



TEST REPORT

LAB NO. : (9315)128-0349-R1
DATE : May 22, 2015
PAGE : 1 OF 8

The report is amendment of and supersedes the previous report (9315)128-0349 dated May 18, 2015

APPLICANT : **KYSAN ELECTRONICS INC**
820 CHARCOT AVENUE, SAN JOSE, CALIFORNIA 95131, USA

CONTACT PERSON : Tony Su

DATE OF SUBMISSION : May 08, 2015

TEST PERIOD : May 08, 2015 to May 18, 2015

NO. OF WORKING DAYS : 7

SAMPLE DESCRIPTION : Step Motor

Color: /

Style No.: 42BYG,57BYG, 85BYG, 86BYG, 110BYG,35BYG, 28BYG, 39BYG

P.O. No.: /

Country of Origin: /

Country of Destination: /

MANUFACTURER : /

SUMMARY OF TEST RESULTS

TEST REQUESTED	CONCLUSION	REMARK
European Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)	PASS	

RW

Bureau Veritas Consumer Products Services (Guangzhou) Co.,Ltd

No. 183, Shinan Road, Meilin Plaza Block B, Dongchong, Nansha, Guangzhou, Guangdong Province, China 511453

Tel: (86) 20 2290 2088 Fax:(86) 20 3490 9303

Email: BVCPS_pyinfo@cn.bureauveritas.com

Website:cps.bureauveritas.com

This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at <http://www.mtl-acts.com> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.



LAB NO. : (9315)128-0349-R1
DATE : May 22, 2015
PAGE : 2 OF 8

BUREAU VERITAS CONSUMER PRODUCTS SERVICES (GUANGZHOU) CO., LTD

NINA REN
SECTION MANAGER

REMARK

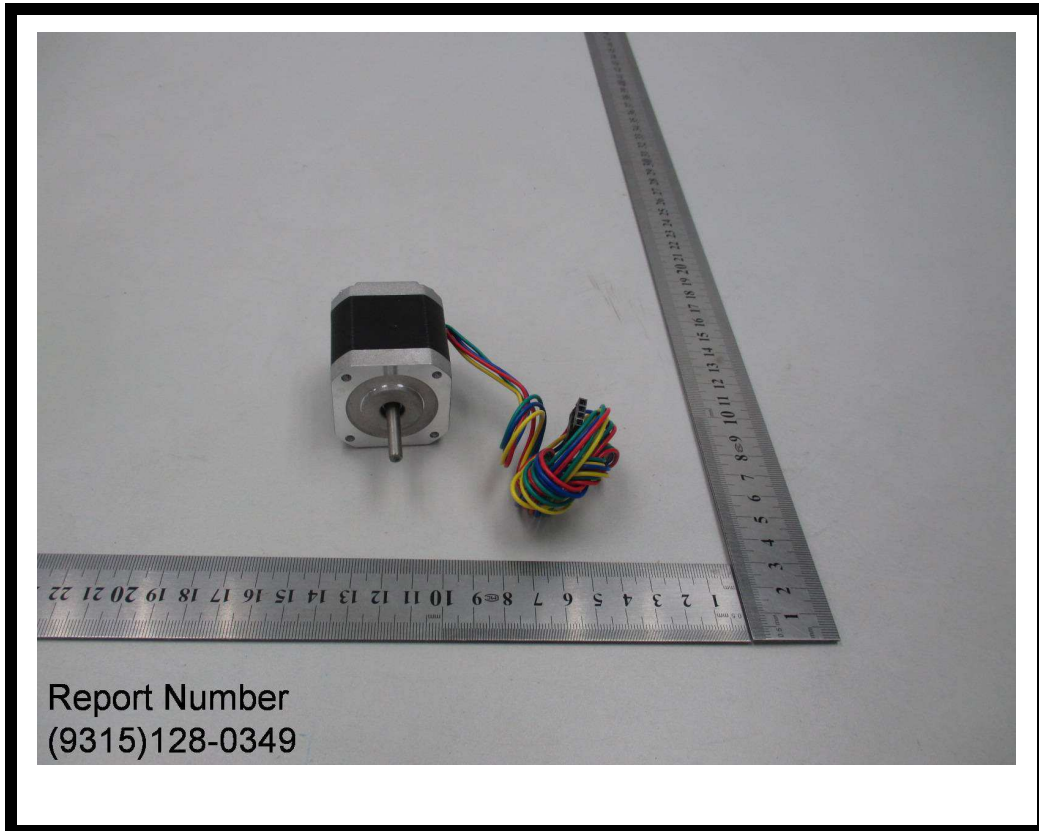
If there are questions or concerns on this report, please contact the following persons:

