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

Certificate No:
MRE000000G
Revision No:
2

In accordance with Article 10.1 of EU Regulation 391/2009

This Certificate is issued to

Schneider Electric Industries SAS

Eybens, **France**

for
Contactors

with type designation(s)
Tesys D LC1/ LC2

The product is found to comply with
EU RO Mutual Recognition Technical Requirements for Contactors

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

Rated Voltage (V)	**600 / 690**
Rated Current (A)	**60-80**
Frequency (Hz)	**50 / 60**

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 **2028-10-22**.

Issued at **Høvik** on **2023-11-08**

DNV local unit: **France CMC**

Approval Engineer: **Nicolay Horn**

for **DNV**

Digitally Signed By: Elter, Frederik Tore
Location: DNV Høvik, Norway

Frederik Tore Elter
Head of Section

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-3)	38 A	35 A	40 A	33 A	32 A
		Ie (AC-3e)	38 A	35 A	40 A	33 A	21 A
		Ie (AC-4)	38 A	35 A	40 A	33 A	21 A
		Ie (AC-1)	60 A				
LC1/LC2-D50A	80 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-4)	51 A	41 A	50 A	33 A	21 A
		Ie (AC-1)	80 A				
LC1/LC2-D65A	80 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-4)	61 A	55 A	50 A	33 A	21 A
		Ie (AC-1)	80 A				
LC1/LC2-D80A	80 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-4)	61 A	55 A	50 A	33 A	21 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	Ir (440V)	3	40 A aM fuse
	Iq (440V)	50	
	Ir (690V)*	3	
	Iq (690 V)*	3	
LC1/LC2-D50A	Ir (440V)	3	63 A aM fuse
	Iq (440V)	50	
	Ir (690V)*	3	
	Iq (690 V)*	3	
LC1/LC2-D65A LC1/LC2-D80A	Ir (440V)	3	63 A aM fuse 80 A aM fuse
	Iq (440V)	50	
	Ir (690V)*	3	
	Iq (690 V)*	3	
LC1-DT60A	Iq (690V)	3	125 A gG fuse
	Ir (690V)*	3	
LC1-DT80A	Iq (690V)	5	125 A gG fuse
	Ir (690V)*	5	

* See application / limitation

Manufactured by

Schneider Electric Industries SAS
Le Vaudreuil, France

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

Application/Limitation

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.

Name	Number	Date
«TeSys D, D Green, SK, K, SKGC, GC, GY, GF – Technical Data for Designers»	part of cataloge	
TeSys d contactors – Marine certification file" part 1, item 3 "Electrical ratings"		2008-11-26
"TeSys d contactors – Marine certification file"	part 4 (binder 1/1 & 1 / 2)	2008-11-26
Test report	201703851_002, 003, & 004	2017-09-01
Test report	201604841_061,_062, &_63	2017-01-12 &
Test report	201604841_016	2017-02-24
Test report	2426-46-TL3-1 & 2426-46-TL3-2	2017-12-20
Test report	143029-688903A2	2016-11-30
Test report	143029-688903B2	2016-11-30
Test report	144414-692749	2017-01-16
Test report	146109-698338	2017-01-16
Test report	150529-710258	2018-01-24
Test report	155413-720935	2018-07-02
Test report	150698-710269	2018-01-24
Test report	150697-709694	2018-01-24
Test report	128422-665184-B00	2014-03-03
Test report	128422-665184-B01 to –B07	2015-03-03
Test report	128422-665184-A00	2014-03-03
Test report	128422-665184-A01 to –A07	2015-03-03
Certificate	FR 665184B_M2 and FR 665184A	2018-03-20
Certificate	FR 700311_M2	2018-08-29

Marking of product

Telemecanique / Schneider Electric – Type designation

Other Conditions

Electrical tests after IEC 60947, Environmental tests after DNVGL-CG-0339 Novemberl 2015 (Power supply variation, power supply failor, dielectric, insulation, inclination, vibration, cold, dry heat and damp heat).

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 (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 and at renewal.

Generic Statement for EU RO MR Type Approval Certificate

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.

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;
- 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