



CERTIFICATE NUMBER	26-0515774-PDA
EFFECTIVE DATE	17-Jun-2026
EXPIRY DATE	16-Jun-2031
ABS TECHNICAL OFFICE	Yokohama Engineering Services

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: Delomatic 4, PCM 4-5.
Endorsements:
Tier: 5 - Unit Certification Required

This Product Design Assessment (PDA) Certificate remains valid until 16/Jun/2031 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

Motohiro Tamura,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: jfl@deif.com

Web: www.deif.com

Tier: 5 - Unit Certification Required

Product: Power Management System

Model: Delomatic 4, PCM 4-5.

Endorsements:

Intended Service:

For use on ABS Classed Vessels and Offshore Installations in accordance with the listed ABS Rules and International Standards.

Description:

Used for generator power management, control, protection and monitoring functions on board marine vessels, offshore and industrial applications of up to 15 generators integrated into one system. Hardware units include: Generator unit rack system (DGU), Modules (PCM, IOM, SCM) and Display unit (DU) & Operator panel (AOP); See attachment for details.

Rating:

Auxiliary power Supply: 24 VDC nominal

Operating temp.: -25...70C (-13...158 Deg F)

Service Restriction:

Power management system is categorized as computer based systems category II and therefore unit certification is required as indicated on ABS Rules for Building and Classing Marine Vessels 4-1-1/table 3 item 35; 4-9-3/7.1 and 4-9-3/Table 1.

Test & Documentation for computer based systems Category II as indicated on ABS Rules for Building and Classing Marine Vessels 4-9-3/table 2 must be followed by the manufacturer.

If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

Comments:

Tests and Approval are for hardware only. Each installation 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. EPC 810_03, Test Data, DEIF A/S, Denmark, Date: 09.02.2021, Revision: -, Pages:51

Drawing No. EPC 810_01, Manufacturer Statement, Revision: A, Pages: 1

Drawing No. EPC 810_02, DM-4 Marine data sheet 4921240294 UK, Revision: C, Pages: 1

Drawing No. 13B DNV GL Voltage Variations, 13B DNV GL Voltage Variations, Revision: -, Pages: 7

Drawing No. 14A LR witness Insulation test, 14A LR witness Insulation test, Revision: -, Pages: 4

Drawing No. 15B DNV GL witness Voltage Interruptions, 15B DNV GL witness Voltage Interruptions, Revision: -, Pages: 6

Drawing No. 16B DNV GL witness Low-frequency Interference, 16B DNV GL witness Low-frequency Interference, Revision: -, Pages: 6

Drawing No. 4A DNV GL witness Dryheat Test, 4A DNV GL witness Dryheat Test, Revision: -, Pages: 5

Drawing No. 5B DNV GL witness Electrostatic Discharge, 5B DNV GL witness Electrostatic Discharge, Revision: -, Pages: 6

Drawing No. 6A LR witness DEIF Dampheat test, 6A LR witness DEIF Dampheat test, Revision: -, Pages: 6

Drawing No. 6B LR witness Slow transients - Surge, 6B LR witness Slow transients - Surge, Revision: -, Pages: 11

Drawing No. 9A LR witness Vibration Test, 9A LR witness Vibration Test, Revision: -, Pages: 5

Drawing No. DM-4_13B, Voltage Variations ABS Signed low res, Revision: -, Pages: 8

