



APPLICATION FOR LVD

On Behalf of

Product Name:	Solar charging and boosting cross-flow drive integrated machine
Model :	P320, P330, M340, M360, P1220, P1230, P1240, PCC06, PCC08, PCC10, PCC15, MCC10, MCC15, P0840, P0630, PCV10, MCV10, M1260, M1280, M2410, M2415
Prepared For :	Shenzhen depowersupply electrical co.,ltd 7th floor,Block A,Xin Weirun Hi-Tech industry area,no.36th pinggang RD,Jiangshi Gongming town,Guangming new dis.,Shenzhen
Prepared By :	TXBRheinland Testing Services Corp Limited
Test Date:	Mar26, 2019
Date of Report :	Apr 4, 2019
Report No.:	TXB20190403RY03

IP CODE Report
EN 60529:1991+A2:2013
Degrees of protection provided by enclosures

Testing laboratory	TXB Rheinland Testing Services Corp Limited
Applicant	Shenzhen depowersupply electrical co.,ltd
Address	Floors 1-4, Unit 101, Building A4, Songbai (Gongming) Industrial Park, No. 2 Bieshu Road, Shangcun Community, Gongming Subdistrict, Guangming District, Shenzhen City, Guangdong, China
Manufacturer	Shenzhen depowersupply electrical co.,ltd
Address	Floors 1-4, Unit 101, Building A4, Songbai (Gongming) Industrial Park, No. 2 Bieshu Road, Shangcun Community, Gongming Subdistrict, Guangming District, Shenzhen City, Guangdong, China
Standard	EN 60529: 1991/A2:2013
Test Result	Compliance with EN 60529: 1991/A2;2013
Procedure deviation	N.A.
Non-standard test method	N.A.
Type of test object	Solar charging and boosting cross-flow drive integrated machine
Trademark	N/A
Model/type reference	P320, P330, M340, M360, P1220, P1230, P1240, PCC06, PCC08, PCC10, PCC15, MCC10, MCC15, P0840, P0630, PCV10, MCV10, M1260, M1280, M2410, M2415
Rating	DC3.3-24V,6-30A
IP CODE	IP67

Possible test case verdicts :

test case does not apply to the test object : N(A.)

test object does meet the requirement : P(ass)

test object does not meet the requirement : F(ail)

Name and address of the testing laboratory : TXB Rheinland Testing Services Corp Limited

Mike Zhao

Tested By: _____
(Mike Zhao)

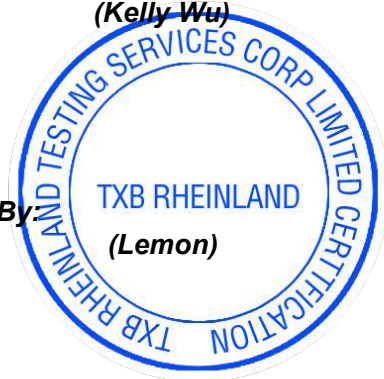
Date: Mar 25-31, 2019

Kelly Wu

Check By: _____
(Kelly Wu)

Date: Mar 25-31, 2019

Approved By:



TXB RHEINLAND
(Lemon)

Date: Mar 25-31, 2019

General remarks:	
"(see remark #)" refers to a remark appended to the report. "(see appended table)" refers to a table appended to the report. Throughout this report a comma is used as the decimal separator. The test results presented in this report relate only to the object tested. This report shall not be reproduced except in full without the written approval of the testing laboratory.	Attached with:

EN 60529			
Clause	Requirement - Test	Result - Remark	Verdict
5	Degrees of protection against access to hazardous parts and against solid foreign objects indicated by the first characteristic numeral		P
5.1	Protection against access to hazardous parts		P
	First characteristic numeral is 6 Protected against access to hazardous parts with a wire The access probe of 1,0 mm Ø shall not penetrate		P
5.2	Protection against access solid foreign objects		P
	First characteristic numeral is 6 Dust-tight No ingress of dust		P
6	Degrees of protection against ingress of water indicated by the second characteristic numeral		P
	Second Characteristic numeral is 7 Protected against water jets Water immersed in water from any direction onto the enclosure will not cause harmful effects		P
10	Marking		P
	The requirements for marking shall be specified in the relevant product standard. Where appropriate, such a standard should also specify the method of marking which is to be used when - one part of an enclosure has a different degree of protection to that of another part of the same enclosure; - the mounting position has an influence on the degree of protection; - the maximum immersion depth and time are indicated.		P
11	General requirements for tests		P
11.1	Atmospheric conditions for water or dust Tests: Temperature range: Relative humidity: 25% to 75% Air pressure: 15 °C to 35 °C 86 kPa to 106 kPa (860 mbar to 1 060 mbar).		P
11.2	Test samples The tests specified in this standard are type tests.		P

