



TEST REPORT

Report No.: **TH2403217-C08-R01**

Product: **AC Servo Motor**

Model: **See attachment**

Applicant: **Shenzhen Rtelligent Technology Co.,Ltd**

Address: **2F-6F, A Building, Ruitech Industrial Park, Xingyu Road No.23, Xixiang Street, Bao an District, Shenzhen,Guang Dong Province, China, 518102**

Manufacturer: **Shenzhen Rtelligent Technology Co.,Ltd**

Address: **2F-6F, A Building, Ruitech Industrial Park, Xingyu Road No.23, Xixiang Street, Bao an District, Shenzhen,Guang Dong Province, China, 518102**

Sample Received Date: **2024-03-19**

Testing completed Date: **2024-03-27**

Test Method: **Please refer to next page(s)**

Test Conclusion: **Based on the performed tests on submitted sampLe(s), the results of lead,Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs),Polybrominated diphenyl ethers (PBDEs) and Phthalates such as Bis(2-ethylhexyl) phthaLate (DEHP),Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) , and Diisobutyl phthalate (DIBP) comply with the limits as set byRoHS Directive (EU) 2015/863 amending Annex II to Directive (EU)2017/2102.**

Note: **/**

Authorized by:
Shenzhen Tian Hai Test Technology Co.,Ltd.

Thomas Wong

Test data presented in this report are gathered and based on the test reports of separated parts supplied by the applicant. Shenzhen Tian Hai Test Technology Co.,Ltd. is not responsible for the authenticity of all the test data of these reports.

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Test Method :

1. EN IEC 63000:2018: Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances (IEC 63000:2016)
2. With reference to IEC 62321-2:2013, review was performed for the samples disjoined from the submitted articles.
3. With reference to IEC 62321-1:2013, tests were performed for the samples indicated by the photos in this report
 - a. With reference to IEC 62321-5:2013, determination of Cadmium by ICP-OES
 - b. With reference to IEC 62321-5:2013, determination of Lead by ICP-OES
 - c. With reference to IEC 62321-4:2013+A1:2017, determination of Mercury by ICP-OES
 - d. IEC 62321-1:2013, determination of Hexavalent Chromium by Colorimetric method.
 - e. With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.
 - f. IEC 62321-8:2018, determination of DEHP, BBP, DBP, DIBP by GC-MS.



In accordance with the result of material risk assessment, the following disjointed parts in the submitted sample have been verified.

Part No.	Part Description.	Restricted Substances.	Results	Result of Testing (mg/kg)	Conclusion on EU RoHS
1	Enclosure Colour: Black	Pb	BL	---	Comply
		Cd	BL	---	Comply
		Hg	BL	---	Comply
		Cr(VI)	BL	---	Comply
		PBBs	BL	---	Comply
		PBDEs	BL	---	Comply
		DIBP	BL	---	Comply
		DEHP	BL	---	Comply
		DBP	BL	---	Comply
		BBP	BL	---	Comply
2	Rotor Colour: Silver	Pb	BL	---	Comply
		Cd	BL	---	Comply
		Hg	BL	---	Comply
		Cr(VI)	BL	---	Comply
		PBBs	BL	---	Comply
		PBDEs	BL	---	Comply
		DIBP	BL	---	Comply
		DEHP	BL	---	Comply
		DBP	BL	---	Comply
		BBP	BL	---	Comply
3	Wire Colour: Black	Pb	BL	---	Comply
		Cd	BL	---	Comply
		Hg	BL	---	Comply
		Cr(VI)	BL	---	Comply
		PBBs	BL	---	Comply
		PBDEs	BL	---	Comply
		DIBP	BL	---	Comply
		DEHP	BL	---	Comply
		DBP	BL	---	Comply
		BBP	BL	---	Comply
4	Wire Colour: Red	Pb	BL	---	Comply
		Cd	BL	---	Comply
		Hg	BL	---	Comply
		Cr(VI)	BL	---	Comply
		PBBs	BL	---	Comply
		PBDEs	BL	---	Comply
		DIBP	BL	---	Comply
		DEHP	BL	---	Comply
		DBP	BL	---	Comply
		BBP	BL	---	Comply



