

CERTIFICATE NUMBER EFFECTIVE DATE EXPIRY DATE ABS TECHNICAL OFFICE 25-0242706-PDA 27-May-2025 26-May-2030 London Engineering Department

CERTIFICATE OF

Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

DEIF A/S

located at

FRISENBORGVEJ 33, , SKIVE, Denmark, DK-7800

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product: Power Management System

Model: PPM 3 - Protection and Power Management System

Endorsements:

Tier: 5 - Unit Certification Required

This Product Design Assessment (PDA) Certificate remains valid until 26/May/2030 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau Of Shipping
SBarua

Siddharth Barua, Engineer/Consultant

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

DEIF A/S

FRISENBORGVEJ 33

SKIVE

Denmark DK-7800

Telephone: 45-9614-9614

Fax: 45-9614-9615 Email: ifl@deif.com Web: www.deif.com

Tier: 5 - Unit Certification Required

Product: Power Management System

Model: PPM 3 - Protection and Power Management System

Endorsements:

Intended Service:

ABS classed vessels and offshore facilities in accordance with the listed ABS Rules and International standards.

Protection and Power Management Module capable of providing generator control, protection and monitoring functions on board marine vessels, offshore and industrial applications with up to 8 bus tie breakers, 16 diesel generators, 1 emergency generator, 2 shaft generators and 2 shore connections. Additional information available on attached Data Sheet.

Auxiliary power Supply: 12/24 VDC nominal;

Enclosure Protection: Unit: IP20

Service Restriction:

1. Unit certification is required in accordance with 4-9-3/Table 2 of Marine Vessel Rules to customize this equipment when it is used as part of Category II or III services in 4-9-3/Table 1 of Marine Vessel Rules. 2. Tests and approval are for hardware only. Each configuration is to be specifically approved.

Comments:

- Tests and approval are for hardware only. Each application/configuration is to be specifically approved.

- The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

Notes/Drawing/Documentation:

Drawing No. 4910211527C, 27A IP Report on Display Unit, Pages: 1 Drawing No. 4910217502M, 02B RF electromagnetic field immunity, DEIF laboratory, Revision: -, Pages: 17

Drawing No. Manufacturer Statement, Manufacturer Statement, Pages: 1

Drawing No. 4910216501M, 16A Radiated disturbance, DEIF laboratory Revision: -, Pages: 9

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STANDARDS

ABS Rules:

Marine Vessels Rules (2025): 1-1-4/7.7, 1-1-A3, 1-1-A4 which covers the following: 4-1-1 / Table3 (items 28, 35), 4-8-3/1.7, 4-9-2/3.1, 4-9-2/3.3, 4-9-2/3.5, 4-9-2/3.7, 4-9-2/5.1, 4-9-3/7, 4-9-9/15.7 Table **DEIF A/S**

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Tier: 5 - Unit Certification Required

Offshore Rules (2025) 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following: 4-1-1/7.9, 4-3-1/11

National:

NA

International:

IACS UR E10 Rev9

Government:

NA

EUMED:

NA

OTHERS:

NA