

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Circuit Breaker**with type designation(s)
Evolis

Issued to

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

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft**Application :****Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.****Rated voltage (V) 7200 - 17500****Rated current (A) 630 - 2500**Issued at **Høvik** on **2018-06-05**This Certificate is valid until **2022-12-31**.for **DNV GL**DNV GL local station: **Marseille**Approval Engineer: **Nicolay Horn**

Andreas Kristoffersen
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.



Product description

Type: Evolis

Medium voltage vacuum circuit breakers. Withdrawable and fixed versions.

Technical data:

Types: Evolis	MC1	MC1	MC2	MC2
Rated insulation voltage (kV):	7.2	12	7.2	12
Rated operational voltage (kV):	7.2	12	7.2	12
Withstand voltage (kV):	20	28	20	28
Impulse withstand voltage (kV):	60	75	60	75
Rated current (A) ³ :	630/1250	630/1250	630/1250	630/1250
Rated frequency (Hz):	50-60	50-60	50-60	50-60
Rated service short circuit breaking cap. I _{sc} (kA):	25 / 31.5	25 / 31.5	31.5 / 40	31.5 / 40
Rated short time withstand current (3 s) I _k (kA):	25 / 31.5	25 / 31.5	31.5 / 40	31.5 / 40
Rated making capacity I _p (kA):	65 / 82 ²	65 / 82 ²	82 / 104 ²	82 / 104 ²

Types: Evolis	MC2	MC3	MC3	MC3
Rated insulation voltage (kV):	17.5	7.2	12	17.5
Rated operational voltage (kV):	17.5	7.2	12	17.5
Withstand voltage (kV):	38	20	28	38
Impulse withstand voltage (kV):	95	60	75	95
Rated current (A) ³ :	630/1250	630-2500	630-2500	630-2500
Rated frequency (Hz):	50-60	50-60	50-60	50-60
Rated service short circuit breaking cap. I _{sc} (kA):	31.5 / 40	25/31.5/40	25/31.5/40 ¹	25/31.5/40 ¹
Rated short time withstand current (3 s) I _k (kA):	31.5 / 40	25/31.5/40 ¹	25/31.5/40 ¹	25/31.5/40 ¹
Rated making capacity I _p (kA):	82 / 104 ²	65/82/104 ²	65/82/104 ²	65/82/104 ²

1: Breaker rated 630 and 1250 A not available with short circuit capacity of 25 and 31.5 kA.

2: Values given for 60 Hz.

3: See Application / limitation.

Application/Limitation

Shall be installed and tested according to Veritas Rules for Ships/High Speed, Light Craft and Naval Surface Craft.

Current rating is given for 40 °C. To be derated with 5 % for ambient temperature of 45 °C

Type Approval documentation

Tests carried out

Type tests in accordance with IEC 62271-100: Dielectric performances, temperatur-rise, operation performances, mechanical endurance, and shorts-circuit making and breaking.

Environmental tests in accordance with DNV "Standard for Certification No. 2.4": Power supply variation, vibration, inclination, damp heat (humidity), and dry heat test.

Marking of product

Evolis – Rated Voltage – Rated Frequency – Rated Current – Rated Breaking Capacity – Rated Making Capacity

Periodical assessment



Job Id: **262.1-005269-5**
Certificate No: **TAE00002XR**

The scope of the periodical assessment survey 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 periodical 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
- 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