying time per square metre on shell surface: About $1min$ Test time: At least $3min$ Distance from nozzle to shell surface: $2.5m \sim 3m$ The central part of the main stream: The circle with diameter of $40mm$ from the nozzle $2.5m$. All possible directions for sprinkling water Test Status: No electricity <p>Decision requirements: Check for water in the enclosure after the test. If there is water that it should not be enough to affect the normal operation or damage safety of the sample. Water does not accumulate on insulation parts that may cause creepage traces along creepage distances. Water does not enter into a charged part or Enter the windings that are not allowed to run in a wet state. Water does not accumulate near the head of the cable or into the cable.</p>	002	There is no water in the enclosure after the test.	Pass
<p>Test Specification:</p> <p>GB/T 4208-2017 Degrees of protection provided by enclosure (IP code)</p> <p>Environment Conditions: Temperature: $24^{\circ}C$, Humidity: 48%. Atmospheric pressure: $86kPa \sim 106kPa$</p> <p>Test Status: /</p>					
Remarks: /					



Sample appearance photos



Photos after waterproofing test



Photos after dust-proof test

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Note

1. The test report have to attend appropriative of inspection, an official stamp and a seal on the perforation.
2. The copy reversion have to attend appropriative of inspection, an official stamp and a seal on the perforation.
3. The test report has to include Approver, Auditor and checker signed or appended.
4. Inspection items or standards which sign '☆' means that Not within the scope of authorization by CNAS.
5. The information about sample on home page of test report is statement by client.
6. The test report content modified or copy of part will invalidation.
7. If have any doubted of the test report, please immediately inform NCTC.
8. The inspection report is only applicable to the tested samples.

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