



Confirmation of Product Type Approval

Please refer to the "Service Restrictions" shown below to determine if Unit Certification is required for this product.

This certificate reflects the information on the product in the ABS Records as of the date and time the certificate is printed.

Pursuant to the Rules of the American Bureau of Shipping (ABS), the manufacturer of the below listed product held a valid Manufacturing Assessment (MA) with expiration date of 05/AUG/2019. The continued validity of the Manufacturing Assessment is dependent on completion of satisfactory audits as required by the ABS Rules.

And; a Product Design Assessment (PDA) valid until 15/OCT/2020 subject to continued compliance with the Rules or standards used in the evaluation of the product.

The above entitle the product to be called Product Type Approved.

The Product Design Assessment is valid for products intended for use on ABS classed vessels, MODUs or facilities which are in existence or under contract for construction on the date of the ABS Rules used to evaluate the Product.

ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

Product Name: Programmable Logic Controller
Model Name(s): FL1B/ FL1C/ FL1D/ FL1E/ FL1F-series

Presented to:

IDEC CORPORATION
TSUKUBA PLANT, 1-9 KOYODAI
Japan

Intended Service:

Automation Systems (Monitoring and Control Functions) on AMS, ACC, ACCU, ABCU Classed Vessels.

Description:

FL1B/C-H12RCA, FL1B/C-H12RCC, FL1B/C-H12SND, FL1B/C-H12RCE, FL1B/C-B12RCE, FL1B/C-B12RCA, FL1B/C-B12RCC, FL1D-H12RCC, FL1D-H12RCA, FL1D-H12RCE, FL1D-H12SND, FL1D-B12RCC, FL1D-B12RCA, FL1D-B12RCE, FL1D-K2B2, FL1E-H12RCC, FL1E-B12RCC, FL1E-H12SND, FL1E-H12RCA, FL1E-B12RCA, FL1E-H12RCE, FL1E-B12RCE, FL1F-H12SCD, FL1F-H12RCE, FL1F-H12RCA, FL1F-H12RCC, FL1F-B12RCE, FL1F-B12RCA, FL1F-B12RCC, FL1F-RD1. Extension Modules: FL1B-M08B1S2, FL1B-J2B2, FL1B-M08D2R2, FL1B-M08C2R2, FL1B-M08B2R2, FL1E-RD1, FL1D-K2BM2, FL1F-M08B1S2, FL1F-M08B2R2, FL1F-M08D2R2, FL1F-M08C2R2, FL1F-J2B2, FL1F-K2BM2, FL1F-J2BR2. External programming software WindLGC V6.x, V8.x.

Ratings:

Max: 12 Inputs 12V or 24V or 12/ 24V DC or 115 / 230V AC; Max: 8 Outputs, 0.3A, 8A or 10A; Extension Modules Inputs: 4 Digital/ 2 Analogue/ 2xPT100, 8 Digital/ 2xPT100 or 2xPT1000; Extension Modules Outputs: 2 Analogue, 4 Digital/ Relays, 4 Digital/ Transistor, 8 Digital/ Relay, 8 Digital/ Transistor. Degree of Protection: IP 20.

Service Restrictions:

Unit Certification is required for this product by the user to customize this equipment where it is used for Category II or III services as described in Section 4-9-3/Table 1 of the Steel Vessel Rules. 1.) Components with 24 V DC supply only to be used in conjunction with lightning protection units. 2.) Installation of the units,

as per manufacturer's instruction. 3.) FL1B/C/D/E/F-H12RCE and FL1B/C/D/E/F-B12RCE modules only to be used with 24 V DC power supply. 4.) All modules fulfill the EMC requirements for General Power Distribution Zone. Exception: FL1F series except FL1F-RD1 may be used in bridge zone and deck zones with filter B84113-C-B30 (or equivalent).

Comments:

- Each particular application/ installation and the user operating software is to be specifically approved in conjunction with the relevant system in which the units are being used. - System Category III. Manufacturer is to keep evidence of quality plan for software, inspection of hardware components from sub-suppliers and quality control in production. Performance integration, fault simulation, final system factory acceptance tests, on-board system and integration tests to be witnessed by the Surveyor. - The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

Notes / Documentation:

Drawing No. None 01, Manual, Revision: -, Pages: 1 Drawing No. None 03, Test Specification, Revision: -, Pages: 1

Term of Validity:

This Product Design Assessment (PDA) Certificate 15-HG1428861-PDA-DUP, dated 16/Oct/2015 remains valid until 15/Oct/2020 or until the Rules or specifications used in the assessment are revised (whichever occurs first). This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product. Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA. Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

ABS Rules:

2015 Steel Vessel Rules 1-1-4/7.7, 1-1-Appendix 3 and 4, 4-9-2/ 3.1.1, 4-9-3/ 5.1.1/ 5.1.2/ 5.1.3/ 5.1.4/ 5.1.5/ 5.1.9/ 11.1/ 11.7.1/ 7.1, 4-9-3/ Table 2 and Table 3, as applicable for the inherent basic operating software, 4-9-8/7/13

- National Standards:**
- International Standards:**
- Government Authority:**
- EUMED:**
- Others:**

Model Certificate	Model Certificate No	Issue Date	Expiry Date
PDA-DUP	15-HG1428861-PDA-DUP	30/OCT/2015	15/OCT/2020



ABS Programs

ABS has used due diligence in the preparation of this certificate and it represents the information on the product in the ABS Records as of the date and time the certificate was printed. Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. Limited circumstances may allow only Prototype Testing to satisfy Type Approval. The approvals of Drawings and Products remain valid as long as the ABS Rule, to which they were assessed, remains valid. ABS cautions manufacturers to review and maintain compliance with all other specifications to which the product may have been assessed. Further, unless it is specifically indicated in the description of the product; Type Approval does not necessarily waive witnessed inspection or survey procedures (where otherwise required) for products to be used in a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS. Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.