



TYPE APPROVAL CERTIFICATE

Certificate No:
TAE000033T
Revision No:
1

This is to certify:

That the Contactor

with type designation(s)
Tesys D LC1/ LC2

Issued to

Schneider Electric Industries S.A.S.
Eybens, France

is found to comply with

DNV rules for classification – Ships, offshore units, and high speed and light craft
IEC 60947

Application :

Contactors and reversing / pole-changing contactors with ac control circuit for installation in enclosures onboard ship and mobile offshore units

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

Rated voltage (V) Up to 600 / 690
Rated current (A) 60 to 80
Frequency (Hz) 50 - 60

Issued at **Høvik** on **2023-06-12**

for **DNV**

This Certificate is valid until **2027-12-31**.

DNV local unit: **France CMC**

Approval Engineer: **Nicolay Horn**

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Frederik Tore Elter
Head of Section

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 300,000 USD.



Name and place of manufacturer

Schneider Electric Industries SAS
 27109 Le Vaudreuil, France

PT. Schneider Electric Manufacturing Batam
 Batamindo Industrial Park, Lot 4, Muka Kuning
 Batam, 29433, Indonesia

Product description

Single contactors (LC1) and reversing contactor (LC2) with ac or dc coils electromechanical or electronic. Contactor equipped with one NO and one NC contact.

Rated insulation voltage (Ui): 600/690V *
 Rated impulse voltage (Uimp): 6kV

Electrical ratings:

Type designation	Ith	Ue Utilization category	230 V	400V	440V	500V	690V*
LC1/LC2-D40A	60 A	Ie (AC-4)	38 A	35 A	40 A	33 A	21 A
		Ie (AC-3)	38 A	35 A	40 A	33 A	32 A
		Ie (AC-3e)	38 A	35 A	40 A	33 A	32 A
		Ie (AC-1)	60 A				
LC1/LC2-D50A	80 A	Ie (AC-4)	51 A	41 A	50 A	33 A	21 A
		Ie (AC-3)	51 A	41 A	50 A	44 A	35 A
		Ie (AC-3e)	51 A	41 A	50 A	44 A	35 A
		Ie (AC-1)	80 A				
LC1/LC2-D65A	80 A	Ie (AC-4)	61 A	55 A	50 A	33 A	21 A
		Ie (AC-3)	61 A	55 A	65 A	53 A	39 A
		Ie (AC-3e)	61 A	55 A	65 A	53 A	39 A
		Ie (AC-1)	80 A				
LC1/LC2-D80A	80 A	Ie (AC-4)	61 A	55 A	50 A	33 A	21 A
		Ie (AC-3)	80 A	80 A	66 A	53 A	39 A
		Ie (AC-3e)	80 A	80 A	66 A	53 A	39 A
		Ie (AC-1)	80 A				
LC1-DT60A	60 A	Ie (AC-1)	60 A				
LC1-DT80A	80 A	Ie (AC-1)	80 A				

Rated conditional short-circuit current:

Type designation	Prospective short-circuit current (kA)		SCPD
LC1/LC2-D40A	I _r (440V)	3	40 A aM fuse
	I _q (440V)	50	
	I _r (690V)*	3	
	I _q (690 V)*	3	
LC1/LC2-D50A	I _r (440V)	3	63 A aM fuse
	I _q (440V)	50	
	I _r (690V)*	3	
	I _q (690 V)*	3	
LC1/LC2-D65A LC1/LC2-D80A	I _r (440V)	3	63 A aM fuse 80 A aM fuse
	I _q (440V)	50	
	I _r (690V)*	3	
	I _q (690 V)*	3	
LC1-DT60A	I _q (690V)	3	125 A gG fuse
	I _r (690V)*	3	
LC1-DT80A	I _q (690V)	5	125 A gG fuse
	I _r (690V)*	5	

* See application / limitation

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.

Environmental classes: Temperature D, Humidity B, Vibration A, EMC A

Type Approval documentation

Technical documentation:

«TeSys D, D Green, SK, K, SKGC, GC, GY, GF – Technical Data for Designers» part of catalogue.
«TeSys d contactors – Marine certification file» part 1, item 3 “Electrical ratings” dated 2008-11-26.

Test reports:

TÜV test reports no. CN211 HUT 002 dated 2022-07-20, CN215DQ4 002 dated 2022.05-13
CN21EYYe 001 dated 2021-12-17, CN21ES2Z 002, CN216XSW 001, CN212GAW 002 dated 2022-07-20 and
CN2182N3 dated 2021-11-26.

STIE test report no 21AAS01P04D31-00255 dated 2021-11-22

“TeSys d contactors – Marine certification file” dated 2008-11-26, part 4 (binder 1/1 & 1 / 2).

Test reports No. :

Nos. 201703851_002, 003, & 004 dated 2017-09-01

Nos. 201604841_061, 062, & 63 dated 2017-01-12 & 13

No. 201604841_016 dated 2017-02-24

Nos. 2426-46-TL3-1 & 2426-46-TL3-2 dated 2017-12-20

No. 143029-688903A2 dated 2016-11-30 & 143029-688903B2 dated 2016-11-30

No. 144414-692749 dated 2017-01-16

No. 146109-698338 dated 2017-01-16

No. 150529-710258 dated 2018-01-24 & 155413-720935 dated 2018-07-02

No. 150698-710269 dated 2018-01-24

No. 150697-709694 dated 2018-01-24

No. 128422-665184-B00 dated 2014-03-03

No. 128422-665184-B01 to -B07 dated 2015-03-03

No. 128422-665184-A00 dated 2014-03-03

No. 128422-665184-A01 to -A07 dated 2015-03-03

Certif No. FR 665184B_M2 and FR 665184A_M2 issued 2018-03-20

Certif No. FR 700311_M2 issued 2018-08-29

Tests carried out

Electrical tests after IEC 60947-4-1:2009 (Third Edition) + A1:2012 Environmental tests after DNVGL-CG-0339 August 2021: (Power supply variation, power supply failure, dielectric, insulation, inclination, vibration, cold, dry heat and damp heat and EMC).

Marking of product

Schneider Electric – Type designation – Manufacturing place

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