DNV·GL

EUROPEAN UNION RECOGNISED ORGANISATION (EU RO) MUTUAL RECOGNITION TYPE APPROVAL CERTIFICATE

Certificate No:
MRE000000J
Revision No:
1

In accordance with Article 10.1 of EU Regulation 391/2009

This Certificate is issued to
Schneider Electric Industries SAS
GRENOBLE, France

for
Electrical/Electronic Relays

with type designation(s)
Tesys D LRD3 / LR3D3

The product is found to comply with
EU RO Mutual Recognition Technical Requirements for Electrical/Electronic Relays

Intended service
Thermal overload relay with differetial and non differential type for installation in enclosures onboard ship and offshore units

This is to certify:

that the Product referred to herein has been inspected for the Manufacturer, pursuant to the relevant requirements of the European Union Recognised Organisation Mutual Recognition procedure, required by Article 10.1 of EU Regulation 391/2009, and has been found in accordance with those requirements.

This Certificate is valid until **2023-12-18**.

Issued at **Høvik** on **2020-03-27**

DNV GL local station: **France CMC**

Approval Engineer: **Nicolay Horn**

for **DNV GL**
Digitally Signed By: Alonso Pontes, Marta
Location: DNV GL Høvik, Norway

Marta Alonso Pontes
Head of Section

When a product is presented with this EU RO MR Type Approval Certificate for given application, its acceptability with regards to the limitations stated in the certificate conditions defined in 1b, 1c and 1d of the applied Technical Requirement will be evaluated by the EU RO in charge of classing the ship or being in charge of the unit/system certification.
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.

Job Id: **262.4-000149-1**
Certificate No: **MRE000000J**
Revision No: **1**

Product description

Thermal overload relay with differetial and non differential type.

Rated insulation voltage Ui : 600 /690 V*
Rated impulse voltage Uimp: 6 kV
IP protection: IP20

Technical data :

LRD3 LR3D 3 Class 10	Current Range Ie (A)	Iq = Ir (690V)* (kA)	Iq (440V) (kA)	Fuse aM (A max.)
13	9.0 – 13.0	1	50	16
18	12.0 – 18.0	3		20
25	17.0 – 25.0	3		25
32	23.0 – 32.0	3		40
40	30.0 – 40.0	3		40
50	37.0 – 50.0	3		63
65	48.0 – 65.0	3 or 5		63
80	62.0 – 80.0	3 or 5		80

LRD 3…L Class 20	Current Range Ie (A)	Iq = Ir (690V)* (kA)	Iq (440V) (kA)	Fuse aM (A max.)
13	9.0 – 13.0	1	50	20
18	12.0 – 18.0	3		25
25	17.0 – 25.0	3		32
32	23.0 – 32.0	3		40
40	30.0 – 40.0	3		50
50	37.0 – 50.0	3		63
65	48.0 – 65.0	5		80

* See Application / limitation

Manufactured by

Schneider Electric France
6-8 rue du Bailly
21078 Dijon Cedex
FRANCE

Application/Limitation

With Uimp = 6 kV the max. rated voltage is 600 V when used in a IT (ship) net. Applicable for use in applications with directly earthed systems with rated voltage of 400/690 V.

Type Approval documentation

Technical documentation:
«TeSys LRx, RM1 – Technical Data for Designers» part of cataloge
"Tesys protection components", parts of manufacturer's catalogue.
"TeSys d Thermal overload Relays 13 - 65A – Marine certification file"version 2.0 dated 2013-09-27.

Test reports:
Schneider test report no. 200903629_001 dated 2009-02-12.
LCIE test reports no. 150527-710254 & 150529-710258 dated 2018-01-24.
LCIE test reports nos 128422-665184-D00 to D04 all dated 2015-05-20.
LCIE test reports nos. 110468-620644/00, 110468-620644/01, 110468-620644/02 & 110468-620644/03 all issued 2013-04-04

Marking of product

Telemecanique – Schneider Electric– Type designation

Other Conditions

Electrical tests after EU RO MR Technical Requirements – Electrical/Electronic Relays (Type tests after IEC 60947-4-1 (2009) + A1:2012. Environmental tests after IACS E10 rev.6 Oct. 2014, (Power supply variation, power supply failor, dielectric, insulation, inclination, vibration, cold dry heat and damp heat)).

Environmental test parameters:

Temperature:	-25 °C and 70 °C
Vibration:	± 1mm / 0.7g
EMC:	General power zone
Enclosure:	IP20

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval is 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 tests (RT) checked (if not available tests RT to be carried out).
- Review of type approval documentation.
- Review of possible change in design, materials and performance.
- Ensure traceability between manufacturer's product marking and the DNVGL EU MR Type Approval Certificate.

Assessment to be performed annually.

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Generic Statement for EU RO MR Type Approval Certificate

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In accordance with Article 10 of Regulation (EC) No 391/2009 of the European Parliament and of the Council of 23 April 2009 "on common rules and standards for ship inspection and survey organizations", the following organizations, recognized by the EU on this date, have agreed on the technical and procedural conditions under which they will mutually recognize this certificate:

- *American Bureau of Shipping (ABS);*
- *Bureau Veritas (BV);*
- *China Classification Society (CCS);*
- *Croatian Register of Shipping (CRS);*
- *DNV GL;*
- *Indian Register of Shipping (IRS);*
- *Korean Register (KR);*
- *Lloyd's Register Group Ltd. (LR);*
- *Nippon Kaiji Kyokai General Incorporated Foundation (ClassNK);*
- *Polish Register of Shipping (PRS);*
- *RINA Services S.p.A. (RINA);*
- *Russian Maritime Register of Shipping (RS).*

The scheme for the mutual recognition of class certificates for materials, equipment and components laid down by Article 10(1) of Regulation (EC) No 391/2009 is only enforceable within the Union in respect of ships flying the flag of a Member State. As far as foreign vessels are concerned, the acceptance of relevant certificates remains at the discretion of relevant non-EU flag States in the exercise of their exclusive jurisdiction, notably under the United Nations Convention on the Law of the Sea (UNCLOS). (In accordance with COMMISSION IMPLEMENTING REGULATION (EU) No 1355/2014 amending Regulation (EC) No 391/2009 - recital (25)).

END OF CERTIFICATE