



Certificate No:
TAE00004DS

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Contactor

with type designation(s)
MC 1400a/1700a/2100a/2650a

Issued to
LS ELECTRIC Co., Ltd. (Cheong-ju Plant)
Cheongju-si, 04, Republic of Korea

is found to comply with
DNV rules for classification – Ships, offshore units, and high speed and light craft

Application :

For installation inside switchboard/enclosures onboard ships and offshore units.

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Rated voltage (V) 220/440/690 or up to 1000
Rated current (A) 800 to 2650
Frequency (Hz) 50/60

Issued at **Busan** on **2021-10-19**

This Certificate is valid until **2026-10-18**.

for **DNV**

DNV local station: **Seoul**

Approval Engineer: **Eun Sook Kim**

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Hanwee Low
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

3-pole electromagnetic contactor that controls the switches of electric circuit, according to utilization category as listed below.

A. Utilization category AC-3:

Type	Electrical Ratings (A)		
	220 V	440 V	690 V
MC – 1400a	860	860	800
MC – 1700a	1050	1050	950

B. Utilization category AC-1:

Type	Electrical Ratings (A)
	Up to 1000 V
MC – 1400a	1400
MC – 1700a	1700
MC – 2100a	2100
MC – 2650a	2650

Application/Limitation

For installation inside switchboards/enclosures onboard ships and mobile offshore unit.

Type Approval documentation

Tests carried out

Type tests according to IEC 60947-4-1.

Environmental tests including dry heat, damp heat, vibration, high voltage, cold, inclination and insulation resistance test.

Marking of product

- Manufacturer name
- Model name
- Power ratings

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routine tests (RT) and selected type tests (ref. to applicable class programs) checked (if not available these tests shall be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE