

EU-Type Examination Certificate



1. **EU-TYPE EXAMINATION CERTIFICATE**
2. **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
Directive 2014/34/EU**
3. **EU-Type Examination Certificate Number: ITS14ATEX47996X Issue 1**
4. **Product:** **Electronically Commutated Motor ECM7108, ECM7112, ECM 7120 series**
5. **Manufacturer:** **HANGZHOU WEIGUANG ELECTRONIC CO LTD**
6. **Address:** **No. 365 Xingzhong Road, Yuhang Region, Hangzhou, China**
7. This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
8. Intertek Testing and Certification Limited, Notified Body number 0359 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council dated 26 February 2014, certifies that the product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential Intertek Report Ref G100807579 Issue 1 dated 21 December 2016.
9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-0:2012+A11:2013 and EN 60079-15:2010 except in respect of those requirements referred to at item 16 of the Schedule.
10. If the sign "X" is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Safe Use specified in the Schedule to this certificate.
11. This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
12. The marking of the product shall include the following:



II 3 G Ex nA IIA T5 Gc

-30°C ≤ Ta ≤ +50°C

Intertek Testing & Certification Limited
Intertek House, Cleeve Road, Leatherhead, Surrey, KT22 7SB
Tel: +44 (0)1372 370900 Fax: +44 (0)1372 370977
www.intertek.com

Registered No 3272281 Registered Office: Academy Place, 1-9 Brook Street, Brentwood, Essex, CM14 5NQ.

Brad Bombardier, P.E.
Certification Officer
21 December 2016

EU-Type Examination Certificate



SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE NUMBER ITS14ATEX47996X Issue 1

13. Description of Equipment or Protective System

The Electronically Commutated Motor is installed inside of equipment such as freezer, showcase, and refrigeration, which make the motor is isolated from the external environment by equipment.

The enclosure for the equipment provides a degree of protection of at least IP65.

The equipment has the following electrically ratings:

ECM7108 ¹⁾		ECM7112 ¹⁾		ECM7120 ¹⁾	
220-240V	100-120V	220-240V	100-120V	220-240V	100-120V
0.09A	0.16A	0.25A	0.32A	0.32A	0.5A
7W		24W		32W	

Note:

1) See below table for detailed information of models

Model	ECM	71	08	*	*	*	2	**	***
Item #	1	2	3	4	5	6	7	8	9
#	Explanation								
1	Electronically Commutated Motor								
2	Diameter of laminated core								
3	Thickness of laminated core.								
4	For electrical design: A: 2-wire; counterclockwise; single speed; C: 2-wire; clockwise for a period(≤300s), then counterclockwise; single speed; B: 3-wire; clockwise / counterclockwise (Controlled by 3rd wire); single speed; D: 3-wire; Counterclockwise; 2 speed modes, High / Low (Controlled by 3rd wire). Remark: See Section D.2 for additional hardware for 3-wire models compared to 2 wire models.								
5	Foot mounted installation: A: without screw hole on rear cover; B: with screw hole on rear cover.								
6	Installation nut: A: 0 provided; D: 3 provided; E: 4 provided; H: 7 provided.								
7	Rated voltage 1: 100-120Vac; 2: 220-240Vac;								
8	Speed code. Note: Speed range: 1300RPM to 1800RPM								
9	Product ID: 000-999								

EU-Type Examination Certificate



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EU-TYPE EXAMINATION CERTIFICATE NUMBER ITS14ATEX47996X Issue 1

14. Report Number

Intertek Report Ref: G100807579 Issue 1 Dated: 21 December 2016

15. Special Conditions of Certification

(a). Specific Conditions of Safe Use

- The motor shall only be installed inside end use equipment, such as freezer, showcase, and refrigeration, which makes the motor isolated from the external environment by equipment shield like guard, grid, etc. to make sure no external impact applies on the motor.
- The motor is not exposed to light after installation.
- The motor shall be installed and disassembled by professionals from manufacturer.
- To prevent from the risk of an electrostatic charge, it's only allowed to use a damp cloth when cleaning.

(b). Conditions of Manufacture - Routine Tests

- A dielectric strength test in accordance with clause 23.2.1 of EN 60079-15:2010 shall be carried out.
The results of the above test shall be recorded and retained.

EU-Type Examination Certificate

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EU-TYPE EXAMINATION CERTIFICATE NUMBER ITS14ATEX47996X Issue 1

16. Essential Health and Safety Requirements (EHSRs)

The relevant Essential Health and Safety Requirements (EHSRs) have been identified and assessed in Intertek Report Ref: G100807579 Issue 1 Dated: 21 December 2016.