EN 60529			
Clause	Requirement - Test	Result - Remark	Verdict
12	Tests for protection against access to hazardous parts indicated by the first characteristic numeral		P
12.1	Access probes The test wire of 1,0 mm Ø shall not penetrate and adequate clearance shall be kept		P
12.2	Test conditions For tests on low-voltage equipment, a low-voltage supply (of not less than 40 V and not more than 50 V) in series with a suitable lamp should be CONNECTORed between the probe and the hazardous parts inside the enclosure. Hazardous live parts covered only with varnish or paint, or protected by oxidation or by a similar process, are covered by a metal foil electrically CONNECTORed to those parts which are normally live in operation. The signal-circuit method should also be applied to the hazardous moving parts of high-voltage equipment. Internal moving parts may be operated slowly, where this is possible.		P
12.3	Acceptance conditions :The protection is satisfactory if adequate clearance is kept between the access probe and hazardous parts.		P
13	Tests for protection against solid foreign objects indicated by the first characteristic numeral		P
13.1& 13.2	Test means & Test conditions Test means and the main test conditions are given in Table VII		P
13.3	Acceptance conditions for first characteristic numerals 1,2,3,4 The protection is satisfactory if the full diameter of the probe specified in Table VII does not pass through any opening.		P
14	Tests for protection against water indicated by the second characteristic numeral		P
14.1	Test means & Test conditions Test means and the main test conditions are given in Table VIII		P
14.2.5	Use the water immersion test to keep the distance from the bottom of the sample to 1M or more, the top of the sample is greater than or equal to 0.15M, and the test time is 30 minutes.		P

EN 60529			
Clause	Requirement - Test	Result - Remark	Verdict
14.3	Acceptance conditions After testing in accordance with the appropriate requirements of 14.2.1 to 14.2.8 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		P

Photo:

