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

Certificate No:
MRE0000018

In accordance with Article 10.1 of EU Regulation 391/2009

This Certificate is issued to

Schneider Electric Industries S.A.S.

Grenoble, **France**

for
Circuit Breakers

with type designation(s)
ComPacT NSX 250DC EP and NSX 500DC EP, ComPacT NSX250 NA DC EP and NSX630 NA DC EP

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

Intended service
Circuit breaker for use onboard ship and offshore platforms.

Type	Rated Voltage (V)	Rated Current (A)	Frequency (Hz)
ComPacT NSX 250DC EP and NSX 500DC EP	1500 DC	80 - 500	NA
ComPacT NSX250 NA DC EP and NSX630 NA DC EP	1500 DC	100-630	NA

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 **2027-10-17**.

Issued at **Høvik** on **2022-10-18**

DNV local station: **France CMC**

for **DNV**

Approval Engineer: **Nicolay Horn**

Marta Alonso Pontes
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.

Product description

DC Circuit-Breakers Com**PacT** NSX DC EP

	NSX250 DC EP	NSX500 DC EP
Rated insulation voltage (V)	1600	
Rated operational voltage DC (V)	1500	
Rated Current (A)	80 - 250	250 - 500
Rated Service Short-circuit Breaking capacity (kA) Ics		
1500V (4P)	20	20
1100V (4P)	20	50
Rated Ultimate Short-circuit Breaking capacity (kA) Icu		
1500V (4P)	20	50
1100V (4P)	50	50
Selectivity category	A	A

DC Switch-Disconnectors Com**PacT** NSX NA DC EP

	NSX250 NA DC EP	NSX630 NA DC EP
Number of poles	4	4
Rated insulation voltage (V)	1600	1600
Rated operational voltage DC (V)	1500	1500
Rated Current (A)	100-250	320-630
Rated short time withstand current Icw 1s (kA)	3.5	7.56
Rated short-circuit making capacity Icm 1s (kA)	3.5	7.56
Utilization category	DC-22A DC-PV2	DC-22A DC-PV2

Manufactured by

Schneider (Beijing) Low Voltage Co., Ltd.
No.2 Liangshuihe 2nd Street
BJ Economic Technological Development Area
Beijing 100176
P.R.China

Application/Limitation

Shall be installed and tested according to Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas' Offshore Standards. The manufacturer's instructions to be observed.

Environmental classes in accordance with IACS E10 rev.8:

Test	Standard	Description
Dry heat	IEC 60068-2-2:2007	Temperature: 70°C ± 2°C Duration: 16 hours
Damp heat	IEC 60068-2-30:2005 test Db	Temperature: 55°C Humidity: 95% Duration: 2 cycles 2 x (12 +12 hours)
Cold	IEC 60068-2-1:2007	Temperature: –25°C ± 3°C Duration: 2 hours
Vibration	IEC 60068-2-6:2007 Test Fc	2 +3 Hz to 13.2 Hz – amplitude ±1mm –0 13.2 Hz to 100 Hz – acceleration ± 0.7 g.

Type Approval documentation

Marking of product

Schneider Electric – Com**PacT** NSX DC EP – type designation – manufacturing place (code date)
Schneider Electric – Com**PacT** NSX NA DC EP – type designation – manufacturing place (code date)

Other Conditions

IEC 60947-2 (including Annex P), sequence 1 and 2 and 3, inclination, vibration, cold, dry heat, damp heat.
IEC 60947-3.

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 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.

Periodical assessment to be performed annually.

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