17. Drawings and Documents

Title:	Drawing No.:	Rev. Level:	Date:
ECM7108 assembly diagram	HWD/SJ-ECM08-001	--	2013/11/28
ECM7108 Explode diagram	HWD/SJ-ECM08-002	--	2013/08/24
ECM7108 Front end cover	HWD/SJ-ECM08-003	--	2013/08/24
ECM Rear cover	HWD/SJ-ECM08-004-A	--	2016/05/24
ECM mouted on top of the rear cover	HWD/SJ-ECM08-004-B	--	2016/05/24
Bearing end cover	HWD/SJ-ECM08-005	--	2013/06/18
ECM7108 Front frame	HWD/SJ-ECM08-006	--	2012/02/02
ECM7108 Rear frame	HWD/SJ-ECM08-007	--	2012/02/02
Wind wane fixing seat	HWD/SJ-ECM08-008	--	2012/02/02
Holzer element fixing seat	HWD/SJ-ECM08-009	--	2012/02/02
Bearing cover	HWD/SJ-ECM08-010	--	2013/11/28
Pin	HWD/SJ-ECM08-011	--	2012/02/02
Sealing ring	HWD/SJ-ECM08-012	--	2013/07/27
Two core sheathed power lines	HWD/SJ-ECM08-013-A	--	2012/02/02
Three core sheathed power lines	HWD/SJ-ECM08-013-B	--	2012/02/02
ECM7108 Plastic magnetic rotor	HWD/SJ-ECM08-014	--	2016/10/20
ECM7108 Rotating shaft	HWD/SJ-ECM08-015	--	2012/02/02
Stator core	HWD/SJ-ECM08-016	--	2012/02/02
Fan cover	HWD/SJ-ECM08-017	--	2012/02/02
Rubber head	HWD/SJ-ECM08-018	--	2012/02/02
Flat gasket	HWD/SJ-ECM08-019	--	2012/02/02
Ex label	HWD/SJ-ECM08-020-B	--	2016/10/09
ECM motor Winding diagram	HWD/SJ-ECM08-021	--	2013/03/22
Waterproof connector	HWD/SJ-ECM08-022	--	2013/05/09
Compression nut	HWD/SJ-ECM08-023	--	2013/06/18
Gasket	HWD/SJ-ECM08-024	--	2013/05/22
Line sets	HWD/SJ-ECM08-025	--	2013/06/18
Rubber stopper	HWD/SJ-ECM08-026	--	2013/05/22
Lock nut	HWD/SJ-ECM08-027	--	2013/12/06
Conical gasket	HWD/SJ-ECM08-028	--	2013/08/24
ECM7112 assembly diagram	HWD/SJ-ECM12-001	--	2013/11/28
ECM7112 Explode diagram	HWD/SJ-ECM12-002	--	2013/08/24
ECM7112 Front end cover	HWD/SJ-ECM12-003	--	2013/08/24
ECM7112 Front frame	HWD/SJ-ECM12-004	--	2012/02/02
ECM7112 Rear frame	HWD/SJ-ECM12-005	--	2012/02/02
ECM7112 Plastic magnetic rotor	HWD/SJ-ECM12-006	--	2016/10/20
ECM7112 Rotating shaft	HWD/SJ-ECM12-007	--	2012/02/02
ECM7112 Foot bracket	HWD/SJ-ECM12-008	--	2012/02/02
ECM7120 assembly diagram	HWD/SJ-ECM20-001	--	2013/11/28
ECM7120 Explode diagram	HWD/SJ-ECM20-002	--	2013/08/24

Page 4 of 6

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EU-Type Examination Certificate



SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE NUMBER ITS14ATEX47996X Issue 1