Part No.	Part Description.	Restricted Substances.	Results	Result of Testing (mg/kg)	Conclusion on EU RoHS
5	Wire Colour: Blue	Pb	BL	---	Comply
		Cd	BL	---	Comply
		Hg	BL	---	Comply
		Cr(VI)	BL	---	Comply
		PBBs	BL	---	Comply
		PBDEs	BL	---	Comply
		DIBP	BL	---	Comply
		DEHP	BL	---	Comply
		DBP	BL	---	Comply
		BBP	BL	---	Comply
6	Wire Colour: Green	Pb	BL	---	Comply
		Cd	BL	---	Comply
		Hg	BL	---	Comply
		Cr(VI)	BL	---	Comply
		PBBs	BL	---	Comply
		PBDEs	BL	---	Comply
		DIBP	BL	---	Comply
		DEHP	BL	---	Comply
		DBP	BL	---	Comply
		BBP	BL	---	Comply
7	PCB Colour: Green	Pb	BL	---	Comply
		Cd	BL	---	Comply
		Hg	BL	---	Comply
		Cr(VI)	BL	---	Comply
		PBBs	BL	---	Comply
		PBDEs	BL	---	Comply
		DIBP	BL	---	Comply
		DEHP	BL	---	Comply
		DBP	BL	---	Comply
		BBP	BL	---	Comply
8	Copper wire Colour: Copper	Pb	BL	---	Comply
		Cd	BL	---	Comply
		Hg	BL	---	Comply
		Cr(VI)	BL	---	Comply
		PBBs	BL	---	Comply
		PBDEs	BL	---	Comply
		DIBP	BL	---	Comply
		DEHP	BL	---	Comply
		DBP	BL	---	Comply
		BBP	BL	---	Comply



Part No.	Part Description.	Restricted Substances.	Results	Result of Testing (mg/kg)	Conclusion on EU RoHS
9	welding spot Colour: Silver	Pb	BL	---	Comply
		Cd	BL	---	Comply
		Hg	BL	---	Comply
		Cr(VI)	BL	---	Comply
		PBBs	BL	---	Comply
		PBDEs	BL	---	Comply
		DIBP	BL	---	Comply
		DEHP	BL	---	Comply
		DBP	BL	---	Comply
		BBP	BL	---	Comply



Remark:

- (1) (a) There are the results on total Br while test items on restricted substances are PBBs and PBDEs. There is the result on total Cr while test item on restricted substances is Cr(VI).
- (b) Results are obtained by EDXRF for primary screening, and further chemical testing by ICP-OES (for Cd, Pb, Hg), UV-Vis (for Cr(VI)) and GC-MS (for PBBs, PBDEs) is recommended to be performed, if the concentration exceeds the below warning value according to IEC62321-3-1:2013 (unit: mg/kg).

Element	Polymer	Metal	Composite Materials
Cd	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$LOD < X < (150+3\sigma) \leq OL$
Pb	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Hg	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Br	$BL \leq (300-3\sigma) < X$	--	$BL \leq (250-3\sigma) < X$
Cr	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X$	$BL \leq (500-3\sigma) < X$

(c) BL = Below Limit, OL = Over Limit, IN = Inconclusive, LOD = Limit of Detection, -- = Not regulated.

(d) The XRF screening test for RoHS elements - The reading may be different to the Actual content in the sample be of non-uniformity composition.

- (2) (a) mg/kg = 0.0001%, MDL = Method detection Limit, ND = Not Detected (<MDL), --- = Not conducted, - = Without BOM.

