



TYPE APPROVAL CERTIFICATE

Certificate no.:
TAE00000U7
Revision No:
3

This is to certify:

that the **Monitoring Relay**

with type designation(s)
ADL 111Q96

issued to

DEIF A/S
Skive, Denmark

is found to comply with

DNV rules for classification – Ships, offshore units, and high speed and light craft

Application:

Products approved by this certificate are accepted for installation on all vessels classed by DNV.

Issued at **Hamburg** on **2026-06-22**

This Certificate is valid until **2030-12-19**.

DNV local unit: **Denmark CMC**

Approval Engineer: **Torsten Dzillak**



for **DNV**

This document has been digitally signed and will
therefore not have handwritten signature

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to USD 300 000.



Job ID: 262.1-021020-4
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Product description

Insulation monitoring relay for DC Networks

Standard versions:

Measuring circuit:

Monitoring networks:	24 VDC	110 VDC	220 VDC
DC resistance Ri:	12 k Ω \pm 1%	55 k Ω \pm 1%	110 k Ω \pm 1%
Measuring voltage:	+/- 12,0V DC +/- 5%	+/- 25,5V DC +/- 5%	+/- 25,5V DC +/- 5%
Measuring range:	50...0 k Ω	250...0 k Ω	500...0 k Ω

Auxiliary voltage: 24 VDC/ 110 VDC/ 220 VDC

Advanced versions:

Measuring circuit:

Monitoring networks:	24 VDC	24 VDC	24 VDC
DC resistance Ri:	11 k Ω \pm 1%	22 k Ω \pm 1%	220 k Ω \pm 1%
Measuring voltage:	+/- 5,0V DC +/- 5%	+/- 5,0V DC +/- 5%	+/- 5,0V DC +/- 5%
Measuring range:	500...0 k Ω	1...0 M Ω	10...0 M Ω

Auxiliary voltage: 24 VDC

Application/Limitation

Pollution degree:

To be installed in a cabinet with an IP degree in accordance with DNV GL Rules w.r.t. location. Anti-condensation heating required. In IP20 or IP21 cabinets, limited to be used in pollution protected rooms (maximum pollution degree II).

Location classes :

Temperature:	B
Humidity:	B
Vibration:	A
EMC:	B

Type Approval documentation

Tests carried out

IACS UR E10 rev. 7 (Radiated emission and RF E-Field Immunity test)
Guidelines for the Performance of Type Approvals Part 2, Edition 2003

Marking of product

DEIF, type designation

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routines (RT) checked (if not available tests according to RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Assessment to be performed at 2 and 3.5 year and at renewal.

END OF CERTIFICATE