



NIPPON KAIJI KYOKAI

TYPE APPROVAL CERTIFICATE FOR AUTOMATIC DEVICES AND EQUIPMENT

Certificate No. TA21502M

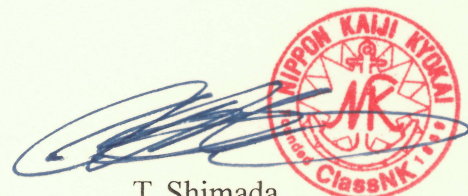
This is to certify that the undernoted product(s) has/have been approved in accordance with the requirements specified in Chapter 1, Part 7 of “Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use” and the relevant Society's Rules.

This certificate is issued to

Manufacturer:	DEIF A/S
Place of Manufacturing:	Frisenborgvej 33 DK-7800 Skive, Denmark
Product description:	Generator and mains control, monitoring and protection unit
Model:	uni-line
Approval No.:	98A107
Valid until:	2 June 2026

This certificate is subject to the conditions specified in the attached sheet(s).

Issued at Tokyo on 3 June 2021.



T. Shimada
General Manager
Machinery Department

Note: The manufacturer, if desired, is requested to apply to the Society for renewal prior to the expiration date.

Specification & documents:

1. Particulars:

Power supply	:	AC57.7 ~ 690V *
		DC24 ~ 220V *
Measurement	:	57.7 ~ 690V AC *
		0.3 ~ 5.0A AC *

(* : Flexible configuration of power supply and measurement inputs)

2. Components and reference drawings:

Voltage Relays	:	RMV-112D, RMV-122D, RMV-132D, RMV-142D
Over Current / Short Circuit Relays	:	RMC-111D, RMC-121D, RMC-122D, RMC-132D
Differential Current Relay	:	RMC-131D
Stator Earth Fault Relay	:	RMC-142D
Overload / Reverse Power Relays	:	RMP-111D, RMP-112D, RMP-121D* (*For Reverse Power Relay Only)
Loss of Excitation Relay	:	RMQ-111D
Over Excitation Relay	:	RMQ-121D
Frequency Relay	:	RMF-112D
Synchronizers	:	FAS-113DG, FAS-115DG
Load Sharing Units	:	LSU-112DG, LSU-113DG, LSU-114DG, LSU-122DG
Electronic Potentiometer	:	EPN-110DN
Phase sequence indicator	:	RMT-111Q96
Paralleling relay	:	HAS-111DG

3. Documentation and Test Reports:

4921240130A1/4 ~ 4/4, 4921240096A, 4921240046D, 4921240128A, 4921240102A,
4921240104A, 4921240108A, 4921240110A, 4921240106A, 4921240112A, 4921240098A,
4921240114A, 4921240116A, 4941240118A., 4921240120A, 4941240122A, 4941240124A,
4921240126A, 4941240131A, 4921240112B, 4189340145A, 4921240102B, 4189340144A.
4921240144B, 4921240141C, 403730004B, 4910217502N, 4910216501M, 4921240260D,
4921240148H,
DEIF Software version numbering 110429,
Critical plastic components information (for flame retardant)
Manufacturer declaration for uniline renewals IACS E10 rev.7 compliance (2021-06-17 JFL)

- To be continued -

Test items & approval conditions:

1. Test items:

(Applied testing items are marked with X.)

ENVIRONMENTAL TESTS (IACS UR E10 Rev.7 basis)		Mark
External examination		X
Operation test and performance test		X
Electric power supply failure test		X
Power supply fluctuation test	Electric	X
	Pneumatic and Hydraulic	--
Insulation resistance test		X
High voltage test		X
Pressure test (Pneumatic and Hydraulic)		--
Dry heat test (Temperature 70 °C × 18 hours)		X
Damp heat test (Temperature 55 °C, Humidity 95%, 12 hours, 2 cycles)		X
Vibration test (Acceleration ±1.0 G × 2 hours)		X
Inclination test		X
Cold test (Temperature -25°C × 18 hours)		X
Salt mist test		--
Electrostatic discharge immunity test		X
Radiated radio frequency immunity test		X
Conducted low frequency immunity test		X
Conducted high frequency immunity test		X
Burst / Fast transient immunity test		X
Surge immunity test		X
Radiated emission test		X
Conducted emission test		X
Flame retardant test		--

- The End -