(b) Unit and MDL in wet chemical test

Test Item	Pb	Cd	Hg
Unit	mg/kg	mg/kg	mg/kg
MDL	10	10	10

The MDL for single compound of PBBs and PBDEs is 100 mg/kg.
MDL of Cr(VI) for polymer and composite sample is 10 mg/kg.
MDL of Cr(VI) for metal sample is 0.10 µg/cm².



(c) ▼ =Metal sample

a. The sample is positive for CrVI if the CrVI concentration is greater than $0.13 \mu\text{g}/\text{cm}^2$.
The sample coating is considered to contain CrVI.

b. The sample is negative for CrVI if CrVI is ND (concentration less than $0.10 \mu\text{g}/\text{cm}^2$).
The coating is considered a non-CrVI based coating.

c. The result between $0.10 \mu\text{g}/\text{cm}^2$ and $0.13 \mu\text{g}/\text{cm}^2$ is considered to be inconclusive
- unavoidable coating variations may influence the determination

Information on storage conditions and production date of the tested sample is unavailable and thus Cr(VI) results represent status of the sample at the time of testing.





Product photographs







Attachment For TH2403217-C08-R01

RSQ-M13J6025A	RSQ-M13J4025A	RSQ-M11J4030A	RSQ-M13J5025A	RSQ-M11J5030A
RSQ-M11J5030A-Z	RSQ-M13J6025A	RSQ-M13J10015A	RSQ-M11J6030A	RSQ-M11J6030A-Z
RSQ-M13J15015A	RSQ-M13J7725A	RSQ-M13J10025A	RSQ-M13J15025A	

RSX-XXXXXX-X Series Remark:

1: First "X" means series definition, can be "N, M or Q" indicates 4 pole pairs; "NA, MA, DA, ZA, HA, TA" indicates 5 pole pairs.

2: Second "X" means inertia, can be "S" indicates small inertia; "M" indicates medium inertia; "H" indicates high inertia.

3: Third "X" means motor frame size, can be "04" indicates 40mm; "06" indicates 60mm; "08" indicates 80mm; "10" indicates 100mm; "11" indicates 110mm; "13" indicates 130mm.

4: Fourth "X" means encoder type, can be "J" indicates 17-bit magnetic single-turn absolute encoder; "H" indicates 23-bit optical single-turn absolute encoder; "G" indicates 17-bit magnetic multi-turn absolute encoder; "L" indicates 23-bit optical multi-turn absolute encoder;

5: Fifth "X" means motor rated torque, can be "01" indicates 0.16Nm; "03" indicates 0.32Nm; "06" indicates 0.64Nm; "13" indicates 1.27Nm; "19" indicates 1.92Nm; "24" indicates 2.39Nm; "32" indicates 3.18Nm or 3.2Nm; "40" indicates 4.0Nm; "47" indicates 4.7Nm; "50" indicates 5.0Nm; "54" indicates 5.4Nm; "60" indicates 6.0Nm; "77" indicates 7.7Nm; "82" indicates 8.2Nm; "100" indicates 10Nm; "115" indicates 11.5Nm; "150" indicates 15Nm.

6: Sixth "X" means motor rated speed, can be "15" indicates 1500rpm; "20" indicates 2000rpm; "25" indicates 2500rpm; "30" indicates 3000rpm.

7: Seventh "X" means option, can be "Null" indicates with no oil seal, lead wire type and low heat dissipation; "A" indicates with oil seal, lead wire type and low heat dissipation;

"B" indicates with no oil seal, terminal type and low heat dissipation;

"C" indicates with oil seal, terminal type and low heat dissipation;

"D" indicates with no oil seal, lead wire type and high heat dissipation;

"E" indicates with oil seal, lead wire type and high heat dissipation;

"F" indicates with no oil seal, terminal type and high heat dissipation;

"G" indicates with oil seal, terminal type and high heat dissipation;

8: Eighth "X" means motor type, can be

"Null" indicates with no brake; "Z" indicates with brake.

***** END OF THE REPORT *****