



NIPPON KAIJI KYOKAI

TYPE APPROVAL CERTIFICATE FOR AUTOMATIC DEVICES AND EQUIPMENT

Certificate No. TA19488M

This is to certify that the undernoted products 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-LCD19GA, KEI-LCD19GA2, KEI-LCD19GD**

Approval No.: **08A045**
Valid until: **23 December 2024**

This certificate is subject to the conditions specified in the attached sheets.

Issued at Tokyo on 16 December 2019.



T. Shimada
General Manager
Machinery Department

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

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Attached sheet -1/2 to the Certificate No. TA19488M

Specification & documents:

1. Particulars: Power supply: AC 100V, 50/60Hz (KEI-LCD19GA)
AC 220V, 50/60Hz (KEI-LCD19GA2)
DC 24V (KEI-LCD19GD)

2. Components and reference drawings:

Component	Type	Drawing
LCD Display Panel	KEI-LCD19GA	KEI-LCD19G-101
	KEI-LCD19GA2	
	KEI-LCD19GD	
Noise Filter	MBW-1203	KEI-MBW1203-101
Power Supply	SVB12SA	KEI-SVB12**-111
	SVB12SB	
	SVB12SC24	

3. Documentation and Test Reports:

- Test procedure NK-LCD19G-501 (6 Oct. 2008)
NK-AC220V-501 (20 Aug. 2009)
- Test report NK-LCD19G-505 (7 Dec. 2008)
NK-AC220V-505 (20 Aug. 2009)
- Specification incl. flame retardant material declaration NK-LCD19G-512 (20 Aug. 2009)
- Design and performance standards, codes and rules NK-LCD19G-503 (6 Oct. 2008)

- 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		X
Pressure test (Pneumatic and Hydraulic)		--
Dry heat test (Temperature 70°C × 16 hours)		X
Damp heat test		X
Vibration test		X
Inclination test		X
Cold test		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 product is not allowed to be installed on open decks.