



TYPE APPROVAL CERTIFICATE

Certificate No:
TAA000012N
Revision No:
3

This is to certify:

That the Programmable Controller

with type designation(s)
FT1A Touch, FT1A Pro, FT1A Lite, FT1A-P**

Issued to

IDEC Corporation
Osaka City, Osaka Pref., Japan

is found to comply with
DNV 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.

Location classes:

Type	Temperature	Humidity	Vibration	EMC	Enclosure
FT1A Touch	B	B	A	B	Required protection according to DNVGL 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 **2022-03-22**

for **DNV**

This Certificate is valid until **2027-02-22**.

DNV local station: **Kobe**

Approval Engineer: **Dong Ho Park**

Hanwee Low
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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

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 DNV Type Approval Certificate, TAA0000035.

Place of Manufacture

KAYBRIGHT ELECTRICTY (HUIZHOU) CO., LTD
(FACTORY BUILDING) Shunju Village,
Chayuan Village, Qiuchang Road,
Huiyang District, Huizhou City, Guangdong
516221 China

Approval Conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, 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 rules for classification of 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

If specified in the Rules, ref. Pt.4 Ch.9 Sec.1, the control and monitoring system in which the above listed hardware is used shall be delivered with a product certificate. For each such delivery the certification test is to be performed at the manufacturer of the application system before the system is shipped to the yard. The test shall be done according to an approved test program. After certification the clause for software control will be put into force.

Software control

All changes in software are to be recorded as long as the system is in use on board. Documentation of major changes is to be forwarded to DNV for evaluation and approval before implemented on board. Certification of modified functionality may be required for the particular vessel.

Type Approval documentation

NSH-12046-09 list of application models 131121.pdf
EP1448-0 product catalog 130218.pdf
Y1494-0L01E product specifications of FT1A Lite and Pro.pdf
Y1494-6L01D product specifications of FT1A Touch.pdf
12-RD219-111 FT1A Touch block diagram.pdf
12-RD219-116 FT1A Lite and Pro block diagram.pdf
Y1494-0L01D outline drawing of FT1A Lite and Pro.pdf
Y1494-6L01D outline drawing of FT1A Touch.pdf
12-RD219-112 FT1A Touch parts list.pdf
12-RD219-117 FT1A Lite and Pro parts list.pdf
12-RD219-113 FT1A Touch Enclosure Flame Class.pdf
12-RD219-118 FT1A Lite and Pro Enclosure Flame Class.pdf
NSH-12046-16 Type Test Report 130920_3.pdf (consisting of following reports)
Japan Certification Corporation, Doc. No. NSH-12046-16, dated 2013-09-20.
Furuno, EMC Test Report, Doc. No. FLI 12-13-052, dated 2013-08-27.
Furuno, EMC Test Report, Doc. No. FLI 12-13-051, dated 2013-08-27.
Furuno, EMC Test Report, Doc. No. FLI 12-13-053, dated 2013-08-27.
JQA Test Report, Doc. No. KL80130194R, dated 2013-09-17.
JQA Test Report, Doc. No. KL80130196R, dated 2013-09-17.

JQA Test Report, Doc. No. KL80130195R, dated 2013-09-17.

List of drawings and documents	16-306-022	216-02-22
Product catalog	EP1527-0	Dec-2014
List of application model	15-306-043	2015-06-23
product specifications of FT1A Touch	Y1494-6L01J	2014-08-27
Instruction manual_FT1A Series Touch	B-1552(2)	Aug. 2014
Instruction manual_FT6A Series Analog Cartridge	B-1710(0)	Aug. 2014
Instruction manual_FT1A Lite and Pro	B-1468(1)	Feb. 2013
Instruction manual_FT1A Communication Cartridge	B-1475(0)	May. 2012
Instruction manual_ FT1A Memory Cartridge	B-1477(0)	May. 2012
Block diagram_FT1A-M(C)14K(S)A-W/B/S	15-306-044	2015-06-05
Block diagram_FT1A Touch	12-RD219-111 rev-1	213-02-22
Block diagram_FT1A Lite and Pro	12-RD219-116 rev-0	
Outline dwg_FT1A-M(C)14K(S)A-W/B/S	15-306-045	2015-06-05
Outline dwg_FC6A-P-	15-306-045	2015-06-05
Flame retardant_FT1A series	15-306-054	2015-06-05
Flame retardant_FT1A Touch Enclosure Flame Class	12-RD219-113 rev-0	2013-02-22
Flame retardant_FT1A Lite and Pro	12-RD219-118 rev-0	
Software development manual	10-391-162	2011-01-14
Test configuration	15-306-052B	2015-12-08
Test specification	15-306-050	2015-06-24
Test sample selection	15-306-049	2015-06-05
Test report	16-306-023	2016-02-18
Test report	15-306-124	2015-08-07
Test report	15-306-126	2015-08-04
Test report	15-306-127	2015-07-28
Type approval retention survey report for A-13945		2016.10.14
Application for DNVGL Type Approval (For change of the production site)		2018-12-19
Additional EMC test report	JQA File No.: KL80202585	2020-12-14

Type approval renewal assessment report for TAA000012N R2, DNV Guangzhou 2022-02-23.

Tests carried out

Applicable tests according to DNV class guideline, DNV-CG-0339, August 2021.

Marking of product

The products to be marked with:

- 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 after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of this certificate.

END OF CERTIFICATE