



Confirmation of Product Type Approval

Company Name: DEIF A/S

Address: FRISENBORGVEJ 33 DK-7800 Denmark

Product: Switchboard Instrument

Model(s): DQ Series

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	19-LD1866961-PDA	11-JUL-2019	10-JUL-2024
Manufacturing Assessment (MA)	18-EG3574567	25-OCT-2018	27-NOV-2023
Product Quality Assurance (PQA)	NA	NA	NA

Tier

3

Intended Service

Voltmeters and Ammeters for use on ABS classed Vessels and Offshore Facilities in accordance with the listed ABS Rules and International Standards.

Description

The DQ series are either 90 degree or 240 degree moving coil DC current and voltage meters with exchangeable or non-exchangeable scales, designed for switchboard panel mounting, comprising the following list of Models:

DQ 48-x, 96-x, DQ 72-x, DQ 144-x

DQ 48-c, 96-c, DQ 72-c, DQ 144-c

DQ 48-xc, 96-xc, DQ 72-xc, DQ 144-xc

Ratings

Voltage range: 60 mV to 300 V;

Current range : 1mA-5A-10A-15A-20A-50A, 1mA- 600mA (DQ 48 only),

Scale: 0 to 100%

Service Restrictions

- Unit Certification is not required for this product.

- This product is not suitable for hazardous area.

Comments

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

- Unless specially directed by Administration, this approval is not to be construed as a substitute for flag Administration's approval for the purpose of SOLAS (Consolidated Edition 2014), as amended.

Notes, Drawings and Documentation

Drawing No. 4921210012S, Data Sheet, Pages: 7

Drawing No. 4910212100F, Type Test, DEIF A/S, Denmark, Date: 04-04-2017, Revision: R, Pages: 47

Drawing No. 4910217501O, Type Test, DEIF A/S, Denmark, Date: 27-04-2017, Revision: R, Pages: 39

Drawing No. 4910211527E, Type Test -IP Test, DEIF A/S, Denmark, Date: 27-04-2017, Revision: R, Pages: 5

Drawing No. 4910217507H, Type Test- Common Mode DQ, DEIF A/S, Denmark, Date: 13-11-2009, Revision: 00, Pages: 8

Drawing No. 4910211415B, Type Test- Inclination, DEIF A/S, Denmark, Date: 14-08-2008, Revision: 00, Pages: 18

Drawing No. ISO 9001 – – 00007884, ISO Certificate, Lloyd Register Date: 18-09-2018, Revision: 00, Pages: 03

Drawing No. Declaration EQ DQ, Date: 14-08-2008, Date: 08-07-2019, Revision: 00, Pages: 01

Drawing No. 0741-11, 2A Performance test, DEIF A/S, Denmark, Date: 05-07-2019, Revision: R, Pages: 05

Term of Validity

This Product Design Assessment (PDA) Certificate 19-LD1866961-PDA, dated 11/Jul/2019 remains valid until 10/Jul/2024 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

- Marine Vessels Rules (2019): 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-9-9/7, 4-9-9 Table1;
- Steel Vessels for Service on Rivers and Intracoastal Waterways (2019): 1-1-4/7.7, 1-1-A3, 1-1-A4;
- Steel Barge Rules (2019): 1-1-4/7.9, 1-1-A3, 1-1-A4;
- High Speed Crafts (2019): 1-1-4/11.9, 1-1-A2, 1-1-A3, 4-7-9/7, 4-7-9 Table 9;
- Mobile Offshore Units (2019): 1-1-4/9.7, 1-1-A3, 1-1-A4, 6-1-1/9, 6-1-1/13; 4-3-1/9, 4-3-1/11, 4-3-1/15;
- Facilities on Offshore Installations (2019): 1-1-4/9.7, 1-1-A2, 1-1-A3, 3-7/3.5;

International Standards

NA

EU-MED Standards

NA

National Standards

NA

Government Standards

NA

Other Standards

NA



A handwritten signature in dark ink, appearing to read 'Joseph W. ...', is written over the printed text.

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 23-Aug-2019 6:10

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 is printed.

If the Rules and/or standards used in the PDA evaluation are revised or if there is a design modification (whichever occurs first), a PDA revalidation may be necessary.

The continued validity of the MA is dependent on completion of satisfactory audits as required by the ABS Rules. The validity of both PDA and MA entitles the product to receive a **Confirmation of Product Type Approval**.

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 prior to the effective date of the ABS Rules and standards applied at the time of PDA issuance. 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.

Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. The manufacturer is responsible to maintain compliance with all specifications applicable to the product design assessment. Unless specifically indicated in the description of the product, certification under type approval does not waive requirements for witnessed inspection or additional survey for product use on a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS.

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.

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.



CERTIFICATE NUMBER 19-LD1866961-PDA

EFFECTIVE DATE 11-July-2019

EXPIRATION DATE 10-July-2024

ABS TECHNICAL OFFICE London

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 Switchboard Instrument

Model DQ Series

This Product Design Assessment (PDA) Certificate remains valid until 10-July-2024 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).

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American Bureau of Shipping

Theodoros Chatzidakidas, Senior Engineer

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: info@deif.com

Web: www.deif.com

Tier: 3 - Type Approved, unit certification not required **Product:** Switchboard Instrument**Model:** DQ Series**Intended Service:**

Voltmeters and Ammeters for use on ABS classed Vessels and Offshore Facilities in accordance with the listed ABS Rules and International Standards.

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Tier: 3 - Type Approved, unit certification not required

manufacturer and intended client.

STANDARDS**ABS Rules:**

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- High Speed Crafts (2019): 1-1-4/11.9, 1-1-A2, 1-1-A3, 4-7-9/7, 4-7-9 Table 9;
- Mobile Offshore Units (2019): 1-1-4/9.7, 1-1-A3, 1-1-A4, 6-1-1/9, 6-1-1/13; 4-3-1/9, 4-3-1/11, 4-3-1/15;
- Facilities on Offshore Installations (2019): 1-1-4/9.7, 1-1-A2, 1-1-A3, 3-7/3.5;

National:

NA

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

NA