

Certificate of Compliance

Certificate Number:

E108780

Report Reference:

E108780-20250722

Issue Date:

2025-07-28

Issued to:

**LS ELECTRIC Co Ltd
95 Baekbong-ro Heungdeok-gu
Cheongju-si Chungcheongbuk-do 28439 Republic of Korea**

This certificate confirms that representative samples of:

**FLAME ARREST-PROTECTED COMPONENTS FOR USE IN
REFRIGERATION AND AIR-CONDITIONING EQUIPMENT
EMPLOYING A2L REFRIGERANTS**

See Addendum Page for Product Designation(s).

Have been evaluated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.

See Addendum Page for Standards

Additional Information:

See UL Product iQ® at <https://iq.ulprospector.com> for additional information.

This Certificate of Compliance indicates that representative samples of the product described in the certification report have met the requirements for UL certification. It does not provide authorization to apply the UL Recognized Component Mark. Only the Authorization Page that references the Follow-Up Services Procedure for ongoing surveillance provides authorization to apply the UL Mark.

Only those products bearing the UL Recognized Component Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Recognized Component Mark on the product.



David Piecuch
UL Mark Certification Program Owner

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact UL Solutions Customer Service at <https://www.ul.com/contact-us>.



CERTIFICATE OF COMPLIANCE

Certificate number E108780
Report reference E108780-20250722
Date 2025-07-28

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

USR, CNR – FLAME ARREST-PROTECTED COMPONENTS FOR USE IN REFRIGERATION AND AIR-CONDITIONING EQUIPMENT EMPLOYING A2L REFRIGERANTS

Magnetic Motor Controllers, Contactors : MC-22a/4, MC-32a/4 & MC-40a/4, MC-50a/4 & MC-65a/4 & MC-75a/4 & MC-85a/4, as described in E108780 Volume 1 Section 4.

Magnetic Motor Controllers, Contactors : MC-185a & MC-225a, MC-100a/4 & MC-130a/4 & MC-150a/4 & MC-185a/4 & MC-225a/4, MC-265a & MC-330a & MC-400a & MC-265a/4 & MC-330a/4 & MC-400a/4, MC-500a & MC-630a & MC-800a & MC-500a/4 & MC-630a/4 & MC-800a/4 as described in E108780 Volume 1 Section 5.

Magnetic Motor Controllers, Contactors : MC-32a & MC-40a, as described in E108780 Volume 1 Section 10.

Magnetic Motor Controllers, Contactors : MC-50a & MC-65a, as described in E108780 Volume 1 Section 11.

Magnetic Motor Controllers, Contactors : MC-75a & MC-85a & MC-100a, as described in E108780 Volume 1 Section 12.

Magnetic Motor Controllers, Contactors : MC-6a & MC-9a & MC-12a & MC-18a, as described in E108780 Volume 1 Section 14.

Magnetic Motor Controllers, Contactors : MC-9b & MC-12b & MC-18b & MC-22b, as described in E108780 Volume 1 Section 15.

Magnetic Motor Controllers, Contactors : MC-130a & MC-150a, as described in E108780 Volume 1 Section 16.



Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact UL Solutions Customer Service at <https://www.ul.com/contact-us>.

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Form-ULID-019496 – ver 1.0



EU Declaration of Conformity

MANUFACTURER : LS ELECTRIC CO.,Ltd.

Cheong Ju Plant #1, 95, Beakbong-ro, Heung deok-gu, 28439,
Cheongju-si, Chungcheongbuk-do, Republic of KOREA

Declaration under our own responsibility that the product(s):

Product : Magnetic Contactors, Thermal Overload Relays.

Models :

Magnetic contactor

3P : MC-6a, MC-9a, MC-12a, MC-18a, MC-9b, MC-12b, MC-18b, MC-22b, MC-32a, MC-40a, MC-50a,
MC-65a, MC-75a, MC-85a, MC-100a, MC-130a, MC-150a, MC-185a, MC-225a, MC-265a,
MC-330a, MC-400a, MC-500a, MC-600a, MC-630a, MC-800a, MC-1260a, MC-1400a, MC-1700a,
MC-2100a, MC-2650a

4P : MC-6a/4, MC-9a/4, MC-12a/4, MC-18a/4, MC-22a/4, MC-32a/4, MC-40a/4, MC-50a/4, MC-65a/4,
MC-75a/4, MC-85a/4, MC-100a/4, MC-130a/4, MC-150a/4, MC-185a/4, MC-225a/4, MC-265a/4,
MC-330a/4, MC-400a/4, MC-500a/4, MC-630a/4, MC-800a/4.

Thermal overload relay

MT-12/2H, MT-12/3H, MT-12/3K, MT-12/3D, MT-32/2H, MT-32/3H, MT-32/3K, MT-32/3D, MT-63/2H,
MT-63/3H, MT-63/3K, MT-63/3D, MT-95/2H, MT-95/3H, MT-95/3K, MT-95/3D, MT-150/2H, MT-150/3H,
MT-150/3K, MT-150/3D, MT-225/2H, MT-225/3H, MT-225/3K, MT-225/3D, MT-400/2H, MT-400/3H,
MT-400/3K, MT-400/3D, MT-800/2H, MT-800/3H, MT-800/3K, MT-800/3D

Are in conformity with the provisions of the following (E)EU Directive(s)
when Installed in accordance with the installation instructions contained
in the product documentation :

2014/35/EU Low-Voltage Directive

2014/30/EU EMC Directive

2011/65/EU + 2015/863/EU – RoHS Directive

And that standards and/or technical specifications referenced below
Have been applied :

Low-voltage Switchgear and Controlgear,

General rules

EN 60947-1:2007/A2:2014

Electromechanical contactors and motor-starters

EN IEC 60947-4-1:2019/AC:2020-05

Electromechanical control circuit devices

EN 60947-5-1:2017/AC:2020-05

Technical Documents

EN IEC 63000:2018

Done at Cheong-Ju. 18. June. 2025.

Signatures :

Park Jum seok

J. S. Park

Technical Director

Jae young Lee

J. Y. Lee

Technical Manager





Confirmation of Product Type Approval

Company Name: LS ELECTRIC CO., LTD. - CHEONGJU PLANT

Address: 95, BAEKBONG-RO, HEUNGDEOK-GU, CHEONGJU-SI, Korea, Republic of

Product: Electromagnetic Contactors

Model(s): MC-6a, MC-9a, MC-12a, MC-18a, MC-9b, MC-12b, MC-18b, MC-22b, MC-32a, MC-40a, MC-50a, MC-65a, MC-75a, MC-85a, MC-100a, MC-130a, MC-150a, MC-185a, MC-225a, MC-265a, MC-330a, MC-400a, MC-500a, MC-630a, MC-800a

Endorsements:

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	21-2159879-PDA	10-SEP-2021	09-SEP-2026
Manufacturing Assessment (MA)	19-SE3687990	18-JUN-2019	29-JUN-2024
Product Quality Assurance (PQA)	NA	NA	NA

Tier

3 - Type Approved, unit certification not required

Intended Service

Switching of electric motors for Marine and Offshore use.

Description

Electromagnetic Contactors

Ratings

General specification

- Coil A.C. supply: from 24 to 600V, 50/60Hz
- Coil D.C. supply: from 12 to 250V
- Poles: 3
- Rated Operational Power: from 2.2kW to 500kW
- Operational voltage (Ue): Up to 690Vac
- Insulation voltage (Ui): 690V for MC-6a to MC-22b; 1000V from MC-32a
- Impulse withstand voltage (Uimp): 6k for MC-6a to MC-22b; 8kVac from MC-32a
- Frequency: 50/60Hz

- Utilization category: AC-1, AC-2, AC-3, AC-4

Service Restrictions

1. Unit Certification is not required for this product.
2. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

Comments

1. The manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
2. Application and use are to be in accordance with the manufacturer's instructions.

