DNV·GL

Certificate No:
TAA000012N

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Programmable Controller

with type designation(s)
FT1A Touch, FT1A Pro, FT1A Lite

Issued to
IDEC Corporation
Osaka City Osaka Pref., Japan

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

Application :

Location classes:

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

Type	Temperature	Humidity	Vibration	EMC	Enclosure
FT1A Touch	**B**	**B**	**A**	**B**	**Required protection according to DNV Rules shall be provided upon installation on board**
FT1A Pro	**B**	**B**	**A**	**A**	
FT1A Lite	**B**	**B**	**A**	**A**	
FT1A-P**	**B**	**B**	**A**	**A**	

Issued at **Busan** on **2017-02-13**
This Certificate is valid until **2022-02-12**.
DNV GL local station: **Kobe**

for **DNV GL**

Approval Engineer: **Dong Ho Park**

Baeg Soon Choi
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: **262.1-015677-2**
Certificate No: **TAA000012N**

Product description

This type approval FT1A Series consists of three major model types consisting of several sub-models and optional models as listed below:

FT1A Touch (Display Models):

FT1A-M12RA-W/-M12RA-B/-M12RA-S/-M14KA-W/-M14KA-B/-M14KA-S/-M14SA-W/-M14SA-B/-M14SA-S/-C12RA-W/-C12RA-B/-C12RA-S/-C14KA-W/-C14KA-B/-C14KA-S/-C14SA-W/-C14SA-B/-C14SA-S

FT1A Pro (LCD Models):

FT1A-H12RA/-H24RA/-H40RKA/-H40RSA/-H48KA/-H48SA/-H12RC/-H24RC/-H40RC/-H48KC/-H48SC

FT1A Lite (No LCD Models)

FT1A-B12RA/-B24RA/-B40RKA/-B40RSA/-B48KA/-B48SA/-B12RC/-B24RC/-B40RC/-B48KC/-B48SC

Options

FT1A-PC1/-PC2/-PC3/-PM1, *FC6A-PJ2A/-PK2AV/-PK2AW/-PJ2CP
*Refer to DNVGL Type Approval Certificate, TAA0000035.

Place of Manufacture

Kaybright Electronics (S.Z.) Limited
Address : Miao Xi Industrial District No.7, Xing Hua Community, Guan Lan Street, Bao'an, Shenzhen 518110, CHINA

Approval Conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNVGL, 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 DNVGL Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

Ferrite clamp filters, 'ZCAT3035-1330' or(and) 'ZCAT1730-0730' manufactured by TDK Corporation shall be used according to manufacturer's installation manual.

Product certificate

Each delivery of the application system is to be certified according to Pt.4 Ch.9 Sec.1. The certification test is to be performed at the manufacturer of the application system, preferably at the engine/system application maker integrating control, monitoring and safety system, before the system is shipped to the yard. After the certification the clause for application software control will be put into force.

Clause for application software control

All changes in software are to be recorded as long as the system is in use on board. The records of all changes are to be forwarded to DNVGL for evaluation and approval. Major changes in the software are to be approved before being installed in the computer.

Type Approval documentation

Tests carried out

Applicable tests according to DNV GL class guideline, DNVGL-CG-0339, Nov 2016.

Marking of product

- Manufacturer - Model name - Serial number

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 at least every second year and at renewal of this certificate.

END OF CERTIFICATE