



NIPPON KAIJI KYOKAI

TYPE APPROVAL CERTIFICATE FOR AUTOMATIC DEVICES AND EQUIPMENT

Certificate No. TA19486M

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: **1-1-5 Ikuno-nishi, Ikuno-ku Osaka, Japan**
Product description: **LCD Display Panel**
Model: **KEI-15LCD, KEI-17LCD, KEI-19LCD, KEI-21LCD**

Approval No.: **06A032**
Valid until: **6 November 2022**

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

Issued at Tokyo on 6 September 2019



T. Shimada
General Manager
Machinery Department

Note: (1) This certificate has been issued due to change of manufacturer's name.

(2) 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)

- To be continued -

Test items & approval conditions:

1. Test items:

(Applied testing items are marked with X.)

ENVIRONMENTAL TESTS		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		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		X
Conducted emission test		X
Flame retardant test		--

2. Approval condition:

The products are not to be installed on open decks.