Drawing No. DM-4_9A, Vibration ABS Signed Low res, Revision: -, Pages: 8

Drawing No. DM4_423922, SQP BASIS SW DM4_423922, Revision: -, Pages:10

Drawing No. DM4_432506, SQP_Application_SW_DM4_432506, Revision: -, Pages: 7

DEIF A/S

FRISENBORGVEJ 33

SKIVE

Denmark DK-7800

Telephone: 45-9614-9614

Fax: 45-9614-9615

Email: jfl@deif.com

Web: www.deif.com

Tier: 5 - Unit Certification Required

Drawing No. FAT report 20140827, DM-4 LR FAT report 20140827, Revision: -, Pages: 22
Drawing No. FAT report 20141113, DM-4 DNV GL FAT report 20141113, Revision: -, Pages: 22
Drawing No. FMEA Test report 20140827, DM-4 LR FMEA Test report 20140827, Revision: -, Pages: 22
Drawing No. FMEA report 20141113, DM-4 DNV GL FMEA report 20141113, Revision: -, Pages: 13
Drawing No. GL witness EUT3237 performance, 02A DNV GL witness EUT3237 performance, Revision: -, Pages: 11
Drawing No. IPA0324-04, IPA0324-04 Product Documentation part 1-2, Revision: -, Pages: 174
Drawing No. IPA0324-04, IPA0324-04 Submitted documents, Revision: -, Pages: 19
Drawing No. JST20140512A, DM 4 update 4-5 differences JST20140512A, Revision: -, Pages: 3
Drawing No. Type Certificate 4124030060A, DM-4 Type Certificate 4124030060A, Revision: -, Pages: 1
Drawing No. IPA0324-04-W1, Summary report Module PCM 4.5-DM-4, Revision: -, Pages: 14
Drawing No. witness EUT3238 performance, 02A DNV GL witness EUT3238 performance, Revision: -, Pages: 10
Drawing No. IPA0324-04 Technical documentation, IPA0324-04 Technical documentation, Revision: -, Pages: 19
Drawing No. IPA0324-04 Test data sheets PART 1, IPA0324-04 Test data sheets PART 1, Revision: -, Pages: 129
Drawing No. IPA0324-04 Test data sheets PART 2, IPA0324-04 Test data sheets PART 2, Revision: -, Pages: 10
Drawing No. IPA0324-04 Test data sheets PART 3, IPA0324-04 Test data sheets PART 3, Revision: -, Pages: 9
Drawing No. IPA0324-04 Test data sheets PART 4, IPA0324-04 Test data sheets PART 4, Revision: -, Pages: 17
Drawing No. IPA0324-04 Test data sheets PART 5, IPA0324-04 Test data sheets PART 5, Revision: -, Pages: 8
Drawing No. IPA0324-04 Test data sheets PART 6, IPA0324-04 Test data sheets PART 6, Revision: -, Pages: 2
Drawing No. IPA0324-04 Test data sheets PART 7, IPA0324-04 Test data sheets PART 7, Revision: -, Pages: 8
Drawing No. IPA0324-04 Test data sheets PART 8, IPA0324-04 Test data sheets PART 8, Revision: -, Pages: 2
Drawing No. IPA0324-04 Test data sheets PART 9, IPA0324-04 Test data sheets PART 9, Revision: -, Pages: 56

Terms of Validity:

This Product Design Assessment (PDA) Certificate remains valid until 16/Jun/2031 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.

STANDARDS

ABS Rules:

2026 Rules for Conditions of Classification – 1A-1-4/7.7, 1A-1-A3, 1A-1-A4, which covers the following:
2026 Rules for Building and Classing Marine Vessels: 4-9-2/7, 4-9-3/5.1, 4-9-3/5.3, 4-9-3/7, 4-9-3/11, 4-9-9/3, 4-9-9/7, 4-9-9/13, 4-9-9/Table 1 and 4-9-9/Table 2;

2025 Rules for Conditions of Classification – Offshore Units 1B-1-4/9.7, 1B-1-A2, 1B-1-A3, which covers the following:

2026 Rules for Building and Classing Offshore Units: 6-1-1/9, 6-1-1/13; 4-3-1/9, 4-3-1/11, 4-3-1/17;

2026 Rules for Conditions of Classification – Light and High-Speed Craft 1C-1-4/11.9, 1C-1-A2, 1C-1-A3, which covers the following:

2026 High-Speed Craft: 4-6-1/9, 4-6-1/11, 4-6-1/17, 4.7.1/9, 4-7-8/3.1, 4-7-8/3.3, 4-7-8/3.5, 4-7-8/3.7, 4-7-8/3.9, 4.7.8/7.1, 4.7.8/7.3, 4.7.8/9, 4-7-9 Table 9 and 4-7-9/ Table 10;

DEIF A/S

FRISENBORGVEJ 33

SKIVE

Denmark DK-7800

Telephone: 45-9614-9614

Fax: 45-9614-9615

Email: jfl@deif.com

Web: www.deif.com

Tier: 5 - Unit Certification Required

National:

NA

International:

IACS UR E10 (Rev.10 Aug. 2024)

Government:

NA

EUMED:

NA

OTHERS:

NA