Notes, Drawings and Documentation

This Product Design Assessment is based on as follows:

1. Manufacturer's Type Approval Documentation: Metasol MC-18~800AF (including the following)
 - Product specification in detail
 - Approval range
 - Drawing diagram
 - Test report (see the below 2)
 - User manual
 - Product catalogue
2. Test Reports
 - a) UL: CB Test Certificate No. DK-100615-UL (dated 2020-07-29), Test report No. NC10517-D25-CB-1 (dated 2020-07-22),
 - b) UL: CB Test Certificate No. DK-100616-UL (dated 2020-07-29), Test report No. NC10517-D26-CB-1 (dated 2020-07-22),
 - c) UL: CB Test Certificate No. DK-100705-UL (dated 2020-07-31), Test report No. NC10517-D27-CB-1 (dated 2020-07-22),
 - d) UL: CB Test Certificate No. DK-100804-UL (dated 2020-08-03), Test report No. NC10517-D28-CB-1 (dated 2020-07-22),
 - e) UL: CB Test Certificate No. DK-100787-UL (dated 2020-08-03), Test report No. NC10517-D29-CB-1 (dated 2020-07-22),
 - f) UL: CB Test Certificate No. DK-101266-UL (dated 2020-08-12), Test report No. NC10517-D30-CB-1 (dated 2020-07-22),
 - g) UL: CB Test Certificate No. DK-100789-UL (dated 2020-08-03), Test report No. NC10517-D31-CB-1 (dated 2020-07-22),
 - h) UL: CB Test Certificate No. DK-116163-UL (dated 2021-07-19), Test report No. NC10517-D56-CB-1 (dated 2021-06-28),
 - i) UL: CB Test Certificate No. DK-102096-UL (dated 2020-08-31), Test report No. W20-401-0002 (dated 2020-08-20)

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 09/Sep/2026 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

ABS Rules

2021 Marine Vessels Rules: 1-1-4/7.7, 1-1-A3 & 1-1-A4, 4-8-3/1.3, 4-8-2/9.3.3 & 9.3.4,

2021 Mobile Offshore Units Rules: 1-1-4/9.7, 1-1-A2, 1-1-A3,

2021 Facilities on Offshore Installations: 1-1-4/9.7, 1-1/A2, 1-1/A3

International Standards

IEC 60947-4-1 (2018)

EU-MED Standards

NA

National Standards

NA

Government Standards

NA

Other Standards

NA



A handwritten signature in black ink.

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 12-Sep-2021 6:02

ABS has used due diligence in the preparation of this certificate, and it represents the information on the product in the ABS Records as of the date and time the certificate is printed.

If the Rules and/or standards used in the PDA evaluation are revised or if there is a design modification (whichever occurs first), a PDA revalidation may be necessary.

The continued validity of the MA is dependent on completion of satisfactory audits as required by the ABS Rules. The validity of both PDA and MA entitles the product to receive a **Confirmation of Product Type Approval**.

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or prior to the effective date of the ABS Rules and standards applied at the time of PDA issuance. ABS makes no representations

regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. The manufacturer is responsible to maintain compliance with all specifications applicable to the product design assessment. Unless specifically indicated in the description of the product, certification under type approval does not waive requirements for witnessed inspection or additional survey for product use on a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.

Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

Manufacturer **LS ELECTRIC Co., Ltd.**

Address	95, Beakbong-ro, Heungdeok-gu, Cheongju-si, Chungcheongbuk-do, Republic of Korea
Type	Contactors
Description	Metasol Magnetic Contactor
Trade Name	MC Series
Application	Marine and offshore applications for use in environmental categories ENV2 and ENV3 as defined in LR Type Approval System Test Specification No.1-2020 where the Test Specification is satisfactory for the intend operation.
Specified Standard	IEC60947-1(2007, A2:2014), IEC60947-4-1(2018)
Ratings	Rated Operation Power : 2.2kW to 300kW See the Appendix
Other Conditions	<p>The system or device incorporating these relays shall be subject to the electromagnetic compatibility tests specified for the zone on which it is intended to operate.</p> <p>Type approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.</p> <p>If the specified standards are amended during the validity of this certificate, the product is to be re-approved prior to it being supplied to vessels to which the amended standards apply.</p> <p>(Incase of applications other than marine) The application of the type approval certificate will be limited to the relevant scope of the specified standard and acceptance thereof by the local authorities.</p>

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register Asia of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document LR21431024TA and its supplementary Type Approval Terms and Conditions form part of this Certificate.

Gun-Nam Park

Senior Specialist to Lloyd's Register Asia
A member of the Lloyd's Register group

71 Fenchurch Street, London, EC3M 4BS, United Kingdom

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Appendix

Type	Utilisation Category	Rated Operational Power/Current Ie amperes at rated operational voltage Ue							
		220/240V		380/440V		500/550V		690V	
		Amp	kW	Amp	kW	Amp	kW	Amp	kW
MC-6a	AC-3	9	2.2	7	3	6	3	4	3
MC-9a	AC-3	11	2.5	9	4	7	4	5	4
MC-12a	AC-3	13	3.5	12	5.5	12	7.5	7	7.5
MC-18a	AC-3	18	4.5	18	7.5	13	7.5	9	7.5
MC-9b	AC-3	11	2.5	9	4	7	4	6	4
MC-12b	AC-3	13	3.5	12	5.5	12	7.5	9	7.5
MC-18b	AC-3	18	4.5	18	7.5	13	7.5	9	7.5
MC-22b	AC-3	22	5.5	22	11	20	15	18	15
MC-32a	AC-3	32	7.5	32	15	28	18.5	20	18.5
MC-40a	AC-3	40	11	40	18.5	32	22	23	22
MC-50a	AC-3	55	15	50	22	43	30	28	30
MC-65a	AC-3	65	18.5	65	30	60	33	35	33
MC-75a	AC-3	75	22	75	37	64	37	42	37
MC-85a	AC-3	85	25	85	45	75	45	45	45
MC-100a	AC-3	105	30	105	55	85	55	65	55
MC-130a	AC-3	130	37	130	60	90	60	60	55
MC-150a	AC-3	150	45	150	75	100	70	60	55
MC-185a	AC-3	185	55	185	90	180	110	120	110
MC-225a	AC-3	225	75	225	132	200	132	150	140
MC-265a	AC-3	265	80	265	147	225	147	185	160
MC-330a	AC-3	330	90	330	160	280	160	220	200
MC-400a	AC-3	400	125	400	200	350	225	-	-
MC-500a	AC-3	500	147	500	265	400	265	380	300
MC-630a	AC-3	630	190	630	330	500	330	420	400
MC-800a	AC-3	800	220	800	440	720	500	630	500

Operating Coil : 600V 50/60Hz or less, 250V d.c. or less

Type	Utilisation Category	Rated Operational Power/Current le amperes at rated operational voltage Ue				Thermal Current Ith (=AC-1)	Combination with Thermal Overload Relay Type:		
		220/240V		380/440V					
		Amp	kW	Amp	kW				
MC-6a	AC-4	7	1.5	5	2.2	25	MT-12		
MC-9a	AC-4	8	1.5	6	2.2	25	MT-12		
MC-12a	AC-4	11	2.2	9	4	25	MT-12		
MC-18a	AC-4	16	3.7	11	4	32	MT-12		
MC-9b	AC-4	8	1.5	6	2.2	25	MT-32		
MC-12b	AC-4	11	2.2	9	4	27	MT-32		
MC-18b	AC-4	16	3.7	11	4	40	MT-32		
MC-22b	AC-4	18	3.7	13	5.5	45	MT-32		
MC-32a	AC-4	20	4.5	17	7.5	55	MT-32		
MC-40a	AC-4	25	5	24	9	60	MT-32		
MC-50a	AC-4	35	5.5	32	11	100	MT-63		
MC-65a	AC-4	50	7.5	47	11	115	MT-63		
MC-75a	AC-4	55	7.5	52	25	125	MT-95		
MC-85a	AC-4	65	7.5	62	30	135	MT-95		
MC-100a	AC-4	80	9	75	37	160	MT-95		
MC-130a	AC-4	93	22	90	45	200	MT-150		
MC-150a	AC-4	120	30	110	55	250	MT-150		
MC-185a	AC-4	150	37	150	75	300	MT-225		
MC-225a	AC-4	180	45	180	90	350	MT-225		
MC-265a	AC-4	200	50	200	102	400	MT-400		
MC-330a	AC-4	220	55	220	110	500	MT-400		
MC-400a	AC-4	300	75	300	150	520	MT-400		
MC-500a	AC-4	350	90	350	176	700	MT-800		
MC-630a	AC-4	400	110	400	200	900	MT-800		
MC-800a	AC-4	630	160	630	300	1050	MT-800		

Operating Coil : 600V 50/60Hz or less, 250V d.c. or less



中国国家强制性产品认证证书

证书编号: 2024120304119288

认证委托人名称及地址

LS ELECTRIC Co., Ltd.

