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Certificate No: LR2003457TA Issue Date: 21/04/2020 Expiry Date: 20/04/2025

## **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 LS Tower, 127, Ls-ro, Dongan-gu, Anyang-si, Gyeonggi-do, 14119

Republic of Korea

Place of Production LS ELECTRIC Co., Ltd. Cheonan Factory

56, Samseong 4-gil, Mokcheon-eup, Dongnam-gu, Cheonan-si,

Cungcheongnam-do, 31226, Republic of Korea

**Type** Inverter

**Description** Fan and Pump AC drive

Trade Name LSLV-H100 series

**Application** Marine and offshore use in environmental category ENV2 in "general power

distribution zones" as defined in LR Type Approval System Test Specification

No.1-2019.

**Specified Standard** Manufacture's standards

EN 61800-3:2004/A1:2012, EN 61800-5-1:2007

Gyung-Hwan Lee

Digital & Control Team Leader 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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**Ratings** 

Motor capacity, kW (character 1 to 4) 0008-0.75, 0015-1.5, 0022-2.2, 0037-3.7, 0055-5.5, 0075-7.5, 0110-11, 0150-15, 0185-18.5, 0220-22, 0300-30, 0370-37, 0450-45, 0550-55, 0750-75, 0900-90, 1100-110, 1320-132, 1600-160, 1850-185, 2200-220, 2500-250, 3150-315, 3550-355, 4000-400, 5000-500

Input voltage, V (character 5) 2: 3-phase 200-240, 4: 3-phase 380-440 (0.75~90kW) or 380-500 (110~500kW)

UL type (character 6)
O: UL open, E: UL Type 1

EMC filter (character 7) F: built-in EMC, N: non-EMC

Reactor (character 8)
D: built in DC reactor, N: Non DC reactor

Software version: xxxxxx

## Models:

LSLV0008H100-2CONN, LSLV0015H100-2CONN, LSLV0022H100-2CONN, LSLV0037H100-2CONN, LSLV0055H100-2CONN, LSLV0075H100-2CONN, LSLV0110H100-2CONN, LSLV0150H100-2CONN, LSLV0185H100-2CONN, LSLV0008H100-4COFN, LSLV0015H100-4COFN, LSLV0022H100-4COFN, LSLV0037H100-4COFN, LSLV0055H100-4COFN, LSLV0075H100-4COFN, LSLV0110H100-4COFN, LSLV0150H100-4COFN, LSLV0185H100-4COFN, LSLV0220H100-4COFN, LSLV0300H100-4COFN, LSLV0370H100-4COND, LSLV0450H100-4COND, LSLV0550H100-4COND, LSLV0370H100-4COFD, LSLV0450H100-4COFD, LSLV0550H100-4COFD, LSLV0750H100-4COFD, LSLV0900H100-4COFD, LSLV1100H100-4COFD, LSLV1320H100-4COFD, LSLV1600H100-4COFD, LSLV1850H100-4COFD, LSLV2200H100-4COFD, LSLV2500H100-4COFD, LSLV3150H100-4COFD, LSLV3550H100-4COFD, LSLV4000H100-4COFD, LSLV3150H100-4COFD Damper types- ATCM-2010 (0.75 to 30kW), ATCM-2020 (37 to 185kW), ATCM-2030 (220 to 500kW)

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**Additional Tests** Dry heat test at 55°C (16 hours)

**Other Conditions** 

The complete installation, reserved cabinet solely for inverter propose with isolation damper, and function is subject to separate plan appraisal according applicable Rules and Regulations, when installed on LR classed vessels. Screened cables between motor and inverter to be installed on LR Classed vessels, Inverter used for marine system rated 5kW upwards to be satisfied LR Rules and Regulations, the type selection and installation requirements according LSIS guide line have to be fulfilled.

Type approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations. If the specified standards are amended during the validity of this certificate, the product is to be reapproved prior to it being supplied to vessels to which the amended standards apply.(In case 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.

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 No. LR2003457TA and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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