



CERTIFICATE NUMBER  
04-LD438860-2-PDA

DATE  
04 June 2013

ABS TECHNICAL OFFICE  
London Engineering Department

# CERTIFICATE OF DESIGN ASSESSMENT

This is to Certify that a representative of this Bureau did, at the request of  
**DEIF A/S - SKIVE**

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: **Uni-Line Relays for Generator Protection**

MODEL: **RMV, RMC, RMP, RMQ, RMF, FAS, HAS, EPN, LSU, LMR & RMT**

This Product Design Assessment (PDA) Certificate 04-LD438860-2-PDA, dated 04/Jun/2013 remains valid until 03/Jun/2018 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.

AMERICAN BUREAU OF SHIPPING

Jean-Claude G. Dennemont  
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 the terms and conditions as contained in ABS Rules 1-1-A/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

**DEIF A/S**

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MA Certificate No. 09-EG1609608-X

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**Product:** Uni-Line Relays for Generator Protection

**Model:** RMV, RMC, RMP, RMQ, RMF, FAS, HAS, EPN, LSU, LMR & RMT

**Intended Service:**

Generators fitted in ABS Classed Vessels

**Description:**

The Uni-Line range comprises the following generator protection relays:

Models RMV-112D/RMV-122D/RMV-132D: Voltage Relays 3-Phase;  
Model RMV-142D: Voltage Relays 1-Phase;  
Models RMC-111D/RMC121D/RMC-122D: Short Circuit / Overcurrent Relays;  
Model RMC-131D: Differential Current Relays;  
Model RMC-132D: Over Current Relay with maximum relay outputs;  
Model RMC-142D: Stator earth fault Relay;  
Model RMP-111D: Overload Relays;  
Model RMP-112D: Overload / Reverse Power Relays;  
Model RMP-121D: Reverse Power Relays;  
Model RMQ-111D: Loss of Excitation Relays;  
Model RMQ-121D: Over Excitation Relay with 2 maximum relay outputs;  
Model RMF-112D: Frequency Relays;  
Model FAS-113DG: Synchronizers;  
Model FAS-115DG: Synchronizers with Voltage Matching;  
Model FAS-125DG: Synchronising Relay with static synchronisation, automatic frequency control and voltage matching;  
Model FAS-133DG: Synchronizers;  
Model HAS-111DG: Synchronising Relay with static synchronisation, for manual frequency control;  
Model EPN-110DN: Electronic Potentiometer;  
Model LSU-112DG: Load Sharing Unit;  
Model LSU-113DG: Load Sharing Unit (and Power Protection);  
Model LSU-114DG: Load Sharing Unit (Start/Stop Outputs);  
Model LSU-122DG: VAR Load Sharing Unit;  
Model LMR-111D: Loss of Mains Relay;  
Model RMT-111Q96: Phase Sequence Indicator/Relay

**Ratings:**

Operating temperatures: -25 degrees to 70 degrees C;  
Humidity: Less than or equal to 100% RH

**Service Restrictions:**

Unit Certification is not required for this product.

**Comments:**

Initial approval date: 27 April 1988.

**Notes / Drawings / Documentation:**

This Product Design Assessment (PDA) is valid only 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.

DEIF Test Report IPA0274-04W

**Term of Validity:**

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**STANDARDS**

**ABS Rules:**

2013 Steel Vessel Rules 1-1-4/7.7 and 4-9-7

**National:**

NA

**International:**

IACS UR E10 Rev5:2006

**Government Authority:**

NA

**EUMED:**

NA

**Others:**

NA