127, LS-ro, Dongan-gu, Anyang-si, Gyeonggi-do, Republic of Korea

生产者名称及地址

LS ELECTRIC Co., Ltd.

127, LS-ro, Dongan-gu, Anyang-si, Gyeonggi-do, Republic of Korea

生产企业名称及地址

SEONG WOO Electric Co. Ltd

(Songjeong-dong), 27, Wolmyeong-ro 75beon-gil, Heungdeok-gu Cheongju-si,
Chungcheongbuk-do, Korea

产品名称和系列、型号、规格

接触器

MC-50a/4、MC-65a/4、MC-75a/4、MC-85a/4 详细规格见附件

产品标准和技术要求

GB/T 14048.4-2020

上述产品符合《强制性产品认证实施规则 低压电器 低压元器件》
(CNCA-C03-02: 2024) 的要求, 特发此证。

发证日期: 2024年10月18日 有效期至: 2029年07月29日

证书信息和有效性可扫描下方二维码或登录发证机构网站查验,
也可在认监委网站(www.cnca.gov.cn)查询。

本证书为变更证书, 证书首次颁发日期: 2024年07月30日



方圆标志认证集团
China Quality Mark Certification Group

朱
M. G.





中国国家强制性产品认证证书

证书编号: 2024120304119288

证书附页: 第 1 页共 2 页

1、型号规格:

Uimp:8kV; Ui:1000V; Ith:80A(MC-50a/4), 100A(MC-65a/4), 110A(MC-75a/4), 135A(MC-85a/4); MC-50a/4; AC-1:Ue/Ie:200V~240V/380V~440V/500V~550V/690V/80A; AC-3:Ue/Ie:200V~240V/55A, 380V~440V/50A, 500V~550V/43A, 690V/28A; MC-65a/4: AC-1:Ue/Ie:200V~240V/380V~440V/500V~550V/690V/100A; AC-3:Ue/Ie:200V~240V/380V~440V/65A, 500V~550V/60A, 690V/35A; MC-75a/4: AC-1:Ue/Ie:200V~240V/380V~440V/500V~550V/690V/110A; AC-3:Ue/Ie:200V~240V/380V~440V/75A, 500V~550V/64A, 690V/42A; MC-85a/4; AC-1:Ue/Ie:200V~240V/380V~440V/500V~550V/690V/135A; AC-3:Ue/Ie:200V~240V/380V~440V/85A, 500V~550V/75A, 690V/45A; Us:AC24V, 42V, 48V, 100V, 110V, 220V, 240V, 380V, 400V, 415V, 440V, 500V, 550V, 50Hz; AC1 20V, 240V 50/60Hz; DC12V, 20V, 24V, 48V, 60V, 80V, 100V, 110V, 125V, 200V, 220V, 250V; 3P、4P; IP20; 配用的辅助触头: 1NO1NC; Ith:16A; Uimp:6kV, Ui:600V; AC-15:120V/6A, 240V/3A, 380V/1.9A, 480V/1.5A, 500V/1.4A, 600V/1.2A; DC-13: 125V/1.1A, 250V/0.55A, 400V/0.31A, 500V/0.27A, 600V/0.2A。

2、型号的解释:

本页为证书附页, 应与证书主页同时使用。

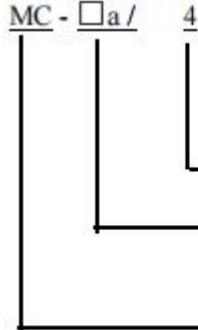
CQM 方圆标志认证集团
China Quality Mark Certification Group



中国国家强制性产品认证证书

证书编号: 2024120304119288

证书附页: 第 2 页共 2 页



Number of poles 极数: 4 poles

Rated operational current(A)(AC-3, 440V):

50a-50A,65a-65A,75a-75A,85a-85A

Contactor 接触器

本页为证书附页, 应与证书主页同时使用。

CQM 方圆标志认证集团
China Quality Mark Certification Group



中国国家强制性产品认证证书

CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION

Certificate No.: 2024120304119288

THE APPLICANT

LS ELECTRIC Co., Ltd.

127, LS-ro, Dongan-gu, Anyang-si, Gyeonggi-do, Republic of Korea

THE MANUFACTURER

LS ELECTRIC Co., Ltd.

127, LS-ro, Dongan-gu, Anyang-si, Gyeonggi-do, Republic of Korea

THE FACTORY

SEONG WOO Electric Co.Ltd

(Songjeong-dong), 27, Wolmyeong-ro 75beon-gil, Heungdeok-gu Cheongju-si,
Chungcheongbuk-do, Korea

PRODUCT AND MODEL(S)

Contactor

MC-50a/4、MC-65a/4、MC-75a/4、MC-85a/4 Please refer to the attachment for detailed
specifications

STANDARDS AND TECHNICAL REQUIREMENTS

THIS IS TO CERTIFY THAT THE ABOVE-MENTIONED PRODUCT COMPLIES WITH THE REQUIREMENTS OF
IMPLEMENTATION RULE FOR CHINA COMPULSORY CERTIFICATION (CNCA-C03-02: 2024).

DATE OF ISSUE: 2024-10-18

DATE OF VALIDITY: 2029-07-29

THE INFORMATION AND VALIDITY OF THIS CERTIFICATE MAY BE VERIFIED BY THE QR CODE AND
THE WEBSITE OF ISSUER AND CNCA (WWW.CNCA.GOV.CN).

THIS CERTIFICATE HAS BEEN UP-ISSUED. THE DATE OF INITIAL ISSUE IS 2024-07-30.



方圆标志认证集团
China Quality Mark Certification Group

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中国国家强制性产品认证证书

CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION

Certificate No.: 2024120304119288

ANNEX: Page 1 of 1
GB/T 14048.4-2020

THIS ANNEX SHALL BE USED TOGETHER WITH THE CERTIFICATE.





中国国家强制性产品认证证书

证书编号: 2024120304119895

认证委托人名称及地址

LS ELECTRIC Co., Ltd.

127, LS-ro, Dongan-gu, Anyang-si, Gyeonggi-do, Republic of Korea

生产者名称及地址

LS ELECTRIC Co., Ltd.