Figure 1
General Appearance of the EUT



Figure 2
General Appearance of the EUT

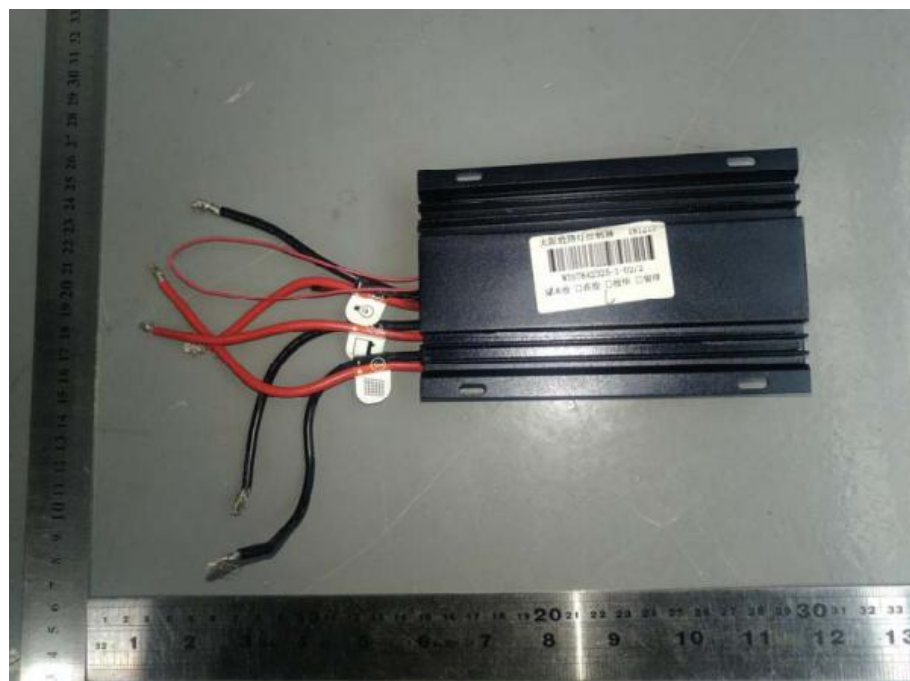


Figure 3

General Appearance of the EUT

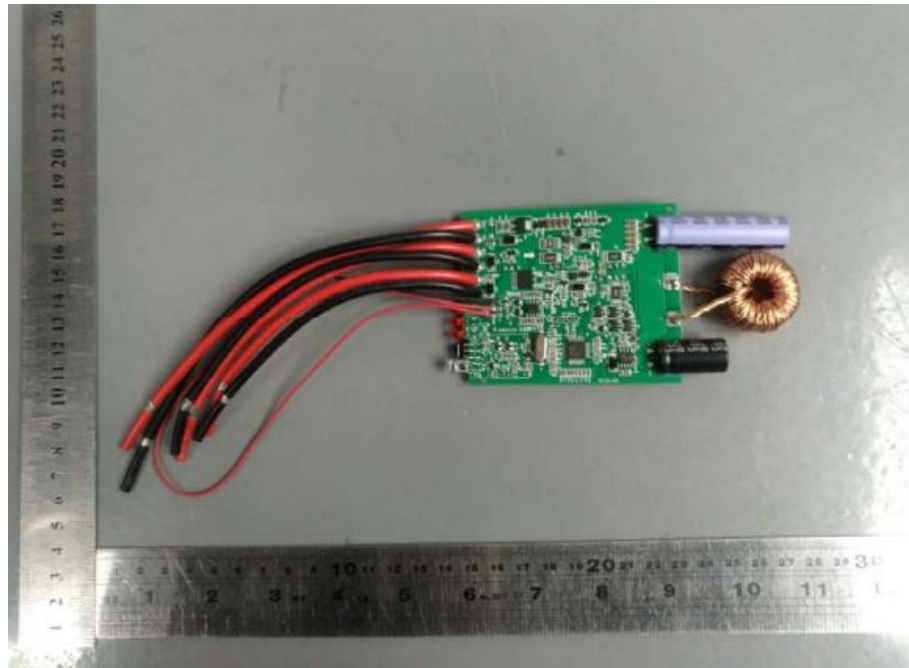


Figure 4

General Appearance of the EUT

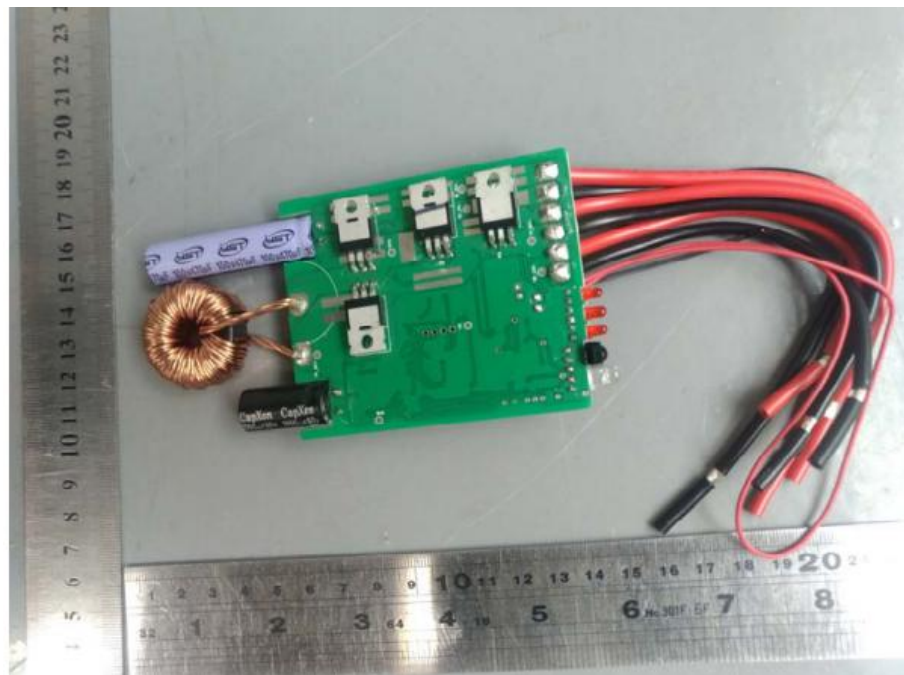


Figure 5

General Appearance of the EUT

