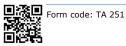
**DNV-GL** 

# TYPE APPROVAL CERTIFICATE

Certificate No: **TAE00001M6**Revision No:

This is to certify:	
That the Overcurrent- and Short-Circuit Relay	
with type designation(s) LRD, LR3, LR3D & LAD	
Issued to Schneider Electric Industries SAS GRENOBLE, France	
is found to comply with DNV GL rules for classification – Ships, offshore units, and high sp IEC 60947	eed and light craft
Application:	
Products approved by this certificate are accepted for installation DNV GL.	on all vessels classed by
Issued at <b>Høvik</b> on <b>2019-12-10</b>	
This Certificate is valid until <b>2023-12-31</b> .	for <b>DNV GL</b>

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.



DNV GL local station: France CMC

Approval Engineer: Nicolay Horn

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Trond Sjåvåg Head of Section

Job Id: **262.1-000288-6** Certificate No: **TAE00001M6** 

Revision No: 1

### Place of manufacturer

Schneider Electric France, 6-8 rue de Bailly – B.P. 97812 21078 Dijon Cedex, France Schneider Thailand limited Bangpoo Industrial Estate Samutprakarn, Thailand

## **Product description**

Thermal overload relays for protection of a.c. circuits and motors against overloads, phase failure, long starting time and prolonged stalling of the motor.

Type designation	Use
LRD01 to LRD35	Differential thermal overload relay, Class 10A w/screw clamp terminal
LR3D01 to LR3D35	Undifferential thermal overload relay, Class 10A w/screw clamp terminal
LRD013 to LRD223	Differential thermal overload relay, Class 10A w/spring terminal
LR3D013 to LR3D223	Undifferential thermal overload relay, Class 10A w/spring terminal
LRD016 to LRD356	Differential thermal overload relay, Class 10A w/lug-clamps
LR3D016 to LR3D356	Undifferential thermal overload relay, Class 10A w/lug-clamps
LRD3322 to LRD33696	Differential thermal overload relay, Class 10A w/screw clamp terminal
LRD4365 to LRD4369	Differential thermal overload relay, Class 10A, w/ screw clamp terminal
LR3D3322 to LR3D33696	Undifferential thermal overload relay, Class 10A w/screw clamp terminal
LR3D4365 to LR3D4369	Undifferential thermal overload relay, Class 10A w/screw clamp terminal
LAD7C and LAD7C1	Prewiring kit for direct connection with NC relay and contactors
LAD-7B10	Therminal block for LRD-01 to LRD-35 & LR3-D01 to LR3-D35
LAD-703	Remote tripping or electric reset device

LRD: Differential version (sensitive to phase failure)

LR3D: Undifferential version (not sensitive to phase failure)

## Technical data:

Relay type	LRD01 to 16	LRD21 to 35	LRD3322 to LRD33656
	LR3D01 to D16	LR3D21 to D35	LR3D3322 to LR3D33656
Rated insulation voltage (V)	400/690*	400/690*	400/690*
Rated impulse voltage (kV)	6	6	6
Frequency limits(Hz)	0 - 400	0 - 400	0 - 400
Setting range(A)	0.1 - 13	12 - 38	17 - 104
Iq (440V ) (kA)	80	80	70

Relay type	LRD33676 to LRD33696	LRD4365 to LRD4369
	LR3D33676 to LR3D33696	LR3D4365 to LR3D4369
Rated insulation voltage (V)	400/690*	400/690*
Rated impulse voltage (kV)	6	6
Frequency limits(Hz)	0 - 400	0 - 400
Setting range(A)	95 - 140	80 - 140
Iq (440V ) (kA)	70	70

<sup>\*</sup>See voltage restrictions under "Application limitation".

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Job Id: **262.1-000288-6** Certificate No: **TAE00001M6** 

Revision No: 1

# **Application/Limitation**

For installation inside switchboards / enclosures onboard ships and offshore units.

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

# Type Approval documentation

#### Technical info:

Schneider Cataloge ID-IEC-LRD /LR3D pages 3 to14.

Letter to DNV ref. CJ/052083 dated 2005-06-06 (item 2- Listing of products). Schneider catalogue "Motor starter solutions Control and protection components", dated October 2001 (parts).

#### Test certificates / reports:

ASEFA Certificate of conformity Nos. 116-10BT & 117-10BT issued 2010-08-31. L2E Laboratiory test reports nos. 129163-659446A and 129163-659446B issued 2014-10-27. Schneider test reports nos 545-00, 546-00, 547-00 & 548-00. Schneider test report nos. GV10058B issued 2001-05-31, G001008A issued October 2000 & G023044A issued March 2002.

#### **Tests carried out**

Type tests in accordance with IEC 60947-4-1 and IEC 60947-5-1. Environmental tests in accordance with DNV SfC No. 2.4.

## Marking of product

Schneider Electric and / or Telemecanique and Type designation.

#### 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 survey to be dealt with:

- Ensure that type approved documentation is available.
- Ensure that materials used comply with type approved documents and/or referenced material specifications.
- Review design, materials, performance and production process with respect to possible changes, in order to ensure compliance with the type approved documentation and/or referenced material specifications.
- Ensure traceability between manufacturer's product marking and the DNV Type Approval Certificate.

Assessment to be performed at 2 and 3,5 year and at renewal.

**END OF CERTIFICATE** 

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