127, LS-ro, Dongan-gu, Anyang-si, Gyeonggi-do, Republic of Korea

生产企业名称及地址

LS ELECTRIC Co., Ltd. Cheongju 1 Plant

95, Baekbong-ro, HeungDeok-Gu, CheongJu-Si, ChungCheongBuk-Do, Korea

产品名称和系列、型号、规格

接触器

MC-130a、MC-150a; 详细规格见附录

产品标准和技术要求

GB/T 14048.4-2020

上述产品符合《强制性产品认证实施规则 低压电器 低压元器件》
(CNCA-C03-02: 2024) 的要求, 特发此证。

发证日期: 2024 年 08 月 29 日 有效期至: 2029 年 08 月 28 日

证书信息和有效性可扫描下方二维码或登录发证机构网站查验,
也可在认监委网站 (www.cnca.gov.cn) 查询。



方圆标志认证集团
China Quality Mark Certification Group

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中国国家强制性产品认证证书

证书编号: 2024120304119895

证书附页: 第 1 页共 1 页

MC-130a、MC-150a; U_{imp}: 8kV; U_i: 1000V; I_{th}: 200A (MC-130a), 250A (MC-150a); MC-130a: AC-1: U_e/I_e: 440V/200A; AC-3: U_e/I_e: 200V/240V/130A, 380V/440V/130A, 500V/550V/90A, 690V/60A; AC-4: U_e/I_e: 200V/240V/93A, 380V/440V/90A; MC-150a: AC-1: U_e/I_e: 440V/250A; AC-3: U_e/I_e: 200V/240V/150A, 380V/440V/150A, 500V/550V/100A, 690V/60A; AC-4: U_e/I_e: 200V/240V/120A, 380V/440V/110A; I_q=10kA; IP20; U_s: AC24V, 48V, 100V~240V, 110V~120V, 110V, 220V, 220V~240V, 300V, 380V~440V, 400V, 500V (50/60Hz), AC500V (50/60Hz, 电子式)、AC24V~48V (50/60Hz, 电子式)、AC300V~400V (50/60Hz, 电子式), DC24V, 48V, 110V, 220V, 100V~220V; 极数: 3P; 配用的辅助触头: UA-1 X2, 2N02NC; I_{th}: 16A; AC-15: U_e/I_e: 120V/6A, 240V/3A, 380V/1.9A, 480V/1.5A, 500V/1.4A, 600V/1.2A; DC-13: U_e/I_e: 125V/1.1A, 250V/0.55A, 400V/0.31A, 500V/0.27A, 600V/0.2

本页为证书附页, 应与证书主页同时使用。

CQM 方圆标志认证集团
China Quality Mark Certification Group



中国国家强制性产品认证证书

CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION

Certificate No.: 2024120304119895

THE APPLICANT

LS ELECTRIC Co., Ltd.

127, LS-ro, Dongan-gu, Anyang-si, Gyeonggi-do, Republic of Korea

THE MANUFACTURER

LS ELECTRIC Co., Ltd.

127, LS-ro, Dongan-gu, Anyang-si, Gyeonggi-do, Republic of Korea

THE FACTORY

LS ELECTRIC Co., Ltd. Cheongju 1 Plant

95, Baekbong-ro, HeungDeok-Gu, CheongJu-Si, ChungCheongBuk-Do, Korea

PRODUCT AND MODEL(S)

Contactors

MC-130a、MC-150a; Electrical parameters are specified in attachmen

STANDARDS AND TECHNICAL REQUIREMENTS

GB/T 14048.4-2020

THIS IS TO CERTIFY THAT THE ABOVE-MENTIONED PRODUCT COMPLIES WITH THE REQUIREMENTS OF
IMPLEMENTATION RULE FOR CHINA COMPULSORY CERTIFICATION (CNCA-C03-02: 2024).

DATE OF ISSUE: 2024-08-29

DATE OF VALIDITY: 2029-08-28

THE INFORMATION AND VALIDITY OF THIS CERTIFICATE MAY BE VERIFIED BY THE QR CODE AND
THE WEBSITE OF ISSUER AND CNCA (WWW.CNCA.GOV.CN).



方圆标志认证集团
China Quality Mark Certification Group

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国





Certificate of Compliance

Certificate: 1979742

Master Contract: 241270

Project: 80153461

Date Issued: March 20, 2023

Issued To: LS ELECTRIC Co., Ltd.
127, LS-ro, Dongan-gu,
Anyang-si, Gyeonggi-do, 14119
South Korea

Attention: O Shik Kwon

The products listed below are eligible to bear the CSA Mark




Issued by: Kyu Yong Lee

PRODUCTS

CLASS - C321103 - INDUSTRIAL CONTROL EQUIPMENT Motor Controllers - Auxiliary Devices
CLASS - C321104 - INDUSTRIAL CONTROL EQUIPMENT Motor Controllers - Magnetic

CLASS 3211 04 - INDUSTRIAL CONTROL EQUIPMENT - Motor Controllers - Magnetic

Magnetic Motor Contactors, open type, Series MC with suffixes. Three normally open main contacts. Coil rated 24V ac, 50/60Hz; 48V ac, 50/60Hz; 110V ac, 50/60Hz, 220V ac, 50/60Hz; 380V ac, 50/60Hz; 400V ac, 50/60Hz; 440V ac, 50/60; 500V ac, 50/60Hz; 550V ac, 50/60Hz; Or 12V dc; 24V dc; 48V dc; 100V dc; 110V dc; 125V dc; 200V dc; 220V dc; 250V dc.

Contacts rating as follows:

Cat No. MC-6a rated 25 A continued; 0.5 HP, 110-120 V ac (1-phase); 1.5 HP, 220-240 V ac (1-phase); 5 kA, 240 V ac (1-phase) short-circuit rating; 2 HP, 200-208 V ac (3-phase); 3 HP, 220-240 V ac (3-phase); 5 HP, 440-480 V ac (3-phase); 7.5 HP, 550-600 V ac (3-phase); 5 kA, 600 V ac (3-phase) short-circuit rating.



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Cat No. MC-9, MC-9a, MC-9b rated 25 A continuous; 0.5 HP, 110-120 V ac (1-phase); 1.5 HP, 220-240 V ac (1-phase); 5 kA, 240 V ac (1-phase) short-circuit rating; 2 HP, 200-208 V ac (3-phase); 3 HP, 220-240 V ac (3-phase); 5 HP, 440-480 V ac (3-phase); 7.5 HP, 550-600 V ac (3-phase); 5 kA, 600 V ac (3-phase) short-circuit rating; Elevator rating- 12.5 A, 200-208/220-240/440-480/550-600 V ac (3-phase).

Cat No. MC-12, MC-12a, MC-12b rated 25 A continuous; 1 HP, 110-120 V ac (1-phase); 2 HP, 220-240 V ac (1-phase); 5 kA, 240 V ac (1-phase) short circuit rating; 3 HP, 200-208 V ac (3-phase); 5 HP, 200-240 V ac (3-phase); 7.5 HP, 440-480 V ac (3-phase); 10 HP, 550-600 V ac (3-phase); 5 kA, 600 V ac (3-phase) short-circuit rating; Elevator rating- 12.5 A, 200-208/220-240/440-480/550-600 V ac (3-phase).

Cat No. MC-18, MC-18a rated 32 A continuous, MC-18b rated 40 A continuous; 2 HP, 110-120 V ac (1-phase); 3 HP, 220-240 V ac (1-phase); 5 kA, 240 V ac (1-phase) short-circuit rating; 5 HP, 200-208 V ac (3-phase) for Cat No. MC-18; 7.5 HP, 200-208 V ac (3-phase) for Cat Nos. MC-18a, MC-18b; 7.5 HP, 220-240 V ac (3-phase); 10 HP, 440-480 V ac (3-phase); 15 HP, 550-600 V ac (3-phase); 5 kA, 600 V ac (3-phase) short-circuit rating; Elevator rating- 20 A, 200-208/220-240/440-480/550-600 V ac (3-phase).

Cat No. MC-25, MC-25a, MC-22b rated 40 A continuous; 2 HP, 110-120 V ac (1-phase); 3 HP, 220-240 V ac (1-phase); 5 kA, 240 V ac (1-phase) short circuit rating; 7.5 HP, 200-208 V ac (3-phase); 10 HP, 220-240 V ac (3-phase); 15 HP, 440-480 V ac (3-phase); 20 HP, 550-600 V ac (3-phase); 5 kA, 600 V ac (3-phase) short circuit rating; Elevator rating- 20 A, 200-208/220-240/440-480/550-600 V ac (3-phase).

