DNV·GL

Certificate No:
TAE000005Y

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Circuit Breaker

with type designation(s)
3RV1

Issued to
Siemens AG GWA
Amberg, Germany

is found to comply with
Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas' Offshore Standards

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Rated Voltage (V)	**400 (IT), 690 directly earthed**
Rated Current (A)	**0,16 to 100**
Frequency (Hz)	**50 / 60**

This Certificate is valid until **2018-12-31**.

Issued at **Høvik** on **2015-09-21**

for **DNV GL**

DNV GL local station: **Essen**

Approval Engineer: **Marta Alonso Pontes**

Marit Laumann
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

Cicuit Breaker type Sirius 3RV1 according to size and power range as listed below. Max operating voltage = 400 V (IT-net), 690 V directly earthed. Frequency = 50 / 60 Hz.

The Circuit Breakers are part of the Siemens Sirius 3R system comprising Circuit Breakers, Contactors, Contactor relays, Time relays, Overload relays, Load Feeders and other accessories. All are type approved and listed in various DNV type approval certificates.

3RV1.11-….(size S00)	Rated current I_N: 0,16 A up to 12 A. Thermal overload relay range: 0.11 A up to 12 A. Current trip relay range: 2,1 A up to 156 A (instant trip). Breaking capacity: 100 kA at 400 V for size up to 6,3 A Breaking capacity: 50 kA at 400 V up to 12 A.
3RV1.21-….(size S0)	Rated current I_N: 0,16 A up to 25 A. Thermal overload relay range: 0.11 A up to 25 A. Current trip relay range: 2,1 A up to 325 A (instant trip). Breaking capacity: 100 kA at 400 V for size up to 12,5 A Breaking capacity: 50 kA at 400 V up to 25 A.
3RV1.31-….(size S2)	Rated current I_N : 16 A up to 50 A. Thermal overload relay range: 11 A up to 50 A. Current trip relay range: 208 A up to 650 A (instant trip). Breaking capacity: 50 kA at 400 V all types.
3RV1.41-….(size S3)	Rated current I_N : 40 A up to 100 A. Thermal overload relay range: 28 A up to 100 A. Current trip relay range: 520 A up to 1300 A (instant trip). Breaking capacity: 50 kA at 400 V all types.
3RV1.42-….(size S3)	Rated current I_N : 16 A up to 100 A. Thermal overload relay range: 11 A up to 100 A. Current trip relay range: 208 A up to 1300 A (instant trip). Breaking capacity: 100 kA at 400 V all types.

Accessories include auxiliary and signalling switches (3RV19..), auxiliary releases (3RV19..), isolator modules (3RV19..).

Application/Limitation

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

Suitable for use in an IT (ship) system with a capacity of 1.2 times the maximum trip current at 400 V AC.

It can be used in applications with directly earthed systems with rated voltage of 400/690 V.

Type Approval documentation
Tests carried out

IEC/EN60947, dry heat, damp heat, salt mist, vibration, high voltage, EMC, inclination, flame retardancy.

Marking of product

Manufacturer’s label containing data and manufacturer’s type number.

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 least every second year.

END OF CERTIFICATE