



# NIPPON KAIJI KYOKAI

## TYPE APPROVAL CERTIFICATE FOR AUTOMATIC DEVICES AND EQUIPMENT

Certificate No. TA23073M

**This is to certify** that the undernoted product(s) has/have been approved in accordance with the requirements specified in Chapter 1, Part 7 of “Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use” and the relevant Society's Rules.

This certificate is issued to

Manufacturer: **KEI SYSTEM Co., Ltd.**  
Place of Manufacturing: **2-2-23, Kishinosato, Nishinari-ku, Osaka, 557-0041, Japan**  
Product description: **LCD Display Panel**  
Model: **KEI-15LCD, KEI-17LCD, KEI-19LCD, KEI-21LCD**  
Approval No.: **06A032**  
Valid until: **6 November 2027**

This certificate is subject to the conditions specified in the attached sheet(s).

Issued at Tokyo on **17 February 2023**.

  
  
S. Oishi  
General Manager  
Machinery Department

Note: The manufacturer, if desired, is requested to apply to the Society for renewal prior to the expiration date.

**Specification & documents:**

1. Particulars: Power supply: AC100V/AC200V

2. Components and reference drawings:

Component	Type	Drawing
LCD Display Panel	KEI-15LCD	KEI-15LCD-701
	KEI-17LCD	KEI-17LCD-701
	KEI-19LCD	KEI-19LCD-701
	KEI-21LCD	KEI-21LCD-701

3. Documentation and Test Reports:

-Test report      LRS-1521LCD-503      (July 2006)

                         NK-1521LCD-504      (Oct. 2006)

-Specification incl. flame retardant material declaration NK-1521LCD-512 (20 Aug. 2009)

-Test report      LR-KEI-1521LCD-502-2021      (Aug. 2021)

- To be continued -

**Test items & approval conditions:**

## 1. Test items:

(Applied testing items are marked with X.)

ENVIRONMENTAL TESTS (IACS UR E10 Rev.8 basis)		Mark
External examination		X
Operation test and performance test		X
Electric power supply failure test		X
Power supply fluctuation test	Electric	X
	Pneumatic and Hydraulic	--
Insulation resistance test		X
High voltage test		--
Pressure test (Pneumatic and Hydraulic)		--
Dry heat test (Temperature 55°C × 16 hours)		X
Damp heat test		X
Vibration test (Acceleration ±0.7g × 1.5 hours)		X
Inclination test		X
Cold test (Temperature 5°C × 2 hours)		X
Salt mist test		--
Electrostatic discharge immunity test		X
Radiated radio frequency immunity test (Frequency 80MHz~6GHz)		X
Conducted low frequency immunity test		X
Conducted high frequency immunity test		X
Burst / Fast transient immunity test		X
Surge immunity test		X
Radiated emission test (Frequency 150kHz~6GHz)		X
Conducted emission test		X
Flame retardant test		--

## 2. Approval condition:

The products are not to be installed on open decks.