Cat No. MC-32, MC-32a rated 50 A continuous; 3 HP, 110-120 V ac (1-phase); 5 HP, 220-240 V ac (1-phase); 5 kA, 240 V ac (1-phase) short circuit rating; 7.5 HP, 200-208 V ac (3-phase); 10 HP, 220-240 V ac (3-phase); 20 HP, 440-480 V ac (3-phase); 25 HP, 550-600 V ac (3-phase); 5 kA, 600 V ac (3-phase) short circuit rating; Elevator rating- 25 A, 200-208/220-240/440-480/550-600 V ac (3-phase).

Cat No. MC-35, MC-35a rated 55 A continuous; 2 HP, 110-120 V ac (1-phase); 5 HP, 220-240 V ac (1-phase); 5 kA, 240 V ac (1-phase) short circuit rating; 10 HP, 200-208 V ac (3-phase), 10 HP, 220-240 V ac (3-phase); 25 HP, 440-480 V ac (3-phase); 20 HP, 550-600 V ac (3-phase); 5 kA, 600 V ac (3-phase) short-circuit rating; Elevator rating- 30 A, 200-208/220-240/440-480/550-600 V ac (3-phase).

Cat No. MC-40, MC-40a rated 60 A continuous; 3 HP, 110-120 V ac (1-phase); 7.5 HP, 220-240 V ac (1-phase); 5 kA, 240 V ac (1-phase) short-circuit rating; 15 HP, 200-208 V ac (3-phase); 15 HP, 220-240 V ac (3-phase); 30 HP, 440-480 V ac (3-phase); 30 HP, 550-600 V ac (3-phase); 5 kA, 600 V ac (3-phase) short-circuit rating; Elevator rating- 32.5 A, 200-208/220-240/440-480/550-600 V ac (3-phase).

Cat No. MC-50, MC-50a rated 70 A continuous; 3 HP, 110-120 V ac (1-phase); 10 HP, 220-240 V ac (1-phase); 5 kA, 240 V ac (1-phase) short-circuit rating; 20 HP, 200-208 V ac (3-phase); 25 HP, 220-240 V ac (3-phase); 40 HP, 440-480 V ac (3-phase); 50 HP, 550-600 V ac (3-phase); 5 kA, 600 V ac (3-phase) short-circuit rating; Elevator rating- 37.5 A, 200-208/220-240/440-480/550-600 V ac (3-phase).

Cat No. MC-63 rated 75 A continuous; 5 HP, 110-120 V ac (1-phase); 10 HP, 220-240 V ac (1-phase); 5 kA, 240 V ac (1-phase) short-circuit rating; 20 HP, 200-208 V ac (3-phase); 25 HP, 220-240 V ac (3-phase); 40 HP, 440-480 V ac (3-phase); 50 HP, 550-600 V ac (3-phase); 5 kA, 600 V ac (3-phase) short-circuit rating; Elevator rating- 42 A, 200-208/220-240/440-480/550-600 V ac (3-phase).



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Cat No. MC-65, MC-65a rated 100 A continuous; 5 HP, 110-120 V ac (1-phase); 15 HP, 220-240 V ac (1-phase); 5 kA, 240 V ac (1-phase) short-circuit rating; 25 HP, 200-208 V ac (3-phase); 30 HP, 220-240 V ac (3-phase); 50 HP, 440-480 V ac (3-phase); 60 HP, 550-600 V ac (3-phase); 10 kA, 600 V ac (3-phase) short-circuit rating; Elevator rating- 55A, 200-208/220-240/440-480/550-600 V ac (3-phase).

Cat No. MC-75, MC-75a rated 110 A continuous; 5 HP, 110-120 V ac (1-phase); 15 HP, 220-240 V ac (1-phase); 5 kA, 240 V ac (1-phase) short-circuit rating; 25 HP, 200-208 V ac (3-phase); 30 HP, 220-240 V ac (3-phase); 50 HP, 440-480 V ac (3-phase); 60 HP, 550-600 V ac (3-phase); 10 kA, 600 V ac (3-phase) short-circuit rating; Elevator rating- 60A, 200-208/220-240/440-480/550-600 V ac (3-phase).

Cat No. MC-85, MC-85a rated 135 A continuous; 7.5 HP, 110-120 V ac (1-phase); 15 HP, 220-240 V ac (1-phase); 5 kA, 240 V ac (1-phase) short-circuit rating; 30 HP, 200-208 V ac (3-phase); 40 HP, 220-240 V ac (3-phase); 60 HP, 440-480 V ac (3-phase); 75 HP, 550-600 V ac (3-phase); 10 kA, 600 V ac (3-phase) short-circuit rating; Elevator rating- 70A, 200-208/220-240/440-480/550-600 V ac (3-phase).

Cat No. MC-95 rated 140 A continuous; 10 HP, 110-120 V ac (1-phase); 20 HP, 220-240 V ac (1-phase); 5 kA, 240 V ac (1-phase) short-circuit rating; 30 HP, 200-208 V ac (3-phase); 40 HP, 220-240 V ac (3-phase); 75 HP, 440-480 V ac (3-phase); 75 HP, 550-600 V ac (3-phase); 10 kA, 600 V ac (3-phase) short-circuit rating; Elevator rating- 75A, 200-208/220-240/440-480/550-600 V ac (3-phase).

Cat No. MC-100a rated 160 A continued; 10 HP, 110-120 V ac (1-phase); 20 HP, 220-240 V ac (1-phase); 5 kA, 240 V ac (1-phase) short-circuit rating; 30 HP, 200-208 V ac (3-phase); 40 HP, 220-240 V ac (3-phase); 75 HP, 440-480 V ac (3-phase); 75 HP, 550-600 V ac (3-phase); 10 kA, 600 V ac (3-phase) short-circuit rating.

Magnetic Motor Contactors, open type, Series MC with suffixes, three normally open contacts. Coil rated 24 V ac, 48 V ac, 110 V ac, 220 V ac, 300 V ac, 400 V ac or 500 V ac, 50/60Hz; or 24 V dc, 48 V dc, 100 V dc, 200 V dc.

Contacts ratings as follows:

Cat No. MC-130, MC-130a rated 200 A continuous; 10 HP, 110-120 V ac (1-phase); 20 HP, 220-240 V ac (1-phase); 5 kA, 240 V ac (1-phase) short-circuit rating; 40 HP, 200-208 V ac (3-phase); 40 HP, 220-240 V ac (3-phase); 75 HP, 440-480 V ac (3-phase); 75 HP, 550-600 V ac (3-phase); short-circuit rating – 10 kA, 600 V ac (3-phase).

Cat No. MC-150, MC-150a rated 250 A continuous; 15 HP, 110-120 V ac (1-phase); 25 HP, 220-240 V ac (1-phase); 5 kA, 240 V ac (1-phase) short-circuit rating; 40 HP, 200-208 V ac (3-phase); 50 HP, 220-240 V ac (3-phase); 100 HP, 440-480 V ac (3-phase); 75 HP, 550-600 V ac (3-phase); 10 kA, 600 V ac (3-phase) short-circuit rating.

Magnetic Motor Contactors, open type, Series MC with suffixes. Three normally open contacts. Coil rated 24-25 V ac, 50/60 Hz; 48-50 V ac, 50/60 Hz; 100-240 V ac, 50/60 Hz; 265-347 V ac, 50/60 Hz; 380-450 V ac, 50/60 Hz; 440-575 V ac, 50/60 Hz; 110 V ac, 50/60 Hz; 220 V ac, 50/60 Hz; Or 24 V dc; 48 V dc; 100-200 V dc; 110 V dc; 220 V dc.



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Cat No. MC-185a rated 300 A continuous; 15 HP, 110-120 V ac (1-phase); 30 HP, 220-240 V ac (1-phase); 60 HP, 200-208 V ac (3-phase); 60 HP, 220-240 V ac (3-phase); 125 HP, 440-480 V ac (3-phase); 125 HP, 550-600 V ac (3-phase); 10 kA, 600 V ac (3-phase) short-circuit rating.