ECM7120 Front end cover	HWD/SJ-ECM20-003	--	2013/08/24
ECM7120 Front frame	HWD/SJ-ECM20-004	--	2013/11/28
ECM7120 Rear frame	HWD/SJ-ECM20-005	--	2013/11/28
ECM7120 Rotor	HWD/SJ-ECM20-006	--	2016/10/20
ECM7120 Rotating shaft	HWD/SJ-ECM20-007	--	2013/08/24
ECM7120 Foot bracket	HWD/SJ-ECM20-008	--	2012/04/27
Operating Instruction Manual Of ECM Series Motor	HWD/SJ-ECM-001	--	2016/10/20
ECM motor nonmetallic materials(Cover)Data Sheet	HWD/JS-ECM-001	--	2013/08/24
ECM motor nonmetallic materials (Waterproof connector)Data Sheet	HWD/JS-ECM-002	--	2016/10/05
ECM motor nonmetallic materials (Sealing ring)Data Sheet	HWD/JS-ECM-003	--	2013/08/24
ECM motor nonmetallic materials (Terminals)Data Sheet	HWD/JS-ECM-004	--	2013/11/28
ECM motor nonmetallic materials (Bearing cover)Data Sheet	HWD/JS-ECM-005	--	2013/11/28
ECM motor to calculate the single radial clearance	HWD/JS-ECM-006	--	2013/03/02
ECM motor nonmetallic materials(Encapsulated Materials)Data Sheet	HWD/JS-ECM-007	--	2014/03/21
ECM7108 220V technical BOM table (two-wire)	HWD/JS-ECM-008	--	2016/05/24
ECM7108 220V technical BOM table (three-wire)	HWD/JS-ECM-009	--	2016/05/24
ECM7112 220V technical BOM table (two-wire)	HWD/JS-ECM-010	--	2016/05/24
ECM7112 220V technical BOM table (three-wire)	HWD/JS-ECM-011	--	2016/05/24
ECM7120 220V technical BOM table (two-wire)	HWD/JS-ECM-012	--	2016/05/24
ECM7120 220V technical BOM table (three-wire)	HWD/JS-ECM-013	--	2016/05/24
Encapsulation instructions	HWD/DZ-ECM71-010	--	2014/01/07
ECM series motor PCB encapsulated area description(two-wire)	HWD/DA-ECM71-009	--	2014/02/19
ECM series motor PCB encapsulated area description(three-wire)	HWD/DA-ECM71-010	--	2014/02/19
ECM series motor voltage test process inspection of finished cards	Q/WG J05061-2013	--	2016/10/09
ECM71xxA-220V schmatic(two-wire)	HWD/DZ-ECM71-001	--	2012/08/16
ECM71xxB-220V schmatic(three-wire)	HWD/DZ-ECM71-002	--	2016/09/19
pcb-ECM71xxA (two-wire)	HWD/DZ-ECM71-003	--	2016/10/05
pcb-ECM71xxB (three-wire)	HWD/DZ-ECM71-004	--	2016/10/05
PCB Slotted diagram (two-wire)	HWD/DA-ECM71-011	--	2013/12/16
PCB Slotted diagram (three-wire)	HWD/DA-ECM71-012	--	2013/12/16
Description of creepage on top layer for ECM control board(two-wire)	HWD/DA-ECM71-013	--	2016/10/09
Description of creepage on bottom for ECM control board(two-wire)	HWD/DA-ECM71-014	--	2016/10/09
Description of creepage on top layer for ECM control board(three-wire)	HWD/DA-ECM71-015	--	2016/10/09
Description of creepage on bottom for ECM control board(three-wire)	HWD/DA-ECM71-016	--	2016/10/09
ECM7108 110V technical BOM table (two-wire)	HWD/JS-ECM-014	--	2016/05/24
ECM7108 110V technical BOM table (three-wire)	HWD/JS-ECM-015	--	2016/05/24
ECM7112 110V technical BOM table (two-wire)	HWD/JS-ECM-016	--	2016/09/07
ECM7112 110V technical BOM table (three-wire)	HWD/JS-ECM-017	--	2016/09/07
ECM7120 110V technical BOM table (two-wire)	HWD/JS-ECM-018	--	2016/09/07
ECM7120 110V technical BOM table (three-wire)	HWD/JS-ECM-019	--	2016/09/07
ECM7108A-110V schmatic(two-wire)	HWD/DZ-ECM7108-001	--	2016/09/19
ECM7108B-110V schmatic(three-wire)	HWD/DZ-ECM7108-002	--	2016/09/19
ECM7112A&ECM7120A-110V schmatic(two-wire)	HWD/DZ-ECM7112-001	--	2016/09/19

Page 5 of 6

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EU-Type Examination Certificate



SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE NUMBER ITS14ATEX47996X Issue 1

ECM7112B&ECM7120B-110V schmatic(three-wire)	HWD/DZ-ECM7112-002	--	2016/09/19
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18. Details of Certificate changes Issue 1

Inclusion of new Model Nos. ECM7108, ECM 7112 and ECM7120 which are rated 100-120Vac, 50/60Hz. Update the standards to EN 60079-0:2012+A11:2013