DNV·GL

Certificate No:
TAA00001H5

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Peripheral Equipment

with type designation(s)
KEI-LCD19GA, KEI-LCD19GA2, KEI-LCD19GD

Issued to
KEI System Co., Ltd.
Osaka, Osaka Pref., Japan

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

Application :

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

Location classes:

Temperature	**B**
Humidity	**B**
Vibration	**A**
EMC	**B**
Enclosure	**A / IP20**

Issued at **Høvik** on **2017-11-15**
This Certificate is valid until **2022-12-31**.
DNV GL local station: **Kobe**

for **DNV GL**

Approval Engineer: **Ståle Sneen**

Odd Magne Nesvåg
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.

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Job Id: **262.1-013210-4**
Certificate No: **TAA00001H5**

Product description

KEI marine flush mount LCD display panel comprising the following models:

Model name	Description	Power supply	Compass safe distance
KEI-LCD19GA	19" 4:3 format	SVB12SA (AC100V)	Standard: 130 cm, Steering: 85 cm
KEI-LCD19GA2	19" 4:3 format	SVB12SB (AC220V)	Standard: 130 cm, Steering: 85 cm
KEI-LCD19GD	19" 4:3 format	SVB12SC24 (DC+24V)	Standard: 130 cm, Steering: 85 cm

Power supply noise filter MBW1203-22 is required for all models.

Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV GL, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV GL rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

Type Approval documentation

Tests carried out

Applicable tests according to Standard for Certification No. 2.4, April 2006.
The 'Compass safe distance' was measured according to section 11.2 of IEC 60945 4th edition (2002).

Marking of product

Manufacturer: KEI System Co., Ltd.
Model name: As listed under product description
Serial No.: Unique serial number for each delivered item
Power supply: AC100V 50/60HZ, AC220V 50/60Hz or DC+24V

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the 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