Cat No. MC-225a rated 350 A continuous; 15 HP, 110-120 V ac (1-phase); 40 HP, 220-240 V ac (1-phase); 60 HP, 200-208 V ac (3-phase); 75 HP, 220-240 V ac (3-phase); 150 HP, 440-480 V ac (3-phase); 150 HP, 550-600 V ac (3-phase); 10 kA, 600 V ac (3-phase) short-circuit rating.

Magnetic Motor Contactors, open type, Series MC with suffixes. Three normally open contacts. Coil rated 100-240 V ac, 50/60 Hz; 265-347 V ac, 50/60 Hz; 380-450 V ac, 50/60 Hz; 440-575 V ac, 50/60 Hz; 110 V ac, 50/60 Hz; 220 V ac, 50/60 Hz; Or 100-200 V dc; 110 V dc; 220 V dc.

Contacts rating as follows:

Cat No. MC-265a rated 400 A continuous; 75 HP, 200-208 V ac (3-phase); 100 HP, 220-240 V ac (3-phase); 200 HP, 440-480 V ac (3-phase); 200 HP, 550-600 V ac (3-phase); 10 kA, 600 V ac (3-phase) short-circuit rating.

Cat No. MC-330a rated 500A continuous; 100 HP, 200-208 V ac (3-phase); 100 HP, 220-240 V ac (3-phase); 200 HP, 440-480 V ac (3-phase); 200 HP, 550-600 V ac (3-phase); 18 kA, 600 V ac (3-phase) short-circuit rating.

Cat No. MC-400a rated 520A continuous; 125 HP, 200-208 V ac (3-phase); 150 HP, 220-240 V ac (3-phase); 300 HP, 440-480 V ac (3-phase); 300 HP, 550-600 V ac (3-phase); 18 kA, 600 V ac (3-phase) short-circuit rating.

Magnetic Motor Contactors, open type, Series MC with suffixes. Three normally open contacts. Coil rated 265-347 V ac, 50/60 Hz; 380-450 V ac, 50/60 Hz; 440-575 V ac, 50/60 Hz; 100-127 V ac 50/60 Hz; 200-240 V ac 50/60 Hz; 110 V ac, 50/60 Hz; 220 V ac, 50/60 Hz; Or 100-110 V dc; 200-220 V dc.

Contact ratings as follows:

Cat No. MC-500a rated 700 A continuous; 150 HP, 200-208 V ac (3-phase); 200 HP, 220-240 V ac (3-phase); 400 HP, 440-480 V ac (3-phase); 400 HP, 550-600 V ac (3-phase); 18 kA, 600 V ac (3-phase) short-circuit rating.

Cat No. MC-630a rated 900A continuous; 200 HP, 200-208 V ac (3-phase); 250 HP, 220-240 V ac (3-phase); 500 HP, 440-480 V ac (3-phase); 500 HP, 550-600 V ac (3-phase); 30 kA, 600 V ac (3-phase) short-circuit rating.

Cat No. MC-800a rated 1050A continuous; 200 HP, 200-208 V ac (3-phase); 300 HP, 220-240 V ac (3-phase); 600 HP, 440-480 V ac (3-phase); 600 HP, 550-600 V ac (3-phase); 30 kA, 600 V ac (3-phase) short-circuit rating.

Add-On Auxiliary Contact Block, Cat Nos. UA-1, UR-02 (N.O. & N.C.) rated 6 A, A600 and P600.

Add-On Auxiliary Contact Block, Cat Nos. AU-100 (N.O. & N.C.) (used with MC-185a~800a) rated 6 A, A600 and P600.

Add-On Interlock Unit, Cat Nos. AR-180 (used with MC-185a~400a) and AR-600 and 600 V (used with MC 500a~800a)



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Add-On Latch Unit, Cat Nos. ML-65 (used with MC-6a~65a), ML-150 (used with MC-75a~150a) and AL-220 (used with MC-185a~225a) and AL-400 (used with 265a~400a)

CLASS 3211 03 - INDUSTRIAL CONTROL EQUIPMENT - Motor Controllers - Auxiliary Devices

Thermal Overloads Relays, open type, GTH(K) followed by -12M, -12M/3 (with AZ-12MH)

Thermal Overloads Relays, open type, MT followed by -12 (with UZ-12), -32 (with UZ-32), -63 (with UZ-63), -95 (with UZ-95), -150 (with UZ-150), -225, -400, -800 by 2H, 3H, 3K or 3D

Thermal Overload Relays, open type, as follows:

Cat Nos. GTH-12M, GTH-12M/3, GTK-12M, MT-12/2H, MT-12/3H, MT-12/3K rated Trip Class 10 and MT-12/3D rated Trip Class 20 (used with MC-9a, 12a, 18a contactors):

Cat Nos. MT-32/2H, MT-32/3H and MT-32/3K rated Trip Class 10 and MT-32/3D rated Trip Class 20 (used with Cat Nos. MC-9, 9b, MC-12, 12b, MC-18, 18b, 22b, MC-25, MC-32, 32a & MC-40a contactors). (See Descriptive Report for ratings)

Cat Nos. MT-63/2H, MT-63/3H and MT-63/3K rated Trip Class 10 and MT-63/3D rated Trip Class 20 (used with Cat Nos. MC-35, MC-40, MC-50, 50a, MC-63 & MC-65a contactors). (See Descriptive Report for ratings)

Cat Nos. MT-95/2H, MT-95/3H and MT-95/3K rated Trip Class 10 and MT-95/3D rated Trip Class 20 (used with Cat Nos. MC-65, MC-75, 75a, MC-85, 85a, MC-95 & MC-100a contactors). (See Descriptive Report for ratings)

Cat Nos. MT-150/2H, MT-150/3H and MT-150/3K rated Trip Class 10 and MT-150/3D rated Trip Class 20 (used with Cat Nos. MC-130, MC-130a, MC-150 & MC-150a contactors). (See Descriptive Report for ratings)

Cat Nos. MT-225/2H, MT-225/3H and MT-225/3K rated Trip Class 10 and MT-225/3D rated Trip Class 20 (used with Cat Nos. MC-185a & MC-225a contactors). (See Descriptive Report for ratings)

Cat Nos. MT-400/2H, MT-400/3H and MT-400/3K rated Trip Class 10 and MT-400/3D rated Trip Class 20 (used with Cat Nos. MC-265a, 330a & MC-400a contactors). (See Descriptive Report for ratings)

Cat Nos. MT-800/2H, MT-800/3H and MT-800/3K rated Trip Class 10 and MT-800/3D rated Trip Class 20 (used with Cat Nos. MC-500a, MC-630a & MC-800a contactors). (See Descriptive Report for ratings)

Auxiliary contact rating: C600, R300
1NC (Normally Close) + 1NO (Normally Open)

Note: Open type devices are Certified as components for use only in other Certified equipment where the suitability of the combination is to be determined by the CSA Group.



Certificate: 1979742
Project: 80153461

Master Contract: 241270
Date Issued: 2023-03-20

APPLICABLE REQUIREMENTS

CSA C22.2 No. 14-18 - Industrial Control Equipment

MARKINGS

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The products listed are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and U.S. Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only.

The products listed are eligible to bear the CSA Mark, without any adjacent indicators, indicating that products have been manufactured to the requirements of Canadian Standards.

Submittor's name or trade symbol "LSIS", model number, electrical ratings, short-circuit ampere terminal Identification, terminal torque value, and wiring diagram to indicate connections. "Use 60/75°C Copper Conductors Only" and the CSA Monogram appear on the paper label adhere to each device.