- | | |
|---------------------|------------------------------------|
| a) GENERAL TEL: | (86)755 83437287 |
| FAX: | (86)755 83439100 |
| b) BUSINESS SZ TEL: | (86)755 21534695 |
| FAX: | (86)755 83439100 |
| BUSINESS GZ TEL: | (86) 20 87148525 |
| FAX: | (86) 20 87148528 |
| EMAIL: | eechemical.sc@cn.bureauveritas.com |
| WEBSITE | cps.bureauveritas.cn |

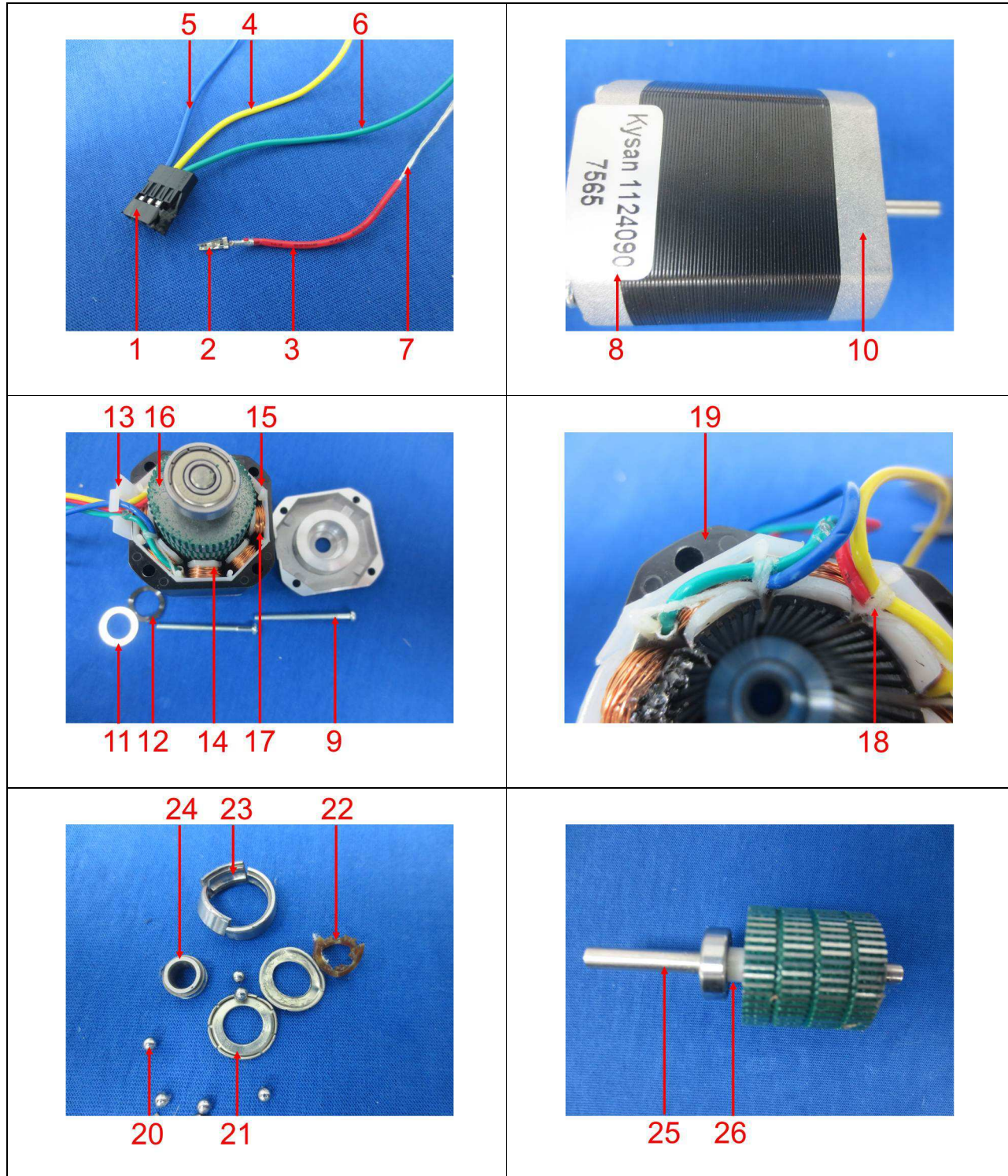


LAB NO. : (9315)128-0349-R1
DATE : May 22, 2015
PAGE : 3 OF 8

Photo of the Submitted Sample



Photograph of test item(s)





LAB NO. : (9315)128-0349-R1
 DATE : May 22, 2015
 PAGE : 5 OF 8

TEST RESULT

Compliance Test - European Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)

Test Method : See Appendix.