Notes:

Products certified under Class C321103, C321104 have been certified under CSA's ISO/IEC 17065 accreditation with the Standards Council of Canada (SCC). www.scc.ca





Supplement to Certificate of Compliance

Certificate: 1979742

Master Contract: 241270

The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

Product Certification History

Project	Date	Description
80153461	2023-03-20	Update Report 1979742 to add alternate components.
80142124	2022-11-28	Report correction in Report 1979742 (Correction of model name and descriptive)
80096253	2021-12-23	Update report 1979742 to upgrade the continuous ratings, contact size and material type, add the alternative components, components replacement and component's company name change, minor corrections and standard upgrade from C22.2 no. 14-10 to C22.2 no. 14-18 of Contactors, model MC series.
80005377	2019-06-04	Update report 1979742 to change factory test method. This quotation includes no other changes.
2447895	2011-10-11	Covers additional Model Numbers
2451291	2011-08-18	Change in C of C with updated client name and address
2087745	2008-11-03	Covers additional of MC-6a, -9a, -12a, -18a, -25a, -32a, - 35a, -40a, -50a, 65a, 75a, -85a, -100a and Add-on contact block; thermal relays, Cat Nos. GTH(K)-12M, MT-12/3H, -12/3K & -12/3D
1979742	2008-02-20	New Certification (MC Series contactors & MT Series thermal overload relays)

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

CB TEST CERTIFICATE

Product

Magnetic Contactor

Name and address of the applicant

 LS ELECTRIC CO LTD
 127 LS-RO DONGAN-GU ANYANG-SI, Gyeonggi-do, 14119
 REPUBLIC OF KOREA

Name and address of the manufacturer

 LS ELECTRIC CO LTD
 127 LS-RO DONGAN-GU ANYANG-SI, GYEONGGI-DO, 14119
 REPUBLIC OF KOREA

Name and address of the factory

 LS ELECTRIC CO LTD
 95 BAEKBONG-RO HEUNGDEOK-GU CHEONGJU-SI,
 CHUNGCHEONGBUK-DO, 28439
 REPUBLIC OF KOREA

Note: When more than one factory, please report on page 2

 Additional Information on page 2

Ratings and principal characteristics

 MC-265a: AC3 ,240V/440V/550V/ 690V, 265A/265A/225A/185A
 MC-330a: AC3 ,240V/440V/550V/ 690V, 330A/330A/250A/220A
 MC-400a: AC3 ,240V/440V/550V, 400A/400A/350A

 Additional Information on page 2

Trademark (if any)



Customer's Testing Facility (CTF) Stage used

CTF Stage 2

Model / Type Ref.

MC-330a, MC-400a, MC-265a

Additional information (if necessary may also be reported on page 2)

 Additional Information on page 2

A sample of the product was tested and found to be in conformity with

IEC 60947-4-1:2018, IEC 60947-1:2007, IEC 60947-1:2007/AMD1:2010, IEC 60947-1:2007/AMD2:2014

As shown in the Test Report Ref. No. which forms part of this Certificate

NC10517-D56-CB-1 issued on 2021-06-28

This CB Test Certificate is issued by the National Certification Body



- UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA
- UL (Demko), Borupvang 5A DK-2750 Ballerup, DENMARK
- UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN
- UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

 For full legal entity names see www.ul.com/ncbnames

Date: 2021-07-19

Signature:

Jan-Erik Storgaard

Additional Ratings:

MC-265a				
Rated Operational Voltage(Vac)	AC1	AC2	AC3	AC4
200~240	400 A	265 A	265 A	200 A
380~440	400 A	265 A	265 A	200 A
500~550	400 A	225 A	225 A	-
690	400 A	185 A	185 A	-
1000	400 A	-	-	-

MC-330a				
Rated Operational Voltage(Vac)	AC1	AC2	AC3	AC4
200~240	500 A	330 A	330 A	220 A
380~440	500 A	330 A	330 A	220 A
500~550	500 A	280 A	280 A	-
690	500 A	220 A	220 A	-
1000	500 A	-	-	-

MC-400a				
Rated Operational Voltage(Vac)	AC1	AC2	AC3	AC4
200~240	520 A	400 A	400 A	300 A
380~440	520 A	400 A	400 A	300 A
500~550	520 A	350 A	350 A	-
690	520 A	300 A	-	-
1000	520 A	-	-	-

Additional information (if necessary)



UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA
 UL (Demko), Borupvang 5A DK-2750 Ballerup, DENMARK
 UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN
 UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

 For full legal entity names see www.ul.com/ncbnames

Date: 2021-07-19

Signature: 
 Jan-Erik Storgaard



СВИДЕТЕЛЬСТВО О ТИПОВОМ ОДОБРЕНИИ
TYPE APPROVAL CERTIFICATE

Изготовитель

Manufacturer **LS ELECTRIC CO., LTD. (BRN 116-81-19273)**

Адрес

Address

Юридический адрес / Legal address: 127, LS-ro, Dongan-gu, Anyang-si, Gyeonggi-do, 14119, Korea

Заводской адрес / Factory address: Baekbong-ro, Heung deok-gu, Cheongju-si, Chungcheongbuk-do, 27439, Korea

Изделие*

Product*

Магнитные контакторы типа "MC- series"

Magnetic contactors of type "MC- series"

Код номенклатуры **11040503**
Code of nomenclature

На основании освидетельствования и проведенных испытаний удостоверяется, что вышеупомянутое(ые) изделие(я) удовлетворяет(ют) требованиям Российского морского регистра судоходства.

This is to certify that on the basis of the survey and tests carried out the above mentioned item(s) complies(ly) with the requirements of Russian Maritime Register of Shipping.

Части XI Правил классификации и постройки морских судов, 2021 и Разделу 10, Части IV Правил технического наблюдения за постройкой судов и изготовлением материалов и изделий для судов, 2021 а также IEC 60947-4-1:2018.

Part XI of the Rules for the Classification and Construction of Sea-Going Ships, 2021 and Section 10, Part IV of the Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships, 2021 as well as IEC 60947-4-1:2018.

Настоящее Свидетельство о типовом одобрении действительно до **08.07.2026**
This Type Approval Certificate is valid until

Настоящее Свидетельство о типовом одобрении теряет силу в случаях, установленных в Правилах технического наблюдения за постройкой судов и изготовлением материалов и изделий для судов.

This Type Approval Certificate becomes invalid in cases stipulated in Rules for the Technical Supervision during Construction of Ships and Manufacture of Shipboard Materials and Products.

Дата выдачи
Date of issue

08.07.2021

№ **21.10500.296**

Российский морской регистр судоходства
Russian Maritime Register of Shipping

М.П.
L.S.

(подпись)
(signature)

М. Латухин / M. Latukhin
(фамилия, инициалы)
(name)

*Дополнительную информацию смотрите на обороте.
Additional information see overleaf.

Технические данные
Technical data

Магнитные контакторы типа "MC-series", 3-х полюсные контакторы

(со вспомогательными блок-контактами, тип "UA-1, UA-2, UA-4, AU-100, AU-100E"):

- Модели: MC-6a, MC-9a, MC-12a, MC-18a, MC-9b, MC-12b, MC-18b, MC-22b, MC-32a, MC-40a, MC-50a, MC-65a, MC-75a, MC-85a, MC-100a, MC-130a, MC-150a, MC-185a, MC-225a, MC-265a, MC-330a, MC-400a, MC-500a, MC-630a, MC-800a

Magnetic contactors of type "MC-series", 3 poles contactors

(with auxiliary contact blocks, type "UA-1, UA-2, UA-4, AU-100, AU-100E"):

- Models: MC-6a, MC-9a, MC-12a, MC-18a, MC-9b, MC-12b, MC-18b, MC-22b, MC-32a, MC-40a, MC-50a, MC-65a, MC-75a, MC-85a, MC-100a, MC-130a, MC-150a, MC-185a, MC-225a, MC-265a, MC-330a, MC-400a, MC-500a, MC-630a, MC-800a

Максимальное номинальное рабочее напряжение, Ue (В):

Max. rated operational voltage, Ue (V):

690 (MC-6a ... MC-22b), 1000 (MC-32a ... MC-800a)

Номинальное напряжение изоляции, Ui (В):

Rated insulation voltage, Ui (V):

690 (MC-6a ... MC-22b), 1000 (MC-32a ... MC-800a)

Номинальная частота, Гц / Rated frequency, Hz:

50 / 60

Номинальное выдерживаемое импульсное напряжение, Uimp (кВ):

Rated impulse withstand voltage, Uimp (kV):

6 (MC-6a ... MC-22b), 8 (MC-32a ... MC-800a)

Рабочая температура окружающей среды / Operational ambient temperature:

+5 °C ~ +70 °C

Техническая документация и дата ее одобрения Российским морским регистром судоходства
Technical documentation and the date of its approval by Russian Maritime Register of Shipping

Техническая документация и программа испытаний одобрены письмом РС №. 296-381-7-144654 от 07.06.2021.