Test Item(s)	Item / Component Description(s)	Location(s)	Style(s)
1	Black plastic	Female connector	-
2	Silvery plated coppery metal	Female connector	-
3	Black printed red soft plastic	Wire jacket	-
4	Black printed yellow soft plastic	Wire jacket	-
5	White printed blue soft plastic	Wire jacket	-
6	White printed green soft plastic	Wire jacket	-
7	Silvery plated coppery metal	Wire	-
8	Black/ printed silvery plastic with adhesive	Label	-
9	Metallic blue plated silvery metal	Screw	-
10	Silvery metal	Endbell	-
11	Silvery metal	Ring	-
12	Black coated silvery metal	Ring	-
13	translucent plastic	Clip	-
14	Translucent plastic	Coil holder	-
15	Translucent plastic	Plate	-
16	Silvery metal with green coating	Rotor	-
17	Coppery metal	Coil	-
18	White thread	Wire	-
19	Black plated silvery metal	Case	-
20	Silvery metal	Bead	-
21	Silvery metal	Cover, bearing	-
22	Dark brown plastic	Bead holder	-
23	Silvery metal	Case, bearing	-
24	Silvery metal	Ring, bearing	-
25	Silvery metal	Shaft	-
26	Translucent plastic	Ring	-
27	Silvery magnet	Rotor	-

See Analytes and their corresponding Maximum Allowable Limit in Appendix

Parameter	Result						Conclusion
	Lead (Pb)	Cadmium (Cd)	Mercury (Hg)	Chromium VI (Cr VI)	PBBs	PBDEs	
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-
Test Item(s)	-	-	-	-	-	-	-
1	ND	ND	ND	ND	ND*	ND*	PASS
2	ND	ND	ND	ND	NA	NA	PASS
3	ND	ND	ND	ND	ND	ND	PASS
4	ND	ND	ND	ND	ND	ND	PASS
5	ND	ND	ND	ND	ND	ND	PASS
6	ND	ND	ND	ND	ND	ND	PASS
7	ND	ND	ND	ND	NA	NA	PASS
8	ND	ND	ND	ND	ND	ND	PASS
9	ND	ND	ND	Negative*	NA	NA	PASS
10	<500	ND	ND	ND	NA	NA	PASS



**BUREAU
VERITAS**

LAB NO. : (9315)128-0349-R1
DATE : May 22, 2015
PAGE : 6 OF 8

Parameter	Result						Conclusion
	Lead (Pb)	Cadmium (Cd)	Mercury (Hg)	Chromium VI (Cr VI)	PBBs	PBDEs	
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-
Test Item(s)	-	-	-	-	-	-	-
11	ND	ND	ND	Negative*	NA	NA	PASS
12	ND	ND	ND	Negative*	NA	NA	PASS
13	ND	ND	ND	ND	ND	ND	PASS
14	ND	ND	ND	ND	ND	ND	PASS
15	ND	ND	ND	ND	ND	ND	PASS
16	ND	ND	ND	Negative*	NA	NA	PASS
17	ND	ND	ND	ND	NA	NA	PASS
18	ND	ND	ND	ND	ND	ND	PASS
19	ND	ND	ND	Negative*	NA	NA	PASS
20	ND	ND	ND	Negative*	NA	NA	PASS
21	ND	ND	ND	ND	NA	NA	PASS
22	ND	ND	ND	ND	ND	ND	PASS
23	ND	ND	ND	Negative*	NA	NA	PASS
24	ND	ND	ND	Negative*	NA	NA	PASS
25	ND	ND	ND	Negative*	NA	NA	PASS
26	ND	ND	ND	ND	ND	ND	PASS
27	ND	ND	ND	ND	ND	ND	PASS

Note / Key :

ND = Not detected

NR = Not requested

% = percent

Detection Limit : See Appendix.

">" = Greater than

mg/kg = milligram(s) per kilogram = ppm = part(s) per million

10000 mg/kg = 1 %

Remark :

- The testing approach is listed in table of Appendix.
- * denotes as reported result(s) was (were) performed by wet chemistry method. Others were screened by XRF. For XRF screening, the result(s) of Cr VI was (were) reported as total chromium and the result(s) of PBBs and PBDEs was (were) reported as total bromine. Also, the XRF result(s) may be different to the actual content based on various factors including, but not limit to, sample size, thickness, area, non-uniformity composition, surface flatness.
- Only selected example(s) is (are) indicated on the photograph(s) in Comment.
- According to European Council Directive 2011/65/EU, Article 5 "Adaptation of the Annexes to scientific and technical progress", exemption(s) should be granted to the materials and components of Test Item(s) in the lists in Annexes III and IV of this directive.