Technical documentation and test program were approved by RS letter No. 296-381-7-144654 dated 07.06.2021.

Образец изделия испытан под техническим наблюдением Российского морского регистра судоходства.
Product's specimen has been tested under the technical supervision of Russian Maritime Register of Shipping.

Акт № 21.10497.296

Report No.

от 08.07.2021

of

Область применения и ограничения

Application and limitations

Изделия предназначены для использования в судовых электрических цепях.

Products are intended for use in ship's electrical circuits.

Вид документа, выдаваемого на изделие
Type of document issued for product

MC - Документ, оформляемый изготовителем / Document drawn up by manufacturer.





Marine & Offshore

Certificate number: 23267/C0 BV

File number: ACE2/138/12

Product code: 2634H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

www.veristar.com

TYPE APPROVAL CERTIFICATE

This certificate is issued to
LS ELECTRIC CO.,LTD
Cheongju (Chungbuk) - KOREA (REPUBLIC OF)
for the type of product
CONTACTORS (LOW VOLTAGE)
Electromagnetic Contactor MC type
Thermal Overload Relay MT Type

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships.
IEC 60947-1 (2014), IEC 60947-4-1 (2018), IEC 60947-5-1 (2016)
EC code: 31

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 15 Apr 2026

For Bureau Veritas Marine & Offshore,
At BV PUSAN, on 15 Apr 2021,
Chang-Uk HONG



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/them being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

The electronic version is available at: <http://www.veristarpm.com/veristarbm/jsp/viewPublicPdfTypec.jsp?id=duvjsjqeuy>
BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

Electromagnetic Contactors MC-6a, MC-9a, MC-12a, MC-18a, MC-9b, MC-12b, MC-18b, MC-22b, MC-32a, MC-40a, MC-50a, MC-65a, MC-75a, MC-85a, MC-100a, MC-130a, MC-150a, MC185a, MC-225a, MC-265a, MC-330a, MC-400a, MC-500a, MC-630a, MC-800a
Thermal Over load Relays MT-12, MT-32, MT-63, MT-95, MT-150, MT-225, MT-400, MT-800

Coil a.c. supply: from 24 to 600V, 50/60Hz

Coil d.c. supply: from 12 to 250V

Poles	3
Rated Operational Power:	From 2.2 kW to 900 kW
Operational voltage (Ue):	Up to 690V _{ac}
Insulation voltage (Ui):	690V for MC-6a to MC-22b; 1000V from MC-32a
Impulse withstand voltage (Uimp):	6k for MC-6a to MC-22b; 8kV _{ac} from MC-32a
Frequency:	50/60Hz
Utilization category:	AC1, AC2, AC3, AC4

2. DOCUMENTS AND DRAWINGS:

- According to Manufacturer's catalogue 2009.09,
- Layout Drawings filed in ACE 02/138/12.

3. TEST REPORTS:

- KEMA Performance Test Report n° 2113421.52 dated 25/08/2008.
- KEMA Performance Test Report n° 2108402.50 dated 01/11/2007.
- KEMA Performance Test Report n° 2113421.50 dated 25/08/2008.
- Underwriters Laboratories Performance Test Report n° 08CA56358-20090219 dated 13/09/2009.
- KEMA Performance Test Reports n° 2123631.50, 51, 52, 53, 54, 55, 56 dated 19/08/2009.
- PT&T Environmental Test Reports n° R410-2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205 dated November 2010.
- PT&T Environmental Test Reports n° R410-2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213 dated November 2010.
- IECEE CB Scheme N° DK-100705-UL, dated 31 Jul 2020 with the associated test report N° NC 10517-D27-CB-1, dated 22 Jul 2020.
- IECEE CB Scheme N° DK-100615-UL, dated 29 Jul 2020 with the associated test report N° NC 10517-D25-CB-1, dated 22 Jul 2020.
- IECEE CB Scheme N° DK-100616-UL, dated 29 Jul 2020 with the associated test report N° NC 10517-D26-CB-1, dated 22 Jul 2020.
- IECEE CB Scheme N° DK-100787-UL, dated 03 Aug 2020 with the associated test report N° NC 10517-D29-CB-1, dated 22 Jul 2020.
- IECEE CB Scheme N° DK-100789-UL, dated 03 Aug 2020 with the associated test report N° NC 10517-D31-CB-1, dated 22 Jul 2020.
- IECEE CB Scheme N° DK-100804-UL, dated 03 Aug 2020 with the associated test report N° NC 10517-D28-CB-1, dated 22 Jul 2020.
- IECEE CB Scheme N° DK-101266-UL, dated 12 Aug 2020 with the associated test report N° NC 10517-D30-CB-1, dated 22 Jul 2020.
- IECEE CB Scheme N° DK-102096-UL, dated 31 Aug 2020 with the associated test report N° W20-401-0002, dated 20 Jul 2020.
- Test report N° R420-3145, dated 19 Feb 2021, with associated test report N° DREETC2102-0030, dated 10 Feb 2021.
- Test report N° R420-3146, dated 19 Feb 2021, with associated test report N° DREETC2102-0031, dated 10 Feb 2021.
- PT&T Environmental Test Reports n° R410-1282 and R410-1291, dated 27 Aug 2010.

4. APPLICATION / LIMITATION:

- 4.1 - According to BV Rules for the Classification of Steel Ships.
- 4.2 - Approval valid for ships intended to be granted with the following additional class notations: **AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.**
- 4.3 - BUREAU VERITAS Environmental Category, EC Code: 31.
- 4.4 - Equipment covered by this Type Approval certificate has been tested according to requirements of IACS UR E10 rev 7.

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The above products are to be supplied by **LS ELECTRIC CO.,LTD** in compliance with the type described in this certificate.
5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320.
5.3 - **LS ELECTRIC CO.,LTD** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

5.4 - For information, **LS ELECTRIC CO.,LTD** has declared to Bureau Veritas the following production site:

LS ELECTRIC CO.,LTD
95, Baekbong-ro
Heungdeok-gu
Cheongju (Chungbuk)
KOREA (REPUBLIC OF)

6. MARKING OF PRODUCT:

According to IEC 60947 specifications.

7. OTHERS:

7.1 - It is **LS ELECTRIC CO.,LTD**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.
7.2 - This certificate supersedes the Type Approval Certificate N° 23267/B1 BV issued on 22 Jun 2020 by the Society.

*** END OF CERTIFICATE ***

CERTIFICATE OF COMPLIANCE

Certificate number E108780
Report reference E108780-20250722
Date 2025-07-28

Standards:

UL 60335-2-40 and CSA C22.2 No. 60335-2-40:22 - Household and Similar Electrical Appliances - Safety - Part 2-40: Particular Requirements for Electrical Heat Pumps, Air-Conditioners and Dehumidifiers

UL 60335-1 - Safety of Household and Similar Electrical Appliances, Part 1: General Requirements

CAN/CSA-C22.2 No. 60335-1 - Household and Similar Electrical Appliances - Safety - Part 1: General Requirements



David Piecuch
UL Mark Certification Program Manager

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