END

APPENDIX

List of Analytes and their Corresponding Test Methods, Detection Limit and Maximum Allowable Limit [Compliance Test for European Parliament and Council Directive 2011/65/EU] :						
No.	Name of Analytes	Detection Limit (mg/kg)				Maximum Allowable Limit (mg/kg)
		X-ray fluorescence (XRF)^[a]			Wet Chemistry	
		Plastic	Metallic / glass / ceramic	Others		
1	Lead (Pb)	100	200	200	10 ^[b]	1 000
2	Cadmium (Cd)	50	50	50	10 ^[b]	100
3	Mercury (Hg)	100	200	200	10 ^[c]	1 000
4	Chromium (Cr)	100	200	200	NA	NA
5	Chromium VI (Cr VI)	NA	NA	NA	3 ^[g, h] / 10 ^[d] / See ^[e, j]	1 000 / Negative ^[i]
6	Bromine (Br)	200	NA	200	NA	NA
7	Polybromobiphenyls (PBBs) - Bromobiphenyl (MonoBB) - Dibromobiphenyl (DiBB) - Tribromobiphenyl (TriBB) - Tetrabromobiphenyl (TetraBB) - Pentabromobiphenyl (PentaBB) - Hexabromobiphenyl (HexaBB) - Heptabromobiphenyl (HeptaBB) - Octabromobiphenyl (OctaBB) - Nonabromobiphenyl (NonaBB) - Decabromobiphenyl (DecaBB)	NA	NA	NA	Each 50 ^[f]	Sum 1 000
8	Polybromodiphenyl ethers (PBDEs) - Bromodiphenyl ether (MonoBDE) - Dibromodiphenyl ether (DiBDE) - Tribromodiphenyl ether (TriBDE) - Tetrabromodiphenyl ether (TetraBDE) - Pentabromodiphenyl ether (PentaBDE) - Hexabromodiphenyl ether (HexaBDE) - Heptabromodiphenyl ether (HeptaBDE) - Octabromodiphenyl ether (OctaBDE) - Nonabromodiphenyl ether (NonaBDE) - Decabromodiphenyl ether (DecaBDE)	NA	NA	NA	Each 50 ^[f]	Sum 1 000
<p>NA = Not applicable</p> <p>^[a] Test method with reference to International Standard IEC 62321-3-1: 2013.</p> <p>^[b] Test method with reference to International Standard IEC 62321-3-5: 2013.</p> <p>^[c] Test method with reference to International Standard IEC 62321-3-4: 2013.</p> <p>^[d] Polymers and Electronics - Test method with reference to European Standard EN 62321: 2009, Annex C.</p> <p>^[e] Metal - Test method with reference to European Standard EN 62321: 2009, Annex B^[i].</p> <p>^[f] Test method with reference to European Standard EN 62321: 2009, Annex A.</p> <p>^[g] Leather - Test method International Standard ISO 17075: 2007.</p> <p>^[h] Other Than Metal, Leather, Polymers and Electronics - Test method with reference to International Standard ISO 17075: 2007.</p> <p>^[i] The principle of this method was evaluated and supported by two studies organized by IEC TC 111 WG3. These studies were focused on detecting the presence of Cr VI in the corrosion protection coatings on metallic samples. Result(s) of Cr VI for metallic material(s) was (were) expressed in term of positive and negative. Negative means the absence of Cr VI on the tested areas and the result(s) was (were) regarded as in compliance with European Parliament and Council Directive 2011/65/EU, Article 4(1). While, positive means the presence of Cr VI on tested areas and the result(s) was (were) regarded as in conflict with European Parliament and Council Directive 2011/65/EU, Article 4(1).</p> <p>^[j]</p>						



LAB NO. : (9315)128-0349-R1
DATE : May 22, 2015
PAGE : 8 OF 8

Testing Approach [Compliance Test for European Parliament and Council Directive 2011/65/EU] :

The testing approach was with reference to the following document(s).

- 1 International Standards IEC 62321-1: 2013 and IEC 62321-2: 2013
- 2 "RoHS Enforcement Guidance Document Version 1" by EU RoHS Enforcement Authorities Informal Network. (May 2006)
- 3 "RoHS Regulations - Government Guidance Notes" by United Kingdom Department for Business Innovation & Skills. (February 2011)
- 4 "Final Report to RoHS substances (Hg, Pb, Cr(VI), Cd, PBB and PBDE) in electrical and electronic equipment in Belgium" by Belgium Federal Public Service Health, Food Chain Safety and Environment. (November 2005)